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Connections between mindfulness, nature and wellbeing: An interpretative phenomenological
analysis

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Abstract

Wellbeing is a central concern within contemporary psychological research, particularly in response to rising mental health challenges and growing interest in accessible, preventative approaches to psychological support. Research indicates that both mindfulness in natural environments are associated with enhanced wellbeing; however, there remains limited qualitative understanding of how individuals subjectively experience mindfulness in nature and how such experiences are interpreted as meaningful. This study explored individuals' lived experiences of mindfulness while walking in nature, with particular attention to how participants made sense of these experiences in relation to wellbeing.

An Interpretative Phenomenological Analysis (IPA) methodology was employed to capture in-depth, idiographic accounts. Four participants engaged in mindful walks in natural environments over a three-month period, recorded multimedia reflections during and following each walk, and subsequently participated in semi-structured interviews. Data were analysed using IPA, attending to phenomenological description, interpretative meaning-making, and patterns of convergence and divergence across cases.

Four superordinate themes were identified: *Cultivating inner stillness and presence*, *Emotional regulation and restoration*, *Deepening connection with nature*, and *Positive transformation and Emerging possibilities*. Participants described experiences of calm, grounding, and embodied presence facilitated through sensory engagement with natural environments. Mindfulness in nature appeared to support emotional regulation, stress relief, and restoration, while also enhancing participants' sense of connection and belonging to the natural world. For some participants, these experiences extended beyond immediate wellbeing, fostering positive shifts in outlook, confidence, and openness to future possibilities.

The findings suggest that wellbeing emerged not from mindfulness or nature alone, but through the personally meaningful ways participants engaged with and interpreted their experiences in natural settings. This study highlights mindfulness in nature as an embodied, relational process that supports both immediate restoration and longer-term

psychological growth, and demonstrates the value of IPA in exploring wellbeing as a lived and contextually situated experience.

Keywords: Mindfulness, nature, wellbeing, interpretative phenomenological analysis, nature connectedness.

Chapter 1

Introduction

Understanding and promoting wellbeing has become a central priority within psychological research and practice. Wellbeing is widely recognised as a multifaceted construct encompassing emotional, psychological, and social dimensions of human functioning (Ryan & Deci, 2001). Rather than being defined solely by the absence of mental illness, wellbeing reflects how individuals feel, function, and make sense of their lives within personal and social contexts. Contemporary societies are undergoing rapid social, economic, and environmental change, with increasing pressures related to mental health, cost of living, work–life balance, social expectations, and social cohesion, all of which may negatively impact individual wellbeing (Khan, 2024; Kirkbride et al., 2024; Williams et al., 2020). In addition, many people are increasingly living in densely populated urban environments characterised by heightened noise, air pollution, and limited access to natural spaces—conditions for which humans may not be evolutionarily adapted and which are associated with increased stress and poorer health outcomes (Abbasi et al., 2023; Lencastre et al., 2024). As such, identifying accessible, sustainable, and preventative ways to cultivate and maintain wellbeing in everyday life has become an important area of psychological inquiry (Kraiss et al., 2022).

Globally, the prevalence of mental health conditions continues to rise. Recent estimates suggest that approximately one billion people worldwide are affected by mental disorders such as depression and anxiety, with emotional distress worsening across populations (Piao et al., 2024; Santini et al., 2022). In Aotearoa New Zealand, findings from the New Zealand Health Survey indicate increasing rates of anxiety and depressive symptoms among adults, children, and young people compared to previous reporting periods (Ministry of Health, 2024a). Alongside rising prevalence, there is growing evidence of unmet need for mental health support, with many individuals reporting that they required professional help for stress, emotional difficulties, or mental health concerns but did not receive it (Ministry of Health, 2024a). While these trends highlight significant challenges within mental health care

systems, they also underscore the importance of broadening psychological research beyond symptom reduction to include wellbeing as a positive, lived experience that can be supported at both individual and community levels.

A range of factors inhibit individuals from seeking or receiving psychological support, including long wait times for services, stigma associated with help-seeking, beliefs about self-reliance, and limited understanding of psychological treatment processes (Gulliver et al., 2010; Topkaya, 2015). Prolonged waitlists have been shown to negatively affect engagement and motivation, potentially leading to worsening symptoms and reduced satisfaction with treatment outcomes (Eichstedt et al., 2024). Although increasing access to mental health services remains a global and national priority (Eichstedt et al., 2024; Ministry of Health, 2024b), traditional one-to-one therapeutic models are resource-intensive and may not adequately reach large segments of the population (Schueller & Parks, 2014). Consequently, there is growing interest in approaches to wellbeing that are low-cost, widely accessible, and embedded within everyday environments. Emerging research suggests that wellbeing is shaped not only by psychological or medical interventions, but also by the contexts in which people live, including their relationship with the natural world (Lencastre et al., 2024; Seymour, 2016).

Humans have an enduring relationship with nature, which has long been associated with psychological wellbeing (Haggstrom, 2018). Historically, nature has served as a source of sustenance, shelter, and medicine; over time, it has also become a space for recreation, physical activity, restoration, and reflection (Abbasi et al., 2023; Seymour, 2016). From a phenomenological perspective, nature is not experienced solely as an external physical environment, but as a lived and embodied experience characterised by sensory engagement, including colours, sounds, smells, and textures (Mathews & Anderson, 2021). Such experiences may evoke memories, emotions, and personal meanings that are unique to the individual (Haggstrom, 2018; Mathews & Anderson, 2021). This understanding aligns with psychological approaches that emphasise subjectivity and lived experience as central to wellbeing, suggesting that the benefits of nature may lie not only in exposure, but in how nature is experienced and interpreted.

Research on nature connectedness further supports this experiential perspective. Studies have shown that individuals who feel more emotionally and cognitively connected to nature tend to report higher levels of wellbeing (Hatty et al., 2022). Emerging evidence

suggests that it is not merely exposure to nature that supports wellbeing, but the quality of engagement with it. Meaningful contact, such as actively noticing natural surroundings or engaging attentively with the environment, appears to play a significant role (Lengieza & Aviste, 2025). Within this context, mindfulness offers a way of engaging with experience that emphasises awareness, attention, and acceptance, and has been increasingly recognised as relevant to wellbeing beyond clinical settings (Kabat-Zinn, 2003). Building on research into nature connectedness, mindfulness has been identified as an important experiential factor associated with enhanced wellbeing (Teerapong et al., 2024). Mindfulness, understood as present-moment awareness and non-judgemental attention, has been linked not only to reductions in distress but also to positive aspects of wellbeing, including emotional regulation, self-awareness, and meaning-making (Williams & Kabat-Zinn, 2013). Recent studies have begun to integrate mindfulness and nature, suggesting that mindfulness practices undertaken in natural settings may offer unique benefits for psychological wellbeing (Unsworth et al., 2016). However, despite this growing body of research, there remains limited qualitative exploration of how individuals subjectively experience mindfulness in nature and which experiential processes contribute to enhanced wellbeing (Baklien et al., 2024; Brymer et al., 2021).

To address this gap, the present study adopts an Interpretative Phenomenological Analysis (IPA) approach to explore individuals' lived experiences of mindfulness in nature and its perceived impact on wellbeing. IPA is grounded in phenomenology, ideography, and hermeneutics, and is concerned with how individuals make sense of significant experiences within their personal and social contexts (Nizza et al., 2021). This approach acknowledges the active interpretative role of the researcher and is particularly well suited to examining meaning-based experiences such as mindfulness in nature, where subjective interpretation and personal significance are central.

The following literature review examines psychological research on wellbeing, mindfulness, and nature. This is followed by an outline of the present qualitative study, which involved four participants who engaged in mindfulness walks in nature over a three-month period and recorded their experiences and reflections. By foregrounding observation as a central mindfulness process, this study seeks to contribute to existing literature by elucidating how specific experiential processes within natural environments may support wellbeing, thereby extending current understandings of nature-based psychological approaches. While

previous psychological research has examined mindfulness and nature both independently and in combination, there remains limited clarity regarding the processes through which these experiences support wellbeing. This research therefore aims to explore the connections between nature, mindfulness, and wellbeing, with a particular focus on how wellbeing is lived, interpreted, and understood through mindful engagement with the natural world.

Wellbeing

Wellbeing is a fundamental component of optimal human functioning and is conceptualised through multiple theoretical perspectives. Within the literature, a range of related constructs are used, including psychological wellbeing, emotional wellbeing, and subjective wellbeing, which can complicate understanding while also highlighting the importance of conceptual clarity (Park et al., 2023). A widely accepted definition describes wellbeing as how people feel and how they function at both personal and social levels, as well as how they evaluate their lives as a whole (Jarden & Roache, 2023; Ruggeri et al., 2020). In everyday language, wellbeing is often associated with terms such as happiness, contentment, and feeling good, reflecting how individuals commonly experience and articulate wellbeing (Ruggeri et al., 2020). More broadly, wellbeing is recognised as a multifaceted and dynamic construct, shaped by the interaction of personal, social, cultural, and environmental factors including health, employment, relationships, and social context (Jarden & Roache, 2023).

Within wellbeing research, two central conceptualisations are consistently identified: hedonic and eudaimonic wellbeing. Hedonic wellbeing is most commonly associated with subjective wellbeing and is concerned with the pursuit of pleasure and the avoidance of pain (Ryan & Deci, 2001). Subjective wellbeing comprises both a cognitive component, typically operationalised as life satisfaction, and an affective component reflecting the balance between positive and negative emotional experiences (Pavot & Diener, 2008). From this perspective, wellbeing is largely defined by how happy individuals feel and how satisfied they are with their lives. In contrast, eudaimonic wellbeing draws on Aristotelian philosophy and emphasises optimal psychological functioning and the realisation of human potential (Pritchard et al., 2020; Ryff, 1989). Ryff's (1989) model of psychological wellbeing outlines several dimensions, including personal growth, autonomy, self-acceptance, purpose in life, environmental mastery, and positive relationships. Rather than focusing solely on pleasure or

happiness, eudaimonic approaches emphasise meaning, engagement, and living in accordance with deeply held values.

The distinction between hedonic and eudaimonic wellbeing reflects the complexity of how wellbeing is understood and experienced. Although these approaches are related, they are conceptually distinct and do not always converge empirically (Ryan & Deci, 2001). Building on this distinction, Keyes (2002) proposed an integrative model that conceptualises mental health as a syndrome of wellbeing encompassing emotional, psychological, and social dimensions. Within this model, emotional wellbeing aligns closely with hedonic experiences, while psychological and social wellbeing reflect eudaimonic functioning. Importantly, this framework positions mental health not merely as the absence of mental illness, but as the presence of positive functioning across multiple domains (Dodge et al., 2012). For example, individuals may report high levels of life satisfaction while experiencing limited purpose or social connection, or conversely, may experience a strong sense of meaning alongside emotional distress. These findings suggest that wellbeing cannot be fully understood through a single dimension, but instead emerges through how individuals experience, value, and make sense of their lives over time.

How wellbeing is conceptualised in research is reflected in the approaches used to measure it. Quantitative measures of subjective wellbeing frequently include the Satisfaction With Life Scale, which assesses cognitive judgements of life satisfaction (Pavot & Diener, 1993), and the Positive and Negative Affect Schedule, which captures tendencies to experience positive and negative emotions (Watson et al., 1988). Eudaimonic wellbeing is commonly assessed using measures such as the Ryff Scales of Psychological Wellbeing, which evaluate multiple dimensions of psychological functioning (Ryff, 1989). These standardised measures have contributed substantially to understanding wellbeing at a population level and allow for comparisons across individuals and contexts. However, quantitative approaches to wellbeing measurement have also been subject to critique.

One limitation is that predefined domains and structured response formats may constrain how individuals express their experiences, potentially overlooking aspects of wellbeing that are personally meaningful or context-specific (Dodge et al., 2012; Keyes, 2002). The use of numerical scores can obscure the complexity of wellbeing and the ways it is shaped by lived experience, social relationships, and environmental context (Ryan & Deci, 2001; Dodge et al., 2012). Similarly, debates persist regarding the use of subjective versus

objective indicators of wellbeing. Objective indicators such as income, education, or physical health do not consistently align with individuals' own evaluations of how well their lives are going, while subjective indicators prioritise personal experience but may lack external reference points. Increasingly, scholars argue that wellbeing arises from the interaction between internal experience and external circumstances, reinforcing the importance of understanding wellbeing within individuals' lived worlds (Huppert & So, 2013).

Wellbeing has also been conceptualised as encompassing both state-like and trait-like components, reflecting transient experiences as well as more enduring patterns of emotional response and life evaluation (Lucas et al., 1996). From a qualitative perspective, fluctuations in wellbeing are not treated as error or inconsistency, but as meaningful features of lived experience that contribute to how individuals understand and narrate their lives. This perspective aligns with growing recognition of the role of individual differences, social relationships, and cultural context in shaping wellbeing. Research indicates that personality, life circumstances, and sociocultural values influence not only how wellbeing is experienced, but also how it is articulated and understood (Diener & Suh, 2000; Steel et al., 2008).

In response to these conceptual and methodological challenges, there has been increasing recognition of the value of qualitative approaches to wellbeing research. Qualitative perspectives emphasise wellbeing as a lived, subjective, and meaning-laden experience, rather than solely as a variable to be measured. From an interpretative phenomenological perspective, wellbeing is understood as something individuals actively make sense of through reflection on their experiences within specific personal, social, and cultural contexts (Nizza et al., 2021). Interpretative Phenomenological Analysis (IPA) is therefore particularly well suited to exploring wellbeing, as it prioritises participants' accounts. Rather than assuming wellbeing to be a fixed or objectively measurable construct, IPA attends to how wellbeing is experienced, interpreted, and given meaning within individuals' lived worlds.

In summary, wellbeing is a complex and multifaceted construct encompassing hedonic and eudaimonic dimensions, transient states and long-standing habits, and experiences shaped by social, cultural, and environmental contexts. While quantitative research has advanced understanding of wellbeing across populations, it is limited in its capacity to capture the richness and individuality of lived experience. A phenomenological

and interpretative approach offers a valuable means of deepening understanding of wellbeing as it is lived, interpreted, and understood by individuals.

Mindfulness

Mindfulness has its origins in ancient contemplative traditions, most prominently within Buddhism, a tradition that is over 2,500 years old (Keng et al., 2011). The historical Buddha, Siddhārtha Gautama, developed a set of practices and ethical principles collectively referred to as the *Dhamma*, aimed at alleviating suffering (*dukkha*) and cultivating insight, wisdom, and liberation (Anālayo, 2003; Bodhi, 2011). Central to these teachings is *sati*, commonly translated as mindfulness, which involves sustained, non-judgemental awareness of present-moment experience (Anālayo, 2003). Importantly, mindfulness in its original context was not conceived as a standalone technique but was embedded within a broader ethical, philosophical, and meditative system, most notably the Noble Eightfold Path, and oriented toward deep personal transformation rather than symptom reduction (Aich, 2013).

In early Buddhist teachings, mindfulness practice is most commonly articulated through the Four Foundations of Mindfulness: awareness of the body, feelings, mind, and mental phenomena (Anālayo, 2003). These practices were designed to cultivate clear seeing into the arising and passing of experience, supporting insight into the nature of suffering, impermanence, and self (Anālayo, 2020; Bodhi, 2011; Keng et al., 2011). As Buddhism spread across Asia, mindfulness practices diversified and were increasingly integrated into everyday activities such as walking, eating, and working, reflecting an embodied and continuous application of awareness rather than a practice confined to formal meditation (Sharf, 2015; Amihai & Kozhevnikov, 2015; Williams & Kabat-Zinn, 2013). This historical evolution provided the foundation for contemporary psychological adaptations of mindfulness.

The introduction of mindfulness into Western psychology was largely driven by clinicians and meditation teachers seeking to translate contemplative practices into accessible, secular forms. One of the most influential figures in this movement was Jon Kabat-Zinn, who developed the Mindfulness-Based Stress Reduction (MBSR) programme in 1979 at the University of Massachusetts Medical School (Bahadir-Yilmaz & Yuksel, 2024).

Kabat-Zinn reframed the practice in secular and accessible language while preserving its core emphasis on present moment awareness (Kabat-Zinn, 2003). This secular adaptation made mindfulness more culturally accessible and facilitated its integration into Western healthcare, psychology, education, and workplace settings (Hanner, 2024). By positioning mindfulness as a teachable skill rather than a religious practice, it became increasingly accessible to empirical research, enabling researchers to examine its psychological and physiological effects and supporting its incorporation into evidence-based clinical interventions.

The growing empirical evidence for mindfulness contributed to its widespread adoption across psychological research and applied settings. Contemporary mindfulness-based approaches have demonstrated benefits for reducing stress, anxiety, depression, and psychological distress while enhancing emotional regulation, resilience, cognitive functioning, and overall wellbeing (Creswell, 2017; Foale et al., 2024). Mindfulness has become both a widely used therapeutic approach and a broader wellbeing practice, bridging ancient contemplative traditions with contemporary psychological science. Overall, the evolution of mindfulness from its origin within Buddhist contemplative traditions to its contemporary application in Western psychology reflects a process of adaptation rather than replacement. Although secular approaches may have shifted emphasis from spiritual liberation towards psychological health and wellbeing, the fundamental practice has remained central across all contexts including cultivating present-moment, non-judgmental awareness (Anālayo, 2003; Kabat-Zinn, 2003; Keng et al., 2011). At the same time, the adaptation of mindfulness into psychological practice has resulted in diverse conceptualisations and approaches to its definition and measurement, reflecting the complexity of translating an ancient contemplative practice into a modern psychological construct. Accordingly, understanding how mindfulness is conceptualised within psychological research is essential for interpreting its application and effectiveness across contemporary research and practice.

Conceptualising Mindfulness in Psychological Research

Within contemporary psychological science, mindfulness is most commonly defined as present-moment awareness characterised by openness and non-judgement (Kabat-Zinn, 2003; Brown & Ryan, 2003). However, this seemingly straightforward definition conceals

considerable conceptual diversity. Across research contexts, mindfulness has been operationalised as a dispositional trait, a momentary state, and a trainable capacity developed through structured practice (Brown & Ryan, 2003; Lau et al., 2006; Creswell, 2017). This variability has enabled mindfulness to be examined across clinical, experimental, and community settings, but it has also generated debate regarding what exactly is being measured and how findings should be interpreted (Van Dam et al., 2018).

Trait-based approaches conceptualise mindfulness as a relatively stable individual difference reflecting a person's tendency to attend to present-moment experience. Brown and Ryan (2003), through the development of the Mindful Attention Awareness Scale (MAAS), demonstrated that higher trait mindfulness was associated with lower depressive symptoms and greater psychological adjustment across multiple samples. While such findings established mindfulness as a construct relevant to wellbeing, they also raised conceptual questions about whether mindfulness represents a distinct psychological capacity or overlaps with broader personality dimensions such as neuroticism or emotional stability. These debates highlight the importance of distinguishing mindfulness from general affective disposition.

State-based research, in contrast, conceptualises mindfulness as a temporary condition that fluctuates across contexts. Lau et al. (2006), through the development of the Toronto Mindfulness Scale, demonstrated that mindfulness can be measured immediately following meditation practice, capturing momentary experiences of curiosity and decentering. These differences between trait and state mindfulness suggest that mindfulness is both a stable personal tendency and something that changes depending on the experiential situation. However, having several different ways of defining and measuring it makes it harder to compare results across studies.

Mindfulness has also been conceptualised as a trainable psychological capacity cultivated through structured interventions. Experimental studies demonstrate that even brief mindfulness training can influence attentional processes and emotional responding (Tang et al., 2007; Chambers et al., 2009). Such findings support the view that mindfulness is not merely dispositional but can be intentionally developed. Yet variability in intervention structure, instructor training, and practice intensity introduces further complexity when comparing outcomes across programmes.

These conceptual differences have prompted broader methodological critiques. Van Dam et al. (2018) argue that inconsistency in definitions, measurement tools, and intervention delivery limits strong causal conclusions about mindfulness. Different scales emphasise different components, including, attention, non-judgement, and awareness, and interventions labelled *mindfulness* may vary considerably in structure and theoretical emphasis. Consequently, mindfulness research encompasses a heterogeneous set of constructs and practices rather than a single unified phenomenon.

Further theoretical debate concerns whether mindfulness should be understood primarily as attentional regulation, meta-cognitive awareness, acceptance, or a broader orientation toward experience. Lindsay and Creswell's (2017) Monitor and Acceptance Theory, for example, distinguishes between attentional monitoring and acceptance processes, arguing that the beneficial effects of mindfulness depend critically on the presence of both components. Such distinctions reinforce that mindfulness is not reducible to attention alone and that different components may produce different psychological outcomes.

Taken together, contemporary psychological research conceptualises mindfulness as a multifaceted construct encompassing dispositional tendencies, momentary states, and cultivated capacities. While this conceptual flexibility has facilitated extensive empirical investigation, it also highlights ongoing questions regarding construct validity, measurement consistency, and theoretical clarity. Clarifying how mindfulness is defined within psychological science provides an essential foundation for examining how it relates to wellbeing and how individuals themselves experience its effects.

Mindfulness and wellbeing

Mindfulness is increasingly recognised as a central construct within contemporary psychological research, with converging evidence linking both dispositional mindfulness and mindfulness-based interventions to improved mental health and wellbeing outcomes (Khoury et al., 2015; Creswell, 2017). Cross-sectional studies have consistently found that individuals higher in trait mindfulness report lower depressive symptoms, reduced anxiety, and greater life satisfaction (Brown & Ryan, 2003; Keng et al., 2011). However, the interpretation of these associations requires caution, as correlational designs cannot establish directionality.

Longitudinal and intervention studies have therefore been central in strengthening claims that mindfulness contributes to psychological wellbeing rather than merely reflecting it.

Meta-analytic research provides robust, though not unequivocal, support for the efficacy of mindfulness-based interventions (MBIs). Khoury et al. (2015), analysing 29 studies, reported moderate effect sizes for reductions in depression, anxiety, and stress across clinical and non-clinical populations. Similarly, Hofmann et al. (2010) found moderate effects for mood and anxiety disorders. These findings indicate that MBIs reliably improve psychological functioning; however, effect sizes vary across populations and intervention formats, suggesting that mindfulness outcomes are context-dependent rather than universally transformative. Notably, mediation analyses indicate that improvements are associated with reduced rumination and increased non-reactivity (Gu et al., 2015), supporting the proposition that mindfulness reshapes how individuals engage with internal events rather than suppressing distress.

Theoretical models have sought to clarify the psychological processes through which mindfulness contributes to wellbeing. While these frameworks share the assumption that mindfulness alters individuals' relationship to experience, they emphasise different mechanisms and operate at varying levels of explanation. Shapiro et al.'s (2006) mechanisms of mindfulness model proposes that intention, attention, and attitude interact to produce *reperceiving* - a shift in perspective in which thoughts and emotions are experienced as transient mental events rather than defining truths. This model suggests that mindfulness changes how individuals relate to their thoughts and emotions by enabling them to step back and observe them as passing experiences, rather than trying to modify or control them. Empirical support for this distinction emerges from research on *decentering*. For example, Fresco et al. (2007) found that increases in *decentering* during mindfulness-based cognitive therapy predicted reductions in depressive symptoms independently of changes in dysfunctional beliefs. This suggests that shifts in perspective, such as learning to step back from thoughts, may contribute to recovery in ways that differ from traditional cognitive restructuring, which focuses on changing the content of thoughts.

While Shapiro's model emphasises the shifts in perspective, *Mindfulness-to-Meaning Theory* (Garland et al., 2017) broadens the explanation by highlighting how mindfulness can reshape emotional and motivational processes. Rather than viewing mindfulness solely as a way of regulating attention, Garland et al. (2019) proposed that mindfulness awareness

interrupts habitual negative appraisals and supports positive reappraisal and meaning-making. In a longitudinal randomised controlled trial of mindfulness-oriented recovery enhancement, increases in mindful awareness predicted greater positive reappraisal, which in turn was associated with enhanced meaning in life and improvements in emotional functioning (Garland et al., 2019). In this way, mindfulness is positioned not only as reducing vulnerability to negative emotion, but as enabling individuals to reconstruct meaning and experience growth in the face of adversity.

Self-Determination Theory (Ryan & Deci, 2017) offers a complementary perspective by linking mindfulness to authenticity and psychological need satisfaction. From this viewpoint, mindfulness enhances wellbeing by increasing awareness of internal states and motivations, allowing individuals to distinguish between personal values and externally imposed pressures. By creating space between impulse and action, mindfulness may support more intentional behaviour that aligns with personally endorsed values. Brown and Ryan (2003) found that dispositional mindfulness was associated with greater autonomy and intrinsic goal pursuit, while Schultz et al. (2015) demonstrated that increases in mindfulness during a workplace intervention predicted greater autonomy need satisfaction, which in turn was associated with improvements in employee wellbeing. These findings suggest that mindfulness may enhance sustained wellbeing by strengthening authentic self-regulation and reducing externally driven behavioural patterns. These theoretical mechanisms are translated into practice which operationalise mindfulness through guided and repeated experiential exercises.

Within applied contexts, structured interventions such as MBSR and MBCT operationalise these theoretical mechanisms. MBSR programmes typically cultivate sustained attentional focus and non-judgemental awareness through practices such as breath meditation and body scanning (Kabat-Zinn, 2003). Randomised controlled trials have demonstrated that MBSR reduces stress and psychological distress across clinical populations (Grossman et al., 2004). MBCT, developed specifically for recurrent depression, integrates mindfulness with cognitive therapy principles to reduce cognitive reactivity. In a large-scale randomised controlled trial, Kuyken et al. (2016) found that MBCT was as effective as maintenance antidepressant medication in preventing depressive relapse over a two-year period. Mediation analyses suggested that reductions in rumination and cognitive reactivity contributed to this

protective effect (Kuyken et al., 2010), supporting the claim that mindfulness alters vulnerability to depressive relapse rather than solely alleviating acute symptoms.

Qualitative research offers insight into how these mechanisms are experienced subjectively. Malpass et al. (2012), using interpretative phenomenological analysis with individuals who completed MBCT, identified themes of “stepping back” from depressive thoughts and developing a “new relationship” with internal experience. Participants described identity-level shifts rather than mere symptom reduction. Similarly, Wasson et al. (2020) reported that mindfulness practitioners described enhanced self-compassion and relational awareness, suggesting that experiential transformations may extend beyond measurable cognitive change. These findings highlight that wellbeing may be experienced as a reorganisation of self-understanding rather than solely as improved mood.

Despite growing evidence, contemporary scholarship urges caution. Van Dam et al. (2018) argue that heterogeneity in measurement tools and intervention fidelity complicates strong causal claims. Lindsay and Creswell’s (2017) Monitor and Acceptance Theory further suggests that attentional monitoring without acceptance may increase distress, underscoring the importance of attitudinal qualities in mindfulness practice. Such critiques highlight that mindfulness effects are not automatic; outcomes depend on contextual, instructional, and relational factors.

Taken together, empirical and theoretical research suggests that mindfulness contributes to wellbeing through multiple interacting pathways, including enhanced attentional regulation (Tang et al., 2007), reduced cognitive reactivity (Fresco et al., 2007), adaptive reappraisal and meaning-making (Garland et al., 2016), and strengthened autonomy and psychological need satisfaction (Schultz et al., 2015). While these findings provide converging support for the psychological benefits of mindfulness, much of the existing literature relies on symptom-based outcome measures and mediation analyses within structured intervention designs. Such approaches clarify potential mechanisms of change but offer limited insight into how individuals themselves experience, interpret, and integrate these shifts in awareness, identity, and meaning within everyday life. Nature theories can provide some further insight into how lived experiences of mindfulness in nature can bridge connections to wellbeing.

Nature Theories

The following two theories provide the theoretical foundation for understanding the relationship between nature and wellbeing within this research. Attention Restoration Theory and Biophilia Theory are two influential theoretical frameworks underpinning research on the relationship between nature and wellbeing. Both have been widely examined for more than three decades and provide complimentary explanations for the psychological and physiological benefits associated with natural environments. As this research examines the interconnectedness of mindfulness, nature and wellbeing, these theories establish the conceptual basis for understanding the mechanisms through which nature may promote both mindful awareness and enhanced wellbeing.

1.2 Attention Restoration Theory

Attention Restoration Theory (ART) provides a prominent framework for understanding the cognitive and psychological benefits of contact with natural environments. Developed by Rachel and Stephen Kaplan, ART proposes that exposure to nature supports wellbeing by restoring depleted attentional resources, particularly those associated with directed attention (Kaplan & Kaplan, 1989; Kaplan, 1995). Directed attention refers to effortful, voluntary attention required for tasks such as problem-solving and self-regulation, which is vulnerable to fatigue following sustained cognitive demand.

ART suggests that modern environments, especially urban and technologically saturated settings, place continuous demands on directed attention, leading to attentional fatigue characterised by irritability, reduced concentration, and increased stress (Kaplan & Berman, 2010). In contrast, natural environments engage involuntary or effortless attention, often described as soft fascination, which allows directed attention to rest while maintaining engagement with the environment (Basu et al., 2019; Kaplan, 1995).

ART identifies four key characteristics of restorative environments: being away, extent, fascination, and compatibility (Kaplan, 1995). Natural environments are proposed to embody these qualities particularly well, offering psychological distance from routine

demands, immersive sensory experiences, effortless attentional engagement, and alignment with personal goals (Ohly et al., 2016).

Empirical research supports ART's claims. Experimental studies demonstrate that exposure to natural environments is associated with improved performance on attentional tasks and enhanced mood compared to urban environments, even when controlling for physical activity (Berman et al., 2008; Berto, 2005). Restored attentional capacity has also been linked to improved emotional regulation and reduced stress, extending ART's relevance beyond cognition to broader aspects of wellbeing (Ohly et al., 2016).

While ART has been widely supported, scholars note that restoration may not be exclusive to natural environments and that individual differences and cultural context influence restorative outcomes (Joye & van den Berg, 2011). Nevertheless, ART remains a foundational theory for understanding how nature supports attentional and psychological wellbeing.

1.2 Biophilia hypothesis

Edward O. Wilson's biophilia hypothesis proposes that humans possess an innate tendency to seek connections with nature and other living organisms. A deep evolutionary affinity rooted in our biological history rather than purely cultural preference (Wilson, 1984). The term biophilia was first promoted in this context to describe the innately emotional affiliation of human beings with other living organisms, suggesting that humans are predisposed to respond positively to elements of the natural world (Kellert & Wilson, 2013; Wilson, 1984).

Wilson (1984) argued that human evolution occurred in close and continuous contact with natural environments, where survival depended on the ability to recognise and respond adaptively to living patterns. As societies became more urbanised and technology-based, this evolved affinity was attenuated but not eliminated, resulting in a persistent psychological pull toward natural settings (Wilson, 1984). The biophilia hypothesis thus suggests that the psychological benefits associated with nature contact, such as relaxation, reflection, and emotional balance arise from a fundamental human predisposition that remains partially intact despite modern lifestyles.

Meta-analytic reviews reveal that the emotional dimension of human–nature interaction is salient. A systematic review found that exposure to natural environments is reliably associated with increased positive affect and decreased negative affect, supporting the emotional component of the biophilia hypothesis and offering evidence that engagement with nature can enhance emotional wellbeing (Gaekwad et al., 2022). This aligns with broader findings showing that people’s favourite places often include natural spaces where individuals report feeling relaxed, reflective, and more emotionally balanced.

In addition to stress reduction, research on nature connectedness has shown robust links with psychological wellbeing. For example, individuals reporting higher nature connectedness tend to report greater life satisfaction and meaning in life (Howell et al., 2011; Nisbet et al., 2009). Moreover, connections between nature connectedness and levels of mindfulness have been observed, suggesting that individuals who feel more affinity to nature also tend to score higher on measures of mindful awareness and presence (Howell et al., 2011).

Despite growing empirical support for the psychological benefits of nature exposure, the biophilia hypothesis itself has attracted conceptual and empirical critique. While Wilson (1984) proposed that humans possess an innate, evolutionarily grounded affinity for life and living systems, scholars have questioned whether this claim is sufficiently specified or empirically falsifiable. Joye and De Block (2011), for example, argue that the broad evolutionary explanation behind biophilia is not clearly defined and may simply be used to explain any positive reaction people have to nature. Similarly, Hartig et al. (2014) note that while human-nature relationships are robustly associated with wellbeing, the evolutionary basis of these tendencies remains difficult to test directly. In response to such critiques, some researchers now describe biophilia not as something all humans naturally share to the same degree, but as a tendency that varies between individuals (Joye & De Block, 2011; Woods et al., 2023). Rather than viewing it as a universal evolutionary instinct, it is increasingly understood as a personal disposition. Meaning that some people feel a stronger pull towards nature than others. Nevertheless, the broader implications of biophilia have informed fields beyond evolutionary biology, including environmental psychology, conservation, and design. The notion of biophilic design translates biophilia into intentional built environment features that incorporate natural elements to support human wellbeing, with research indicating that

environments designed with biophilic principles can enhance attention, reduce stress, and promote affiliation with nature (Barbiero et al., 2021; Berto et al., 2015).

The idea of an innate orientation toward nature has implications for understanding broader psychological processes associated with attention and emotional regulation. Both mindfulness and biophilia emphasise present-moment engagement (Brown & Ryan, 2003) and biophilia through effortless attraction to natural stimuli. Studies linking nature connectedness and mindfulness suggest that individuals who feel more connected to nature also score higher on mindfulness measures, implying that nature may support the development or expression of mindful awareness, perhaps because natural settings invite soft fascination and present-centred attention (Howell et al., 2011; Mayer & Frantz, 2004).

Moreover, the emotional and attentional benefits associated with nature exposure resonate with core mechanisms proposed in mindfulness research, such as improved emotional regulation and attentional recovery. Natural environments may provide contexts that facilitate mindful states, supporting both restorative attentional processes and emotional awareness that are central to wellbeing (Kaplan, 1995; Shapiro et al., 2006). Although biophilia does not explicitly invoke mindfulness as a mechanism, the overlapping psychological outcomes such as reduced stress, enhanced affect, and reflective presence indicate that nature's influence on wellbeing may operate through pathways that align with mindfulness theory.

Nature and wellbeing

Over the past two decades, psychological research has increasingly recognised that natural environments are not merely aesthetic backdrops but psychologically active contexts capable of shaping emotional, cognitive, and existential experience. Early theoretical accounts proposed that nature supports wellbeing through attentional restoration or physiological stress reduction; however, contemporary research has extended these foundations through epidemiological, experimental, and meta-analytic approaches. Across methodologies, a consistent pattern emerges: contact with natural environments is associated with improvements in mood, reductions in stress, enhanced cognitive functioning, and broader indicators of psychological wellbeing (Hartig et al., 2014; Twohig-Bennett & Jones, 2018).

Yet the meaning of these associations extends beyond symptom reduction. Increasingly, nature is understood not simply as calming, but as shaping how individuals attend, relate, and make sense of their experience.

Experimental evidence seeks to clarify how nature influences emotional states. Participants assigned to walk in natural settings demonstrate greater improvements in positive affect and working memory than those walking in urban environments, even when physical activity is held constant (Berman et al., 2008). Meta-analytic synthesis similarly indicates reliable reductions in negative affect and increases in positive mood following exposure to natural environments (Bowler et al., 2010; McMahan & Estes, 2015). These findings suggest that even brief interactions with natural contexts can shift affective balance, supporting hedonic dimensions of wellbeing. Yet effect sizes vary, and methodological heterogeneity including differences in duration, environmental type, and measurement cautions against overly deterministic conclusions (Hartig et al., 2014). To highlight this notion, a large population-based study, individuals who spent at least 120 minutes per week in natural environments reported significantly higher levels of health and wellbeing than those with minimal exposure (White et al., 2019). This highlights the varying evidence in which *how* nature is experienced causing benefits to wellbeing.

Beyond mood enhancement, research increasingly points to attentional and cognitive mechanisms. Natural environments appear to redirect attention away from internally repetitive thought patterns and toward sensory engagement. Bratman et al. (2015) found that participants who walked in natural settings reported reduced rumination and exhibited decreased neural activity in the subgenual prefrontal cortex, a region implicated in self-focused processing and depressive cognition. Such findings suggest that nature may facilitate cognitive shifts by interrupting maladaptive attentional cycles rather than merely inducing relaxation. Relaxation implies passive reduction in arousal, whereas restoration implies replenishment of depleted cognitive resources. Experimental studies demonstrate improved executive functioning and attentional control following exposure to natural environments (Berman et al., 2008; Berto, 2005), reinforcing the idea that nature may support psychological functioning through active cognitive recovery.

Physiological evidence aligns with these attentional findings. Exposure to natural scenes has been associated with faster cardiovascular recovery following stress (Ulrich et al., 1991), alongside reductions in cortisol and sympathetic nervous system activation (Twohig-

Bennett & Jones, 2018). Such embodied responses suggest that nature engages regulatory systems at both psychological and physiological levels. However, while these mechanisms help explain short-term reductions in stress and improvements in mood, they do not fully capture the broader and more enduring forms of wellbeing increasingly associated with nature engagement.

Contemporary wellbeing research distinguishes between hedonic wellbeing, characterised by pleasure and positive affect, and eudaimonic wellbeing, involving meaning, vitality, and psychological growth (Ryan & Deci, 2001; Huta & Ryan, 2010). Nature research reflects this distinction. Brief exposure studies primarily demonstrate hedonic benefits, with reliable improvements in mood and stress reduction (Bowler et al., 2010; McMahan & Estes, 2015). However, relational constructs such as nature connectedness appear more strongly associated with eudaimonic outcomes. Meta-analytic evidence indicates moderate associations between nature connectedness and vitality, meaning in life, and flourishing (Capaldi et al., 2015; Pritchard et al., 2020). These findings suggest that while exposure may regulate affect, deeper feelings of affiliation with nature may contribute to sustained existential wellbeing.

Nature connectedness captures this relational orientation. Defined as the extent to which individuals include nature within their cognitive and emotional sense of self (Mayer & Frantz, 2004), it moves beyond quantifying time spent outdoors to consider how individuals experience belonging and identification with the natural world. Research consistently finds that individuals higher in connectedness report greater life satisfaction and positive affect (Mayer & Frantz, 2004; Nisbet et al., 2009), alongside enhanced meaning and vitality (Howell et al., 2011). Importantly, meaning in life has been shown to mediate the relationship between connectedness and wellbeing, suggesting that nature may contribute to psychological health through processes of existential coherence rather than pleasure alone.

Individual differences further illuminate this relational perspective. Not all individuals derive equal benefit from similar environments. Tam (2013) demonstrated that individuals higher in nature connectedness reported greater restorative outcomes following exposure to green environments than those lower in connectedness. Similarly, Martyn and Brymer (2016) found that connectedness predicted resilience and adaptive coping, while lower levels were associated with a reduction in anxiety. The psychological impact of nature depends not solely on environmental properties but on how individuals attend to and relate to those properties.

Qualitative research enriches this understanding by illuminating how nature is experienced subjectively. Participants engaged in outdoor activities frequently describe feelings of immersion, sanctuary, and perspective shift (Brymer et al., 2021). Nature is portrayed not merely as calming but as transformative, offering opportunities for reflection, expanded awareness, and reorientation in relation to daily stressors. Emotional states such as awe, often evoked in natural settings, have been shown to reduce self-focus and increase prosocial orientation (Keltner & Haidt, 2003; Stellar et al., 2018). These experiences resonate with reductions in rumination observed experimentally (Bratman et al., 2015), showing convergence between subjective accounts and cognitive findings.

Overall, the literature positions nature not simply as a restorative stimulus but as a relational and experiential context that shapes attentional patterns, emotional processing, and existential interpretation. Exposure-based accounts explain short-term mood improvements and cognitive recovery, yet they do not fully account for the deeper shifts in meaning, identity, and affiliation increasingly associated with sustained nature engagement. Nor do they clarify how individuals actively engage with natural environments in ways that facilitate these outcomes. This gap becomes particularly salient when considering the role of mindfulness, which foregrounds attentional awareness as central to psychological transformation. It is at this intersection between environmental context and attentional engagement that the integration of nature and mindfulness becomes theoretically significant.

Nature, Mindfulness, and Wellbeing

Research increasingly suggests that the psychological benefits of natural environments cannot be fully explained by exposure alone. While contact with nature has been shown to improve mood and reduce stress, growing attention has turned toward how individuals *attend* to natural environments and how this attentional engagement shapes wellbeing. Mindfulness, defined as present-moment awareness characterised by openness and non-judgement (Brown & Ryan, 2003), offers a process-oriented lens through which the effects of nature may be better understood. Rather than conceptualising nature as a passive backdrop for restoration, this emerging literature positions wellbeing as arising from the dynamic interaction between environmental context and attentional awareness.

Early work examining the relationship between mindfulness and nature connectedness found consistent positive associations between dispositional mindfulness and feelings of affiliation with the natural world. Howell et al. (2011) reported that individuals higher in trait mindfulness were more likely to experience nature connectedness, and that this relationship was associated with greater life satisfaction and meaning in life. Similarly, mindfulness predicts pro-environmental attitudes through increased connectedness, suggesting that mindful awareness may heighten sensitivity to environmental context (Unsworth et al., 2016). A meta-analysis confirmed a reliable positive relationship between mindfulness and nature connectedness across multiple samples. These findings indicate that individuals who are more attentive and present in everyday life may also experience stronger relational engagement with natural environments (Schutte & Malouff, 2018).

However, trait-level correlations do not clarify whether mindfulness precedes connection, or whether nature itself cultivates mindful awareness. Experimental research provides more direct insight into this interaction. In a study comparing mindfulness practice conducted indoors and outdoors, Lyneus et al. (2018) found that participants engaging in mindfulness exercises within a natural setting reported greater improvements in wellbeing, including attention restoration and nature connectedness, than those practising indoors. The intervention was identical across conditions, suggesting that environmental context amplified the effects of mindful attention. Similarly, Nisbet et al. (2019) instructed participants to engage in deliberate mindful noticing during a nature walk and found greater increases in positive affect and connectedness compared to passive exposure conditions. These findings suggest that mindful attention may deepen engagement with natural features, enhancing emotional and relational outcomes beyond exposure alone. Other intervention studies have reached comparable conclusions. Franco et al. (2017), examining mindfulness integrated into outdoor educational settings, reported improvements in emotional regulation and environmental awareness. Together, these findings suggest a reciprocal relationship in which mindfulness may enhance sensitivity to nature, while natural environments may support or scaffold mindful states. The sensory richness and absence of competing cognitive demands in natural settings may facilitate present-moment awareness in ways that urban environments do not.

Emerging research has begun to examine whether mindfulness functions as a psychological mechanism linking nature engagement with wellbeing. Barbaro and Pickett

(2016) reported that mindfulness partially mediated the relationship between nature connectedness and subjective wellbeing, suggesting that mindful awareness, in particular the Observing facet, may translate relational affiliation into psychological benefit. Similarly, Sadowski et al. (2022) found that increases in mindfulness following participation in nature-based programmes predicted reductions in perceived stress and improvements in life satisfaction. By assessing the five facets of mindfulness, they found Observing and Non-reactivity to have the strongest relationship with positive subjective well-being. These mediation findings imply that mindfulness may serve as a bridge between environmental context and emotional regulation, though causal direction remains complex.

Importantly, mindfulness is multifaceted, and not all aspects may relate equally to nature engagement. Research using the distinguishes between observing, describing, acting with awareness, non-judging, and non-reactivity (Baer et al., 2008). Evidence suggests that the observing facet characterised by noticing internal and external sensory experiences, may be particularly relevant in natural contexts. In a network analysis examining relationships among mindfulness facets, nature connectedness, stress, and meaning in life, Capizzi and Kempton (2023) found that observing emerged as a central bridge connecting nature connectedness with wellbeing indicators. While their cross-sectional design limits causal inference, the finding is theoretically meaningful. Observational awareness, rather than evaluative restraint or non-reactivity, appeared most closely linked to how individuals experience nature and derive psychological benefit.

This emphasis on observing aligns conceptually with environmental psychology's description of natural environments as engaging "soft fascination." Sensory stimuli such as moving water, shifting light, and textured foliage may invite effortless attentional engagement. In this context, observing may not feel effortful, but rather embodied and immersive. Bratman et al. (2015) found that participants walking in natural settings demonstrated reduced rumination and decreased neural activity in regions associated with self-focused processing compared to urban walkers. Although not framed explicitly in mindfulness terms, these findings suggest that sensory engagement with natural environments may redirect attention outward, reducing repetitive cognitive patterns associated with distress. Observing in nature may therefore operate not only as internal monitoring, but as externally anchored awareness.

Qualitative research supports this interpretation. Participants describing time spent in natural environments frequently report feelings of immersion, groundedness, and expanded perspective (Brymer et al., 2021). Such accounts resonate with mindfulness processes yet extend beyond symptom reduction. Individuals often describe experiences of awe, humility, and connection that contribute to shifts in self-understanding (Monroy & Keltner, 2022). These emotional states have been linked to reduced self-focus and enhanced psychological wellbeing (Stellar et al., 2018), suggesting that mindful engagement with nature may support both emotional regulation and existential reflection.

Despite growing evidence for integration between nature and mindfulness, several methodological considerations warrant attention. Much of the literature relies on self-report measures that may inflate associations due to shared conceptual content (Brown & Ryan, 2003; Van Dam et al., 2018). Constructs such as observing, connectedness, and awareness overlap linguistically and theoretically (Baer et al., 2006). Additionally, many intervention studies involve short-term exposure and relatively homogeneous samples, limiting generalisability (Van Dam et al., 2018). The directionality of effects remains uncertain, and few studies also examine sustained changes over time.

Nevertheless, converging experimental and correlational findings suggest that the interaction between mindful attention and natural environments may produce psychological benefits that extend beyond either process in isolation (Unsworth et al., 2016). Natural settings appear to facilitate observational awareness through sensory engagement and reduced cognitive load, while mindfulness practices may deepen relational and reflective engagement with those settings. Together, these processes may contribute to both hedonic improvements in mood and eudaimonic shifts in meaning and vitality.

What remains underexplored, however, is how individuals subjectively experience these processes. Quantitative research identifies associations, mediators, and central facets, yet it cannot capture how observing feels while walking through nature. It does not illuminate whether awareness is experienced as deliberate practice, effortless immersion, grounding, expansiveness, or transformation. Nor does it clarify how individuals integrate such experiences into broader narratives of wellbeing and identity. Exploring such experiences can offer insight and inform future interventions and mindfulness-based practice.

Conclusion

The existing literature converges on the view that engagement with natural environments supports psychological wellbeing through multiple, interacting pathways. Experimental research demonstrates short-term improvements in mood and reductions in stress, while attentional studies suggest that nature may interrupt rumination and replenish depleted cognitive resources (Berman et al., 2008; Bratman et al., 2015). At the same time, relational constructs such as nature connectedness highlight deeper, eudaimonic dimensions of wellbeing, including meaning in life, vitality, and psychological growth (Capaldi et al., 2015; Pritchard et al., 2020). Increasingly, mindfulness research intersects with these findings, suggesting that the quality of attentional engagement, particularly observational awareness, may shape how individuals experience and integrate natural environments into their sense of self.

Despite this growing body of quantitative and theoretical work, much of the evidence remains focused on measurable outcomes, statistical mediation, and short-term interventions. These approaches may clarify patterns of association and potential mechanisms; however, they provide limited insight into how individuals subjectively experience mindful engagement in natural settings.

Interpretative Phenomenological Analysis offers a means of addressing this gap. By foregrounding lived experience, embodiment, and meaning-making (Smith et al., 2010), IPA enables exploration of how individuals interpret and make sense of mindful attention within natural contexts. Rather than treating wellbeing as a variable to be measured, this approach conceptualises wellbeing as relational, situated, and experientially constituted. In doing so, qualitative inquiry does not replicate quantitative findings but deepens understanding of the processes through which mindfulness in nature becomes psychologically meaningful. The following chapter therefore outlines the methodological framework through which these lived experiences are explored.

Chapter 2

Methodology

This study adopted an Interpretative Phenomenological Analysis (IPA) methodology to explore participants' lived experiences of mindfulness in nature and how they made meaning of these experiences in relation to wellbeing. IPA is concerned with examining in detail how individuals perceive, interpret, and make sense of experiences in their lives (Nizza et al., 2021), making it particularly suited to the aims of the present study where a qualitative in-depth analysis contributes to understanding the processes in nature that support wellbeing.

IPA draws on phenomenology, in its commitment to exploring how experiences appear to participants in their own terms. IPA does not bracket interpretation entirely; instead, it recognises that access to experience is always mediated through language and interpretation (Smith, 2022). Participants are therefore understood as experiential experts, while the researcher engages interpretatively with their accounts.

Hermeneutically, IPA recognises that access to experience is indirect and interpretative. The analysis involves a double hermeneutic process, whereby participants sought to make sense of their own experiences of mindfulness in nature, and the key researcher engaged in a second-order interpretation of that sense-making (Smith, 2022). This acknowledges that findings emerge through an active interpretative engagement between participant and researcher, rather than direct access to experience.

IPA's idiographic commitment emphasises detailed, case-by-case analysis before looking for patterns across participants. This enables an in-depth exploration of each participant's unique relationship with mindfulness, nature and wellbeing before identifying shared experience across participant accounts and experiential themes. IPA's aim of depth over breadth (Smith, 2022) meant that it was well suited for the limited time this study could be carried out in due to University deadlines and the smaller participant sample.

The analysis assumed that participants' accounts reflected their lived experience while recognising that such accounts are shaped through language and interpretation- what the

participants said in post-walk questionnaires, recorded observations, and in interviews were connected to the reality of their experience.

Overall, IPA was an appropriate methodological approach for this study as it allowed for a reflective, nuanced and context-sensitive exploration of how individuals experienced mindfulness in nature and how this experience was understood as contributing to their wellbeing.

Participants

Participants were recruited via the social media platform Facebook using a purposive sampling strategy, consistent with IPA's emphasis on recruiting a relatively homogeneous sample with shared experience of the phenomena under investigation (Smith, 2022). Recruitment targeted individuals with an interest in mindful walking in nature in order to facilitate rich, in-depth accounts aligned with the study's aim.

Access was requested to join three New Zealand-based Facebook groups focused on mindfulness and nature-related interests. Following approval to join the groups, a recruitment poster outlining the study's purpose and primary task was shared within the mindfulness and nature-related Facebook groups. (See Appendix A). Twenty-one individuals expressed interest in participating and were emailed an information sheet detailing the study's purpose, design, inclusion criteria, potential risks and benefits, safety considerations, confidentiality, participant rights, withdrawal procedures, and researcher contact details (See Appendix B).

Five individuals returned signed consent forms and were included in the study. The inclusion criteria were not strict; however, participants needed to express interest in nature, mindfulness and wellbeing. Although recruitment was open to adults 18 years and over, all participants who completed the study were adults aged 35 years and above. Age was not an inclusion criterion, and no analytic claims were made regarding age-related differences. The final sample comprised four female participants and one male participant, all of whom reported prior knowledge of, or personal experience with, mindfulness practices and described a pre-existing connection with nature. One participant did not complete the mindful walks and was therefore excluded from the final analysis, resulting in a final sample of four

participants. This sample size was considered appropriate given IPA's idiographic commitment to detailed, case-by-case analysis.

Ethical considerations

Ethical considerations were integral to the design of this study. This project underwent peer review and was deemed low risk; therefore, it did not require review by Massey University's Human Ethics Committees, but were notified.

Informed consent was obtained from all participants prior to participation. Confidentiality and anonymity were maintained throughout the study, with pseudonyms assigned to participants and identifying information were removed from transcripts. All recorded interviews, recordings, and transcripts were stored on a secure password-protected device that only the key researcher had access to. Upon completion of this project, all data will be securely destroyed.

Participants were informed of their right to withdraw from the study at any time. Potential impacts on wellbeing were considered, and participants were advised that they could seek support from their general practitioner if participation raised any concerns. Prior to interviews, participants were reminded that they were not required to answer any questions they felt uncomfortable with. Care was also taken to represent participants'; accounts respectfully and accurately in the final analysis.

Study design

The study design and participant tasks were outlined in the information sheet. Following return of consent forms, participants were contacted via email to discuss any questions, provide further clarification, and ensure all participants felt adequately prepared to participate.

In line with IPA's commitment to exploring lived experience (Noon, 2018; Smith, 2022), this study aimed to understand how participants experienced mindfulness while walking in nature and how these experiences related to their wellbeing. Participants were asked to engage in a minimum of three mindfulness walks in nature over a one-month period, with each walk lasting at least 25 minutes. No maximum number of walks was set, allowing participants flexibility and supporting depth of engagement. This approach was informed by research suggesting that longer time spent in nature has been linked to enhanced wellbeing outcomes (White et al., 2019).

During their walks, participants were invited to observe any thoughts, feelings or perceptions while simultaneously observing their natural surroundings. Participants were asked to record moments they perceived as meaningful using methods that suited them, including photographs, videos, writing reflections, or voice recordings. Importantly, these were intended to support the semi-structured interviews, rather than serve as a separate data source. Participants were advised to prioritise mindful engagement during the walks and to record reflections only when moments felt significant, ensuring that their attention remained on the experience itself.

Post-walk reflections

Following each mindfulness walk, participants completed a brief post-walk questionnaire (See Appendix D). This included open-ended questions including "How did you feel before your walk?", "How did you feel after your walk?", with space for any additional reflections or insights.

The purpose of these post-walk reflections was to capture participants' immediate experiences and emotional states while they remained fresh in their mind and to provide supplementary material to inform the semi-structured interviews. Excerpts from these reflections, as well as their media recorded observations were occasionally drawn upon during analysis to illustrate participants' meaning-making. These materials were interpreted using IPA principles, ensuring that the focus remained on participants' lived experiences as expressed primarily through interviews.

Interview procedure

Upon completion of their mindful walks, participants were invited to take part in a semi-structured interview conducted via Zoom, or in person where possible and at a time convenient to them. Semi-structured interviews were chosen to align with IPA's phenomenological aim of eliciting participants' meaning-making while allowing flexibility to follow individual experiences (Alase, 2017).

Each interview began with the same questions, including: "When you think about nature, what does that mean to you?", followed by "When you think about mindfulness, what does that mean to you?" These initial questions were designed to orient participants towards initial meaning-making and lived experiences consistent with phenomenological principles (Alase, 2017). A set of guiding questions was used across all interviews to explore participants' experiences of mindfulness in nature, with flexibility to follow their unique interpretations. Post-walk questionnaires and participant-generated recordings were used to prompt discussion, but interviews remained the primary dataset.

During the interviews, participants were encouraged to elaborate on significant moments from their walks, including reflections captured in photographs, voice recordings, written observations, or video recordings. These materials were interpreted in line with IPA principles, ensuring that the focus remained on participants' lived experiences rather than treating recordings as independent data. All interviews were recorded via Zoom and transcribed using Otter, with transcripts manually checked against audio recordings for accuracy.

Analysis

The study followed steps for IPA analysis recommended in the literature. First, transcripts were read and re-read to become familiar with each participant's lived experience.

Next, an idiographic approach and critical realist position were applied where language is believed to reflect experience (Oxley, 2016). Transcripts were re-read, and

significant statements, quotes, or key words were highlighted that illustrated how each participant experienced mindfulness in nature and how the experience made meaning to their wellbeing. An important part of this step and recommended by Smith (2022) is to separate yourself from the phenomena being investigated by acknowledging and reflexively engaging with preconceptions about the lived experience under investigation.

Once there was a list of significant statements, quotes, and sentences, superordinate themes were constructed between each transcription individually, which was followed by a written narrative of their unique lived experience.

Following, a cross-case examination took place that highlighted common themes between participant accounts. Patterns of convergence and divergence were identified across participants, allowing shared experiential themes to emerge while preserving idiographic nuance. A comprehensive document was made for each superordinate theme and the subsequent participant quotes. Participant recordings and post-walk reflections were used selectively to illustrate themes and support interpretation, rather than serving as separate datasets. The final thematic structure was refined iteratively through engagement with the data and relevant psychological literature, consistent with IPA's interpretative and hermeneutic foundations.

Reflexivity

IPA acknowledges that the researcher's perspective can influence the interpretation of participants' experiences. As a researcher with a personal interest in mindfulness and spending time in nature, I entered this study with an appreciation for the potential therapeutic qualities. I am aware that my own experiences in natural environments could predispose me to notice similar themes within participants' accounts. Throughout the analysis, I actively bracketed these preconceptions by attending closely to the nuances of each transcript and by noting moments where my expectations might be influencing interpretation. I aimed to remain open to experiences that differed from my own and to recognise the diversity in how individuals relate to mindfulness in nature. My goal was to interpret participants' meaning-making without allowing my own preferences or assumptions to dominate the analysis.

A reflexive diary of personal experience was maintained throughout data collection, where it was used to note assumptions, biases, and interpretive decisions. This practice supported continuous self-awareness and helped ensure that interpretations remained grounded in participants' lived experiences. By integrating reflexive practice, the study aimed to balance the researcher's insights with participants' perspectives, consistent with IPA's double hermeneutic approach.

Chapter 3

Results

Cultivating inner stillness and presence

This theme captures participants' experiences of developing an internal sense of calm and peace during their mindfulness walks in nature. Participants consistently described feeling balanced, peaceful, relaxed, calm, centred and cleansed throughout each and all three walks in nature. This suggests practising mindfulness in nature supports a sense of inner stillness and a grounded embodied state. Two subthemes have been extracted from this theme including *Inner peace through mindful presence*, and *Heightened sensory awareness grounding an embodied experience*.

Inner peace through mindful presence

Participants experienced a sense of peace emerging through grounded presence during their walks. An inner peace appeared to be felt not only due to mindfulness presence but being “surrounded in nature”. Mary explained this saying,

So I crossed over to a peaceful feeling, but the sustained calmness really embedded. The more the walk went on, or maybe it's because I was surprised that it stayed. ... I thought my mind would jump all over the place. And I really think it was because there was just nature all around me that I was able to remain calm.

Mary's account suggests that her calm progressively deepened over time. Her surprise that the calmness stayed could reflect a sustained mindful state and she acknowledges the source of this inner peace as immersion in nature which shows the environment supported her ability to be and remain present.

Helens account of peace were similar which she points to the presence of nature, in particular, the smells in nature as a trigger for peace.

Instant peace – I took a photo to capture the feeling, but the feeling was really triggered by the smell rather than by the visual input. As soon as [I] was past the sign for the walk the smell of freshness just hit me and I felt peace.

Mary and Helen had similar experiences of a deepening calmness. Both participant accounts position nature as central to the experience of inner calm and suggests that peace was accessed via mindful presence. Helen reflected on longer walks in nature showing feelings of peace magnified after day two due to being physically tired resulting in an overall slower pace.

It's like the like, when I do 2 days, like, on the first day, there's you know, it's peaceful. It's wonderful, but, you know, you're kind of trying to be efficient, getting to the hut on time. It's you know, like, you still got a little bit of that going on. Whereas the second day, it's almost like because you're just going back to your car anyway, so you kind of want to get there at a certain ideal time. But your body is tired and you're walking, and you're okay with walking. You know, body's not too tired to walk, but you probably slow down a little bit. You know? It takes a little bit longer, and so that tranquillity is there a lot more.

Going at a slower pace appears to minimise the amount of thinking and facilitates presence and acceptance which in turn offers an experience of tranquillity.

Using facets of mindfulness assisted the sustained mindfulness presence. It appears that Describing, Observing and Acting with awareness facilitated internal feelings of peace. Mary provides an example of using these facets saying: “I felt like I was feeling, because I was being present, I felt like I was aware that I was being calm, at peace, just kind of balanced, yeah, balanced”. Having this awareness and sustained presence in the moment engrained the inner peace and allowed her to fully experience her emotional state.

Mary’s awareness of her own calm suggests an inward directed mindfulness state where observing and describing emotions reinforced feelings of peace and balance. In contrast to an internal emotional observation, John’s experience of inner peace appeared to be facilitated through an outward attention to nature and the environment.

Being in pasture land like that, um, can still be pretty cool and just you know walking amongst or amongst animals when they're across the fence, um, so yeah, that's to me what I like about that is just the natural contours, the rolling shape of the land, and then man's imprint on it. You know, that it's standard pine trees there, um, and that's you know it's being farmed obviously, uh, but again, that can be something that you know I find that quite peaceful being in that situation, there.

Caroline's experience aligned with a similar process to John. She compared her experience to "meditation" saying

So now I've found a posy in the sun, it's getting quite hot, there's just a gentle sea breeze coming up, I'm just sitting here totally relaxed, totally relaxed. ... It's kind of like a meditation thing, ... soothing, relaxing.

John and Caroline's account's suggests that engaging in visual and spatial aspects of nature anchored them to the present moment. It appears to reflect a different pathway to mindfulness and suggests directed attention in sensory experiences of nature provides an alternative to inner peace.

All participants associated inner stillness was accessed via solitude. John noted he is not an "isolationist ... and yet there are times when it's good to be alone". A particular "wild and natural" area on one of his walks that struck him as peaceful was captured by a photograph and spoken about in the interview.

... It's quite secluded, so there's no people tend to go through there ... so that's a very natural area and it's a very very peaceful area because there's no other human beings there". He went on to reflect these peaceful areas were an ideal place to be mindful, "that's a good part of this whole exercise is the thinking about being alone, because the way I interpret it is that that's a very it's the solo thing it's you know you're doing it by yourself without distractions.

This exert suggests solitude further engrained John's inner peace through mindfulness presence which Caroline described a similar process saying,

If I want to be social, I'll go out and find people to be social with, but I don't go ... to be social, yeah I just want to go and be by myself and sort my head out and enjoy myself ...

Helen illustrates how being alone facilitates a care free mind set where being alone relates to an escape.

It's just that I guess that I feel at ease, ... So it's I guess it's still that kind of sense of escaping or ... just sort of being self-sufficient as well. ... it's just me here. Like, I don't need to necessarily think about the needs of another person or, how I appear to another person or anything like that.

Mary's account appeared to align with Helens which was felt in the middle of the bush on a rainy day which was shown in a photograph she captured. She reflected: "There's no one here. It's just, I was like, Christ, if a dinosaur came out of here, that would be perfectly normal. This is so cool. There was no one there". When prompted to reflect on her feeling of peace and being alone, Mary said: "I'm just wondering if I'm bringing back about childhood again [laughs] because I'm like associating alone with peace ... Because I used to go alone a lot". ... we lived on a few farms and one of them there was an old cottage that was falling down. ... I'd hang out in there with my duck and my dog. So when I said it was peaceful and alone, I was like, I'm associating alone with peace again?

The that is reflected on in participant accounts illustrates the importance of being alone in nature to access a mindfulness presence which further facilitates inner stillness.

Heightened sensory awareness grounding an embodied experience.

Across all participants, heightened sensory awareness was a prominent feature of their mindfulness walks which grounded them in an embodied experience of the present moment. On arrival to her Blue nature space, Caroline reflected how a visual and sound experience of nature caused an instant cleansing effect, "Now I can see the beach and I can hear it, I just think ohhh I'm here and just the sound just cleanses me".

Mary's account describes heightened hearing and visual senses facilitating an inner calmness. "My hearing, my senses were definitely heightened. ... really noticed how green everything is and how much calmer it makes me feel being surrounded by with all the green, green, green". This account suggests Mary was grounded in presence through sensory engagement which fostered a calm state. Further she made sense of her embodied experience saying "it [mindfulness] takes me out of my head and thoughts to actually 'being', like human being not human doing or human thinking or human working, but human being". Similarly, John engaged in the sensory experience in nature and illustrates a bigger picture of sense awareness through all of his senses and linked his process to be surrounded in nature's elements.

Because you've got all those natural things around you and it mightn't just be the trees and the moss under your feet. It might be the birds and the wind. But, yeah, that's, that's a that's a biggie to me.

John's process highlights how an embodied sensory exploration facilitated mindfulness. This engagement with nature appeared to deepen a presence and moreover, transform a nature walk into a sensory experience.

For Helen, exerting energy in the wild engaged a direct attention to her body and movement. She explains this saying,

Our body does so much stuff automatically. You know? Your brain goes, you know, I want the biscuit, and then you don't think about the fact that your body walked to the cupboard and your hand stretches out to get it. You know? But but I think, like, when you're out, you're walking uphill, you are exerting yourself and walking on uneven terrain and all of those things. You become very, very aware of what your muscles are doing and your balance and all of those things. It's like it takes you out of the more abstract processes of your brain to concentrating on where you're putting your feet. ... you're noticing every time your foot touches the ground because it's going to be a different feeling each time you put it down. You notice how you're, you know, you're climbing up the hill. You . . . will notice, you know, your glutes working a certain way. You'll notice exactly where you're placing your weight and everything. It's like you're very, very, very aware of your body. I suppose it would be similar, you know, somebody who does yoga or something like that.

It's the same kind of, you know, where you become very aware of the workings of your body.

This account illustrates how the combination of the natural environment and physical activity demands attention and heightens an awareness of the body's workings. This heightened awareness reflects mindfulness presence in particular acting with awareness.

Emotional regulation and Restoration

This theme captures how participants experienced mindfulness in nature as a way to alleviate stress, regulated emotions, and replenish mental and physical resources. Across accounts, participants described a transition from cognitive busyness and emotional urgency towards states of calm, presence and renewed energy. The subtheme *alleviation of stress and emotional burden* and *restoration and replenishment* illustrate how mindfulness in nature can function as a dynamic process enabling participants to step away from stressors and experience a renewed mindset.

Alleviation of stress and emotional burden

Throughout this research participants consistently illustrated mindfulness and nature alleviated stress by reducing feelings of pressure, tension, and worry. The natural environment removed participants away from common demands on their mental load and allowed them to detach from daily stressors. It is important to note, stress was presented as future-oriented worry, an emotional urgency, and cognitive busyness. Mary explains the combination of nature and mindfulness shifted her internal emotional state from being overwhelmed to calm and illustrated a border between stress and calm.

... it was kind of like I crossed the border between the crazy and the calm. ... between like uh noisy traffic, busy, busy demanding clients, like so much going on ... it felt immediate I was like oh good lord and that's, yeah that's when I noticed the karaka seedlings, yeah it was just like twing!

This suggests there was an instant calming effect from nature which appeared to engrain deeper throughout the nature walk through the process of directed attention towards elements of nature including seedlings.

It definitely took me from being harried to being calm. Because I think on nearly every one of the walks prior to it, I was like, rushing, rushing, rushing or busy, busy, busy thoughts and then when I came out the other end I was like, oh god so calm.

For Helen, the transition from stress to decompressed took slightly longer than Mary as she highlights in the next passage. Helen captioned a photograph during her walk as ‘cleansing’ and explained “At this point in my walk (an hour and a bit in) I felt as if I had been cleansed of bustle, people, busyness, stress... I had decompressed”. This suggests the mindfulness walk in nature facilitated a release of mental and emotional tension. Further, she makes sense of this experience saying,

If I walk for a couple of hours and I sit down, then it doesn't stop. Like, I'm still able to be in that mindful space even though I'm not moving. But I think it's just as opposed to whatever stress hormones need to get out of your body.

It appears that upon decompressing, Helen felt more mindful. Comparably for Caroline, nature and its components facilitate a decompression and a space to calm down. Her walks appeared to be intentional as she said “Whenever I, you know, feel the need to go and, like, have a walk and just kind of decompress and calm down, it's I'm usually hot and bothered and sweaty and thoughts in my brain”. Acting with awareness seemingly caused a cleansing effect in her emotional state saying “it just feels like it cleanses me and gets rid of all the negativity”. She described the process further,

I always found as I started walking, then you kind of reflect back on what's happened, you know, how that made you feel, what you could have done, what you could have said. And as you process things, and you've got some waves around you, the sun, the wind and all of the nature, you just kind of just relax more.

John who explains himself as a “doer”, mindfulness in nature appeared to be a contrast to a usual walk in nature. Illustrating he can “get distracted”, John appeared to experience a shift

from future oriented and busy thoughts to a relaxed state. He says “because of the busyness of the of the morning ... My head was spinning with thoughts and ideas” which shifted to “By the time I finished my walk I was a lot more relaxed and thinking about the things I had seen, the not the business of the day”. This indicates a reduction in tension was achieved through mindfulness presence in particular, observation of the natural environment.

Being in the here and now signals an important process enabling mindfulness presence and in turn assisted participants to veer away from future-oriented thoughts that can impact on their cognitive load. Helen suggests getting to a specific point where everything falls away.

Nothing else matters. ... on each walk, I get to this sort of bliss point or whatever where it's like I'm really just here, and the other stuff goes away ... I know that those things matter in the background and they'll matter again, but right at this moment, they don't matter.

Similarly, John reflected the same present awareness and revealed observing nature as his process to be mindfully present.

This whole exercise ... in terms of focusing on nature and the mindfulness thing has really been invigorating for me because it's caused me to actually do these three walks consciously and think about it and be in the zone whereas normally I don't. I just I do a lot of exercise and I like to get out in places, but I'm always thinking about what's next on the agenda, what's on my to-do list, whereas this has caused me just to sit back and think about just to be conscious of what's happening here and now.

This exert suggests, through observation an engaged presence with the natural environment is achieved drawing attention away from future oriented thoughts such as to-do lists.

Caroline appeared to approach two out of three mindfulness nature walks with an intention to decompress when she felt “wound up or something’s happening in my life”. This suggests a pre-existing awareness of the benefits nature holds for her well-being. Her account illustrates a decompression upon entering the natural environment, which is described as a transformation from psychological overwhelm to emotional relief. She voiced this shift expressively,

You kind of getting like [overwhelmed gestures and sound] and sort of walk on the beach and then you just kind of like [sigh of relief] here I can relax, all that's behind me. ... It's like a different world. So when you get there, everything's behind you.

The natural environment Caroline chose to walk in is experienced as an alternate world where worries and stress dissipate. Nature appears to be central to her sense of relief and acts as a boundary between stressors and relief. Further evidence of relief appeared in Caroline's recordings where she experienced emotional burden prior to her walks. Feelings such as "despondent", "sad", and "upset" were noted including the urge: "needed to clear my head", suggesting again mindfulness nature walks were taken in response to emotional distress.

An important component of Caroline's mindfulness process in nature is her use of "self-talk ... it's just you and again, it's the feeling of being positive and you know, you say, it doesn't matter". She further reflected after her walk,

It showed me how I approach situations I am not sure about – which made me more confident about the personal situation I was dealing with – how I see every difficulty as a challenge and an adventure where who knows what might happen.

The above excerpts illustrate the use of mindfulness processes in particular, non-judging and non-reactivity towards emotional distress. This process also frames how difficult situations create an enhanced sense of confidence and an opportunity for personal growth.

Participants' accounts illustrate that distractions occur as a natural part of lived experience during mindfulness walks in nature. Importantly, these distractions at times drew attention away from mindful presence towards particular stressors while simultaneously experiencing relief from stress. For Helen, technology presented as an interruption from feeling decompressed. She captioned a photograph from her walk "Perfect tranquillity" and explains "Feeling very 'decompressed', very tranquil, very settled, very removed from stressors. (funnily enough straight after this photo I hit cell phone reception and got several messages that reminded me of stressors!!!!)" When prompted to reflect on the ease of rejoining a mindfulness presence, the time varied. Helen suggested it depended how long she had been on a mindfulness walk in nature and explained "... if it's early on, it takes longer ... it's like, ... on the second day, I think I come back down from the stress quite quickly because I'm

quite distressed already”. This suggests that extended time spent in a natural environment may cultivate a deeper mindfulness presence supporting in the management of natural distractions and stressors with ease to regulate and reorientate emotions and attention back to feeling decompressed.

Similarly, Mary experienced an unexpected distraction that caused an emotional response. She reflected on hearing the sound of a Mr Whippy truck during her mindfulness nature walk that triggered a childhood memory which caused “a lot of stress ... it was kind of sad, but yuck too, hearing it.” She describes the process of this distraction saying,

I heard that, and honestly, in my mind, I got these visuals of this mechanical hand, so weird, coming in and going, [grabbing motion] trying to pluck me out [of the mindfulness experience]. ... and I was just like ‘Rahh!’”

This experience reflects how attention can be drawn away from a mindful presence if an emotionally charged distraction arises. When prompted to reflect on the non-judgement facet of mindfulness, Mary shared that she experienced judgements in this particular moment however, the following exert demonstrates the development of mindfulness skills such as reorientation and awareness and how she was brought “back to centre” swiftly. Mary reflected saying,

... I was just like, breathe, and then back [clicks fingers]. ... I had those thoughts and I was breathing and back so honestly, thirty seconds. ... then I kind of just dove back into the green inner peace. ... I was able to catch it, whereas not on, not being on the mindful walk, that lag is way longer, way [emphasis] longer. Yeah, it was instantaneous.

The swift return back to mindfulness awareness suggests the emotional distraction was not experienced as a failure of mindfulness, but as an opportunity to practice regulation. As a collective, these participant accounts illustrate a strengthening of mindfulness skills and a capacity to notice a distraction, disengage from, and return to the present moment with nature.

Restoration and Replenishment

Participants experienced restorative effects during their mindfulness walk. For all four participants a walk in nature outside of this study involved thinking about to-do lists, what was next on their agenda, getting distracted by busy thoughts and walking for exercise benefits. Mindfulness presence in nature altered their experience by releasing the need to think about commitments, responsibilities, or workload restoring their energy.

Johns mindfulness walks illustrated a restorative process resulting in increased energy levels. Taken from his post walk questionnaire, John describes “Prior to the walk in a busy frame of mind with a lot happening”. This particular walk involved a slower pace than normal with a “deliberate mindset of observing and taking notice of my surroundings meant I noticed things I normally wouldn’t” his examples included “Light on long pointed Raupo stalks . . . Pohutukawa leaves shining brightly.” This soft fascination of nature allowed John’s directed attention to restore itself and rest leading to feeling: “Energised and re-purposed and more calm”. Mary had a similar experience prior to her mindfulness nature walk where she was feeling rushed, a lot on her mind and experiencing demands from her business. Her energy increased within a short time into her walks she shared,

Energy levels increased at around 10 minutes. Yeah, then I started going up tracks that I've never been up. But they were like steep steps and I like, didn't even question it, I'm like hell yeah! . . . I think what it did was kind of put everything back on track. And I did that calm thing again, where I went back to this calm space. . . . there was definitely something about being mindful, present with nature, that just elevated how I was feeling. And then all that tiredness and the work and the stuff just fell away, if that makes sense and I just felt centred and definitely invigorated.

It appears Mary experienced a restoration in mental and physical aspects upon being mindful in nature which further influenced a desire to take part in more physical activities post mindfulness walk: “This walk surprised me because I felt so much more lightness, energy, calm afterwards. I was even able to go to a gym workout and then for a swim as I felt invigorated and focused”.

All four participants reflected on the combination of mindfulness and nature had restorative effects however for Caroline, exercise was an added key component in her restoration process. She expressed,

It's everything, like ... I'm just thinking, if I'm at home and like I'm in the garden, it's kind of the same but not, it's like the physical movement, the physical feeling and the thinking, Yes, as I said, you get the positivity and then you think, right, I can do anything. Then you're more energized.

Caroline's exert suggests how the combination transforms into energy and a repurposed mindset. Going for longer mindfulness nature walks than the other participants, it can be understood Helen did not experience the same restoration in energy. However, it appeared she gained a replenishment in a depletion of mental and emotional physiological resources. This is illustrated vividly in her post walk questionnaire where she reflected on her week.

The week before had been quite a mixed week, with some good things happening (the publication of a research article) but also some real challenges at my work. Was feeling quite stressed and on edge most of the week, and dissatisfied with many things, including my own actions in some situations.

Post mindfulness nature walk, Helen feelings had transformed while simultaneously experiencing physical exhaustion.

Apart from the sheer physical exhaustion I felt elated after the walk, and the elation has lasted three days so far. Of the impressions I wrote down during the walk, the ones that have been most prominent afterwards are the first two – the feelings of powerfulness and opportunity.

It can be suggested that mindfulness in nature aids emotional and mental replenishment from feelings such as dissatisfaction. Further and which could benefit from more data, depending on the length of the walk, there may be a threshold where energy levels head towards depletion. The lasting effects of elation shown in Helen's account reflect what important benefits mindfulness in nature can have beyond feeling exhaustion from the physical activity.

Deepening connection with Nature

Prior to this study, all participants described an existing personal connection to nature. The interviews illustrate this connection deepened through mindfulness engagement in nature and beyond the study period. Two subthemes were identified from the overarching theme of Deepening Connection with Nature, *Enhanced sense of connection and belonging*, and *Experiencing awe, beauty and wonder*. These subthemes reflect participants emotional and perceptual experiences of nature alongside the meanings they ascribed to these encounters.

Enhanced connection and belonging to nature

All participant accounts reflected an enhanced connection to nature, often experienced as a reminder of the importance for their well-being. Mary reveals her connection to nature reawakened an awareness that she felt had diminished through everyday busyness. She reflected, “It reminded me, like I said, how important nature is to me and I kind of lost that disconnect when I was rushing around. It made me appreciate nature more.” Her account suggests mindfulness in nature performed as a reconnection process that restored an existing relationship that may have been obscured by common patterns of rushing. She further described nature as a guiding presence, in particular through her connection to trees: “It's kind of like they're just these big guiding forces like ‘come this way we've got you, we've got you ... ’” She personified nature as protective which indicates an experience that is relational. “But ‘we’ was nature.” This was further reinforced as she describes the elements responded to her needs.

... It was like nature was bringing in, there's the coolness you need, here is some fresh breeze that you need. ... it was as if nature was like, and then listen to this like the leaves ... it was as if nature was giving all the ingredients I needed to be mindful and present in nature and it calmed me.

This indicates, connecting with nature supported the mindfulness process and facilitated presence which in turn resulted in calming effects.

In contrast, John reflected how mindfulness enhanced his connection to nature. He mentioned “it's helped me uh realise how important it is, how beneficial it is to actually zone in when

you're out and about and in nature". His experience was "invigorating" emphasising a connection to the land he chose to walk on. He reflected on his mindfulness process in nature and described being influenced by Shinrin-yoku,

I was sort of scuffing the ground and there's so much happening under your feet and again this um the Shinrin-yoku thing they really encourage you to just take your shoes off and walk with your bare feet on the forest and I've consciously done that a couple of times and ... there's something about it ... touching the trees particularly the redwoods their bark is just so amazing ... I actually planted every one of those in terms of the cabbage tree and the manuka, that Pohutukawa on the left and the redwoods in the back and, um, so the texture of the bark on every one of those you're looking at there is just so different and it's invigorating just being in that environment.

By returning to a natural environment where John planted trees, observation and physical engagement appeared to enhance his relationship with nature and sense of belonging. Similarly, Caroline described returning to a particular beach she feels connected to for her mindfulness walks and reveals a sense of belonging.

This particular beach it's um I call it my turangawaewae. Because when I'm there, ... just the next beach over which you can see, is where I grew up that's kind of like my past and then when I come [walk] back to like behind me, like where Dunedin is behind me, that's my present, ... This is my past, present and my future, where I can make anything happen.

Reflecting on Turangawaewae, the beach Caroline spends time at resembles a strong sense of belonging to the land that surrounds her. Mindfulness seemingly enabled Caroline to reflect on life, linking past experiences, present awareness, and future potential in one embodied moment.

Participants also described their connection with nature has cleansing and grounding effects. Caroline suggested the wind and fresh air nurtured her well-being by clearing away mental clutter sharing, "I think it's the fresh air and... like the wind kind of blows the cobwebs away". She also explain how a cluttered thoughts "goes in and out with the waves, ... cleansing". Similarly, through observation, Mary described a grounding experience beginning with observing the earth beneath her.

I just kept noticing that I was looking at the earth a lot and the ground a lot and it was wet. Then when I, I don't know how I was just looking at it, I think I was feeling grounded, I don't know, but I was really noticing it, like walking on the earth, it was solid. It sounded different too, not crunchy. And I was just really noticing that I was grounded to it. But then when I was noticing that, I was like, and that's a cool pattern. Then I'm like, hi, you know, you know when you look at something, you're like focusing, looking at it right, but then when you look back, you're like, oh, they go everywhere, and they're all going up the path and I was like, this is so cool.

Marys account gave the impression this awareness of the ground transitioned into a sense of curiosity and fascination with nature. This embodies a dynamic relationship with nature that becomes a way she experiences stability.

Helen described how particular views of nature mirrored her internal state of well-being resembling an emotional connection to nature. She made sense of this saying, “the image that I'm seeing, the view I'm seeing kind of picks up on emotion that's floating around in me somewhere”. This is vividly reflected in an photograph of muddy tracks in the shadows she captioned ‘I’m tired. I have underestimated the road I’ve gone and the burden I’ve carried’ – which followed with the explanation,

... Some of those thoughts related to the physical road/walk ... and others relating to a general sense of weariness bordering on mild burnout in my life in general. These strands of thought combined in the epiphany above which relates to life figuratively.

In contrast to experiencing a muddy, water bogged area in nature, the next exert referred to a photograph captioned ‘No words, just profound joy’ which features blue skies, a sunny day and the variations of green in nature. She explained, “this one captures a feeling of just being in a state of joy. No profound insight, just joy, a very refreshing kind of joy”.

This contrast suggests specific environmental features such as mud or fresh greenery shapes an emotional response and experience. Nature acted as a meaning-making tool and a mirror which fostered an awareness of emotional states that may have been hidden previously.

Experiencing beauty, wonder and awe

Participants described enhanced experiences of beauty, wonder and awe often emerging through mindfulness observation. John heavily engaged in the observation facet of mindfulness throughout his walks which led to seeing nature's beauty on a different scale. He reflected that on a normal walk: "My mind might not be thinking about what I'm seeing". Taken from his post walk questionnaire, John had an epiphany: "The realisation dawned on me that there are beautiful things all around me when my head is up to notice them". This insight reflects a shift from customary distracted perception to an intentional awareness. Embodying this intentional awareness, beauty appeared to reveal itself and become a prominent feature of his nature experience. While reflecting on photographs he had taken, he described a plant growing out of a rock as symbolising "persistence". John's attention to textures, colour, and contrasts is reflected on where he shared,

You could say so much about that one ... persistence, ... that's pretty amazing. ... not only growing out of the rock but um having enough tenacity to create some flowers ... it's pretty cool with the sort of the moonscape rock in the background and ... the colour the ... beauty of it really is what struck me.

This demonstrates a soft fascination with nature charging feelings of wonder, amazement and beauty towards nature reflecting a deep appreciation. Mary experienced a similar fascination with nature and described,

... I usually ... walk along as a gardener, I'm looking at plants that need help or have been sprayed or dying and things like that. But I think because I'm being mindful, pretty sure it is because of that, I'm noticing wicked awesome things like the shape of leaves, colour, light on leaves, trees, etcetera for example the cool flower, tiny flower on the plant I photographed.

This suggests a similar perceptual shift occurred from an intentional work related gaze to a more appreciative awareness of nature's aesthetics.

Demonstrating her connection with nature further, Helen experienced moments of "awe" on multiple occasions. It did not appear to relate to any epiphany like her other recorded

observations however, the emotional intensity is notable. She says, “I’m unsure why a rocky paddock inspired me with awe, but it did. With ‘awe’ I mean that almost teary-eyed feeling”. Revealing more about this feeling, Helen captured another image with the same caption, ‘awe’ and explained, “the feeling of being overwhelmed (in a good way) and feeling like everything else becomes insignificant”. This appeared to signify how nature’s beauty becomes central to a lived experience while allowing everything else to feel unimportant or needing attention. Mary described a comparable experience heightened by wonder. She reflected saying,

It's that awe of bright, shiny, and green. ... it was as if somebody had put it all on steroids ... because I was present? Yeah, That's the only thing I can come up with, why am I noticing it so much?

Although neither Mary nor Helen could not articulate the source of their awe fully, both accounts signify that mindfulness presence intensified awareness resulting in heightened positive emotions. It appears during these particular mindfulness nature moments, the experience of awe was felt rather than understood.

Positive transformation and emerging possibilities

This theme captures how experiences of mindfulness in nature appeared to catalyse shifts for participants’ emotions, thinking, and sense of potential. One sub theme only has been included as it stood alone among participants lived experience. The following accounts illustrate how these moments appeared to be meaningful, transformative and generative of optimism and motivation in everyday life.

Positivity and Possibilities

Not all participants explicitly described experiencing this sub theme, it commonly presented itself in three participants accounts indicating its significance. Mindfulness in nature appeared to evoke feelings of positivity, which in turn prompted reflections on possibilities and potential in life. For Helen, these feelings seemed to be heightened once a mindfulness state was achieved: “I’m here, ... and I can do it, and everything is possible kind of feeling. ... it's

kind of a high, ... but it's also when ... I start feeling more of that, you know, relaxation and mindfulness". Helen further reflects on how observing nature elicited emotional responses that connected to broader life themes.

... those thoughts that have been in the background for a while as well. ... there's potential. ... good things will happen. There's a lot of possibilities ahead, you know, rather than just the stress of where to from here.

This suggests a process where mindfulness creates a moment for reflective meaning-making and future oriented thinking. Similarly, Carolines experience of mindfulness in nature generated positive emotions which transitioned into hopeful thoughts about the present and the future.

... I think, because it feels so positive there, it's like ... I can make anything happen, because I just feel really strong, and it just kind of gives me more positive thoughts and makes me feel stronger.

Caroline further made sense of this shift by explaining, "I think it gets you out of that negative moment so you can focus on the positives of yourself." This suggest, that the combination of nature connectedness and restorative effects Caroline experiences overall, supported a more positive mindset.

Mary describes how her experience of mindfulness in nature has extended into everyday life reflecting the possibilities mindfulness offers beyond this study. She revealed,

This experience has been like really eye opening and it has led to other really cool shit happening, like me wanting to have mindfulness in my life more. ... I've been pursuing it more and trying to bring it into my life and other areas.

This suggests Mary's positive experience of mindfulness in nature fostered ongoing motivation and curiosity, highlighting how such experiences may be the catalyst for broader personal growth and transformation.

Discussion

The present study explores participants' lived experiences of engaging in mindfulness while walking in nature, with particular attention to the meanings they ascribed to these experiences and their perceived impacts on wellbeing. Using Interpretative Phenomenological Analysis (IPA), four superordinate themes were identified across participants' accounts, each reflecting distinct yet interconnected processes that shaped their experiences of wellbeing. *Cultivating inner stillness and presence* emerged as a dominant theme across all participants, encompassing the soothing and calming effects of mindful engagement with nature on psychological, emotional, and embodied experience. *Emotional regulation and restoration* captures participants' experiences of stress relief, emotional release, and the replenishment of mental and emotional resources. *Deepening connection with nature* reflected how mindfulness practices enhanced participants' sense of connection, belonging, and relational engagement with the natural world. Finally, *Positive transformation and emerging possibilities* illustrated how the combined experience of mindfulness and nature fostered future-oriented positivity, personal insight, and openness to growth. As participants developed a mindful way of attending to their experiences, their connection with nature appeared to deepen, supporting meaning-making processes that contributed to enhanced wellbeing. This discussion situates these findings within existing mindfulness, nature, and wellbeing literature, while maintaining an idiographic and phenomenological focus consistent with IPA methodology.

Cultivating inner stillness and presence

The theme Cultivating inner stillness and presence reflects how participants made sense of inner peace as an embodied, relational, and environmentally situated psychological state. Across all four participants', mindful engagement with nature elicited experiences of calm, balance, relaxation, centredness, and cleansing throughout each of their walks. For three participants, peace emerged almost immediately upon entering their chosen natural space; for others, calm developed progressively and became more deeply embedded over time. Importantly, participants did not experience stillness as a purely cognitive achievement resulting from "doing mindfulness," but as a felt shift in bodily and emotional state that arose through immersion in nature. From an IPA perspective, inner stillness was co-constructed

through the interaction between mindful attention, sensory engagement, solitude, and the environmental context.

Participants' accounts align with conceptualisations of mindfulness as intentional present-moment awareness characterised by openness and acceptance (Kabat-Zinn, 2003). However, the findings extend this intrapersonal framing by demonstrating that mindfulness in nature appeared relational and contextually scaffolded. Nature did not merely provide a backdrop for internal attention; it appeared to stabilise and sustain mindful presence. For example, Mary's surprise that calmness endured suggests she anticipated cognitive restlessness as her default state. Her interpretation that being surrounded by nature enabled sustained calm indicates that the environment reduced competing cognitive demands and supported attentional stability. This supports embodied and situated accounts of contemplative practice (Dahl et al., 2015; Gibson, 2019), which argue that mindfulness is enacted within dynamic contexts rather than isolated within the individual. It also extends Capizzi and Kempton's (2023) proposition that natural environments may amplify mindfulness facets such as through sensory affordances. In this study, stillness emerged through reciprocal influence: mindfulness shaped perception of nature, while nature supported and deepened mindful awareness.

1.1 Inner peace through mindful presence

Inner peace and calm appeared to arise through multiple pathways of mindful engagement. For some participants, calm was accessed primarily through inward awareness. Mary described becoming aware that she was calm and balanced, suggesting that observing and describing her emotional state reinforced and stabilised it. This resonates with research on decentering and re-perceiving, where meta-awareness of internal experience reduces reactivity and strengthens emotional regulation (Bernstein et al., 2015; Fresco et al., 2017; Shapiro et al., 2006). However, the present findings extend these mechanisms by showing that awareness of calm was experienced as meaningful in itself. Calm was not simply a regulated outcome; it was interpreted as a grounded state of being that contrasted with her usual cognitive busyness. Her surprise signals that stillness was experienced as counter-normative, suggesting that mindfulness in nature disrupted habitual mental patterns.

For other participants, stillness was accessed predominantly through outward sensory attention. John's experience of peacefulness emerged through attending to landscape contours and environmental features, while Caroline described meditative relaxation through sun, breeze, and spatial openness. These accounts align with Attention Restoration Theory (Kaplan & Kaplan, 1989), which proposes that natural environments support attentional recovery through "soft fascination." This suggests that soft fascination may function not only to restore directed attention but to facilitate a mindful mode of presence. In this way, the findings extend ART by integrating attentional restoration with mindfulness processes such as Observing and Acting with awareness (Baer et al., 2006). It shows how the interconnections between nature and mindfulness may have a greater impact on wellbeing but also an complex relationship that needs further research.

The role of pace further nuances mindfulness theory. Helen reported greater tranquillity when physical tiredness from longer hikes in nature slowed her movement and reduced urgency. This suggests that embodied slowing may reduce cognitive striving and facilitate acceptance. Traditional models of mindfulness emphasise deliberate attentional intention (Kabat-Zinn, 2003), yet the findings in this study suggest that environmental and physiological conditions can make mindful presence more accessible. It is one account within this study that illustrate how the amount of time in nature may change how mindfulness is experienced. Stillness was not only mentally cultivated; it was physically and environmentally enabled.

Solitude emerged as a central facilitator of inner stillness. All participants associated peace with being alone in nature, framing solitude as chosen, freeing, and restorative. This aligns with distinctions in solitude literature between loneliness and intentional solitude (Long & Averill, 2003). Intentional solitude has been associated with enhanced self-regulation and authenticity, particularly when free from social evaluation (Nguyen et al., 2018). In the present study, being alone reduced relational demands and self-presentation concerns, creating psychological space for unobstructed presence to Observe the natural environment here and now. From an IPA standpoint, solitude functioned as a protective container for mindful awareness. Participants interpreted aloneness as freedom from external expectation, which appeared to support non-reactivity and non-judging (Baer et al., 2006). Mary's autobiographical reflection linking solitude with childhood peace further illustrates how inner stillness was intertwined with personal narrative. Her account may also represent a

moment of self-continuity. Nature appeared to facilitate a re-engagement with an earlier, less cognitively burdened mode of being, allowing her to inhabit a state that felt both novel and familiar. In this sense, wellbeing emerged not only through reduced reactivity as mentioned above, but through a felt return to an embodied, remembered way of existing in the world. Mindfulness in nature therefore function as a bridge between present-moment awareness and autobiographical meaning, supporting inner peace through reconnection.

1.2 Heightened sensory awareness grounding an embodied experience

The subtheme Heightened sensory awareness grounding an embodied experience, further demonstrates how mindfulness in nature was fundamentally embodied. Across all participants, heightened sensory awareness grounded them in immediacy of the present moment. Visual vibrancy, soundscapes, texture underfoot, and smells were described as vivid and cleansing. Sensory immersion was consistently linked with calm and centredness.

These accounts support research by suggesting that engagement with natural sensory stimuli reduces stress and enhances emotional regulation (Gordon et al., 2018; Macaulay et al., 2022), which posits that natural environments facilitate psychophysiological recovery from stress. However, the present findings extend SRT by demonstrating that participants interpreted sensory immersion not merely as stress reduction but as a return to “being”. Mary described a shift from cognitive busyness to embodied existence, suggesting that sensory engagement altered her mode of self-experience. This reflects an existential dimension of mindfulness often underemphasised in quantitative research.

Participants’ sensory awareness also reflects Ingold’s (2021) dwelling perspective that posits humans and environments are understood as continually shaping one another through lived engagement; that humans are not separate observers of nature but participants with it. Ingold states, that perception arises through active, embodied engagement with the environment rather than detached observation. In relation to this study, this means that participants’ embodied process of sensing, moving, attending and responding facilitated inner stillness via their perceptions of embodied engagement with nature. Helen’s account deepens this embodied perspective whereby navigating uneven terrain she experienced a heightened awareness of muscle engagement and balance, drawing attention away from abstract thinking

toward bodily sensation. During movement cultivates mindfulness (Schmalzl et al., 2014). Yet the findings extend this by illustrating how natural terrain actively elicits mindful awareness. In line with Ingold's dwelling perspective.

Sensory engagement has been associated with mind wandering during nature experiences acting as a psychological distance from work or other demands (Macaulay et al., 2022). This distancing corresponds with the participants' experience in this study where future-oriented thoughts and work related demands diminished when they experienced grounding and embodiment. For example, Mary described how heightened senses facilitated her embodied experience leading to present awareness rather than focusing on internal thoughts. There appears to be an important overlap in themes where not only did participants make sense of their nature observations eliciting inner peace but simultaneously experienced an alleviation from the pressures of daily living. This leads to questions whether the elimination of demands leads to inner peace and offers an area in research that may be developed and further explored. It also signals the interconnection between mindfulness and nature eliciting inner peace and contributes to research highlighting the need to understand what processes such as Awareness in nature leads to positive well-being (White et al., 2019) as this particular study suggests positive results.

Importantly, participants did not merely report sensory detail, they interpreted these sensations as stabilising and cleansing. From an IPA perspective this highlights, meaning-making sensory immersion became symbolic of grounding and rebalancing. The findings therefore, extend existing models by showing that inner stillness arises through relational and embodied engagement, mediated by specific mindfulness facets and contextualised by solitude.

Emotional regulation and restoration

The second major theme concerned emotional regulation and restoration, particularly the alleviation of stress and emotional burden. All participants consistently described experiencing states of busyness, cognitive demands, and emotional overwhelm on entering their mindfulness nature walk, and leaving with feelings of decompression, calm, relief, and

clarity. Stress was predominantly characterised as future-oriented thinking, cognitive overload, and emotional tension. Importantly, stress was not described merely as a psychological symptom but as a lived, embodied condition — something carried in the body and mind. From an IPA perspective, this suggests that participants were not simply reporting symptom reduction; they were describing a shift in how stress was experienced and interpreted.

2.1 Alleviation of stress and emotional burden

Physiological research indicates that spending time in nature is associated with reduced cortisol levels, supporting the notion that nature can reduce stress responses (Sharma & Shyam, 2023). Participants' descriptions of "crossing a border" or entering "a different world" suggest that nature functioned as a psychological boundary separating everyday demands from a restorative context. This aligns with Stress Reduction Theory, which proposes that exposure to natural environments accelerates psychophysiological recovery following stress (Ulrich et al., 1991). However, the present findings nuance this theory: stress reduction was not experienced as automatic or purely physiological. Rather, participants described active processes of noticing, observing, and reorienting attention — indicating that mindfulness processes shaped how restoration unfolded.

Mary's account of crossing "the border between the crazy and the calm" illustrates this vividly. Her attention catching on karaka seedlings acted as an entry point into regulation. Analytically, this suggests that observing small elements of nature disrupted cognitive acceleration and interrupted stress. This reflects mechanisms proposed in mindfulness-based models (Gecht et al., 2014; Esmaeilizadeh et al., 2025), yet the present data extend these frameworks by showing that environmental stimuli bridged this attentional shift. Restoration, therefore, appeared co-constructed between person and place rather than internally generated alone.

Helen's description of feeling "cleansed of bustle... stress" after an hour into her walk similarly illustrates restoration as a gradual embodied transition. Her interpretation that "stress hormones need to get out of your body" resonates with Ulrich et al.'s (1991) account of stress recovery, but her language of cleansing and decompression suggests a

phenomenological dimension that exceeds physiological models. Stress relief was experienced as a lived transition into a different mode of being.

Caroline's framing of the beach as "a different world" further supports this interpretation. Her accounts indicate that nature did not distract her from stress; rather, it created space in which emotional burden could be processed differently. Her use of self-talk and reframing suggests engagement with Non-judging and Non-reactivity facets of mindfulness (Baer et al., 2006). This aligns with Shapiro et al.'s (2006) concept of *reperceiving* — where intention, attention, and attitude interact to produce a shift in perspective. However, the present findings suggest that *reperceiving* may be environmentally scaffolded: the natural environment appeared to sustain positive affect and openness, enabling perspective change to occur.

John's account similarly demonstrates how observation redirected attention from future-oriented "to-do lists" to present-moment awareness. This resonates with Attention Restoration Theory (Kaplan & Kaplan, 1989), which proposes that natural environments restore depleted directed attention through soft fascination. Yet participants did not describe restoration purely as attentional recovery; they described it as a reorientation toward life. This suggests that restoration may extend beyond cognitive replenishment to include shifts in meaning and relational stance toward stress.

Solitude emerged as a critical contextual factor in emotional regulation. Participants consistently described being alone as enabling presence, reducing self-presentation demands, and diminishing external expectations. This aligns with Long and Averill's (2003) conceptualisation of solitude as facilitating self-regulation and authenticity. Additionally, Kempton and Wailia (2025) frame mindful solitude as distinct from loneliness, describing it as an antidote to relational depletion rather than a deficit state. The present findings support this distinction: solitude was experienced not as absence, but as enabling psychological spaciousness in which mindful regulation became accessible.

Distractions during the walks further illuminate regulatory processes. Helen's encounter with phone reception and Mary's emotionally charged memory triggered by the Mr Whippy truck illustrate that stressors were not eliminated. Rather, participants described noticing disruption and actively returning to presence. Mary's rapid re-centering such as, "breathe, and then back" reflects attentional shifting and emotional containment (Chiesa et

al., 2011; Gresch et al., 2024). Importantly, participants interpreted these moments not as failures but as evidence of strengthened regulation. This suggests that mindfulness in nature may enhance confidence in managing emotional interruptions, extending beyond immediate relief to perceived self-efficacy, and the ability to engage in mindfulness with ease while in natural elements.

2.2 Restoration and replenishment

Restoration and replenishment formed a closely related subtheme, highlighting the energising effects of mindfulness in nature. All participants revealed restoration in mood and, for most, increased energy following their walks. However, participants did not simply describe “feeling better”; they described a shift in how they experienced themselves in relation to their thoughts, bodies, and future responsibilities. From an IPA perspective, restoration was not merely physiological recovery but an interpreted reorganisation of internal experience.

For example, Mary’s experience of feeling energised enough to engage in further exercise suggests a positive feedback loop where restoration enhanced behavioural activation and wellbeing. Reflections regarding pre-walk psychological states frequently described feeling rushed, overwhelmed, or dissatisfied, whereas post-walk reflections emphasised calmness, feeling repurposed, clarity, renewed motivation, and energy. Importantly, participants did not describe restoration as passive relaxation. Instead, they framed it as something actively cultivated through mindful engagement with nature.

There did not appear to be one fixed mindfulness process that all four participants experienced resulting in restoration and replenishment; however, Observing and Acting with awareness again emerged as central. John and Mary, who entered particular walks in similar mental states, described deliberately attending to natural details such as light, colour, and texture. This attentional engagement aligns with Attention Restoration Theory (Kaplan & Kaplan, 1989), which proposes that natural environments restore depleted attentional resources through soft fascination. Yet, participants’ accounts extend ART in meaningful ways. ART primarily emphasises cognitive fatigue recovery; however, participants interpreted restoration as recalibration using language such as “repurposed,” “centred,” “invigorated.” Restoration was not simply the replenishment of attentional capacity; it was experienced as a resetting of self in relation to demands.

Capizzi and Kempton (2023) suggest that mindful engagement in nature enhances restoration by intensifying perceptual salience and reducing habitual cognitive distraction. This proposition is reflected in John's deliberate noticing of Raupo stalks and shining Pohutukawa leaves. His description that he normally would not notice these details indicates that restoration may depend not solely on environmental exposure, but on attentional stance. In this way, the findings nuance restoration theory by suggesting that soft fascination alone may be insufficient; restoration appears amplified when attention is intentionally directed toward environmental features.

Mary's account further illustrates this extension. Her energy increased around ten minutes into the walk, followed by spontaneous willingness to climb steep steps without hesitation. She interpreted this shift as "putting everything back on track." This phrase signals more than restored energy, it implies cognitive and emotional realignment. Her subsequent engagement in gym exercise and swimming suggests that restoration transferred beyond the immediate context. This aligns with Fredrickson's broaden-and-build theory (2001), whereby positive affect broadens behavioural repertoires. However, unlike laboratory studies of broadened cognition, Mary's account illustrates how restoration is experienced subjectively as renewed agency.

Physical movement also played a critical role. Caroline explicitly emphasised that the combination of physical exertion, environment, and thinking created energy. Her statement, "I can do anything," suggests that restoration was interpreted as empowerment. Research on green exercise (Ma et al., 2023) shows additive effects of movement and nature on mood and stress reduction. Yet, Caroline's account complicates purely physiological explanations. The restoration she described was cognitive and emotional positivity, clarity, strengthened self-belief. This suggests that movement may act as a facilitator of mindful embodiment rather than merely increasing endorphins.

Helen's experience provides further nuance. Unlike the other participants, her longer walks resulted in physical exhaustion alongside emotional elation lasting several days. This complicates simplistic restoration models that equate replenishment with physical rest. ART distinguishes between cognitive restoration and physical relaxation (Kaplan & Kaplan, 1989), and Helen's account vividly illustrates this distinction. Her body was tired, yet her mind felt powerful and open to opportunity. From an interpretative perspective, this suggests that

restoration may involve redistribution of energy rather than simple replenishment and shows how emotional vitality can coexist with bodily fatigue.

Solitude again appears significant here. Participants repeatedly described restoration as facilitated by being alone, free from social monitoring or responsibility. Kempton and Wailia (2025) conceptualise mindful solitude as psychologically generative, allowing internal resources to reorganise without interpersonal demand. The present findings align with this perspective, for example, restoration was often described as occurring when “nothing else matters,” when participants felt psychologically unobserved. Solitude may therefore amplify restoration by reducing cognitive load associated with social roles.

Importantly, restoration was not depicted as linear. Participants described distractions (technology, emotionally triggering sounds) that temporarily interrupted their mindful state. Yet these interruptions became opportunities for reorientation rather than collapse. Mary’s swift return to centre following the Mr Whippy trigger demonstrates strengthened attentional control and emotional containment. Research suggests that mindfulness enhances regulatory flexibility (Chiesa et al., 2011; Gresch et al., 2024), and this study extends that literature by illustrating how restoration includes confidence in one’s ability to return to equilibrium. Restoration, therefore, was not only about relief from stress but about increased trust in self-regulatory capacity.

Taken together, restoration and replenishment in this study appear to involve intertwined processes: attentional recovery (ART), emotional regulation (mindfulness models), broadened positive affect (Fredrickson, 2001), embodied engagement (green exercise literature), and generative solitude (Kempton & Wailia, 2025). However, the findings also challenge purely mechanistic accounts. Participants did not describe restoration as something nature “did” to them. Rather, it emerged through their intentional engagement, interpretation, and meaning-making within natural environments.

From an IPA perspective, restoration was experienced not merely as reduced stress but as renewed orientation toward life. Participants left their walks not only calmer, but reconfigured, clearer, energised, and more capable of re-entering demands. This suggests that mindfulness in nature may produce a qualitatively different form of restoration than nature exposure or mindfulness alone, as it integrates attentional recovery, emotional processing, relational context, and interpretative depth.

Deepening connection with nature

The theme *Deepening connection with nature* reflect participants' enhanced sense of relatedness, belonging, and emotional connection to nature. All participants reported a pre-existing connection to nature, however mindfulness appeared to deepen and revitalise this relationship. From an IPA standpoint, this theme reveals how participants made sense of nature acting not only as a backdrop, but as an active relational presence in their lives. Participants described nature as protective, guiding, cleansing, and responsive to their needs.

3.1 Enhanced connection and belonging to nature

Across participants, mindfulness appeared to function as a bridge that transformed nature from background scenery to relational space. This aligns with Unsworth et al. (2016), who found that mindful engagement in nature increases feelings of self-nature interconnectedness beyond nature exposure alone. The present findings in this study extend this research by illustrating how that interconnectedness is experienced and interpreted in lived moments.

Mary's description of nature providing "ingrediants" she needs to be mindufl suggests a reciprocal process in which nature was experienced as supportive rather than passive. She described trees as guiding forces which reflects nature was not observed from a distance, it was encountered as responsive and protective. This framing reflects research that shows individuals often describe nature as something they are in relationship with compared to being merely surrounded by it (Sadowski et al., 2022). This further aligns with relational models of nature connectedness, which propose that wellbeing benefits arise from feeling emotional and deeply connected to nature (Nisbet et al., 2011). Recent research conceptualises nature connectedness as a relational process, shaped by ongoing engagement, attention, and the ways we make meaning from our experiences with the natural world (Pritchard et al., 2020; Bunce & Owens, 2025). Mindfulness appeared to heighten this relational quality, allowing Mary to experience nature as attuned to her needs where she followed nature's guidance reflecting a trusting relationship.

Mindfulness appeared to function as a mechanism that allowed participants to notice and engage with nature more deeply. Johns reflections on Shinrin-yoku and intentional engagement illustrates how mindful Observation and Acting with awareness towards

textures, light, and physical contact can enhance feelings of belonging. His connection was deepened as he walked amongst trees he planted himself, reinforcing a sense of care and belonging to that particular area of nature that in turn elicited feeling invigorated. IPA's emphasis on personal meaning highlights how such experiences are shaped by individual narratives and identities (Smith et al., 2022). John's experience also reflects an ecopsychology perspective of nature connectedness that describes people experientially view themselves as equal members of the natural community, viewing themselves as belonging to the natural world as much as it belongs to them (Terrapong et al., 2024). The way John speaks of the tree's he planted in the spaces he walked in nature

Caroline's use of the concept *Turangawaewae* reflects a significant sense of identity and belonging. The natural environment she carried out her mindfulness walk at was not just a backdrop but part of who she is, uniting past, present, and future possibilities in a one lived moment. Mindfulness appeared to deepen this sense of continuity by allowing her to notice her connection to the land with clarity and emotional resonance. John's example of nature connection and Caroline's account both align with research that shows connections to nature can become integrated into a person's self-concept, contributing to psychological wellbeing (Berze & Dull, 2024). Similarly studies on nature relatedness suggest that emotional bonds with the environment can have the same effects as social belonging that supports wellbeing through stable and meaningful connections (Li et al., 2021; Berze & Dull, 2024). From an IPA perspective, Caroline's account illustrates how meaning-making is relational and embodied, that is, nature is not separate from the self but part of an ongoing story that shapes how she experiences and understands her life. Her *turangawaewae* seemingly became both a lived place and part of her identity reinforcing the idea that nature connectedness can support emotional coherence and a sense of belonging contributes to wellbeing.

All participants were intentionally engaging in the Observation facet of mindfulness and it appears this study aligns with Capizzi and Kempton's (2023) study that states the Observing facet to be particularly important for bridging the gap between mindfulness nature connectedness however it further adds to their research showing *how* observing was enacted and *how* observing strengthened their relationship to nature. For example, John interpreted his observation process drew his eye to pieces of nature he wouldn't normally notice such as, light and shadows, or flowers growing in between cracks of rocks. By noticing these parts of nature, it caused fascination, and further engagement in nature's elements rather than nature as

a backdrop. Through his inquisitive engagement, John's existing connection to nature was heightened and in turn, his connection grew.

Helen's described her account how nature could elicit emotional responses through Observation. Her contrasting experience of muddy tracks and expansive green landscapes illustrate a mirror and how different environmental features can trigger distinct emotions. This aligns with research that demonstrates specific landscapes can evoke varying reactions, with emotional responses playing a central role in human-nature connectedness (Otamendi-Urroz et al., 2023). This process of emotional elicitation through nature observation demonstrates how physical surroundings do not exist in isolation but are deeply intertwined with subjective experience. This meaning-making can be understood through the lens of hermeneutics, which emphasises interpretation and co-creation of meaning between person and environment (Drenthen, 2011). In this context, the external landscape becomes a metaphorical language through which internal emotions are expressed and understood. For example, the muddy track mirrored the "burden" she had carried compared to the green landscapes that mirrored "joy". This interpretative process appears to allow an externalisation of emotions, making them more accessible and manageable. The way in which participants experienced nature as reflecting their emotions illustrates how perception, emotion, and environment are interrelated in a reciprocal relationship.

3.2 Experiencing beauty, wonder and awe

Experiencing beauty, wonder and awe further illustrates the depth of the participants' connection to nature. Experiences of awe, beauty and wonder were characterised by emotional intensity, a sense of insignificance of everyday concerns, and admiration and fascination with the natural world. Research suggests that awe can have an impact on life satisfaction and happiness through mitigating the influence of negative emotions such as life and work pressure, humility, reduced aggression, and enhanced meaning of life (Chen et al., 2025). Participants accounts in this study suggest that mindfulness, in particular Acting with awareness and Observation facets, heightened their awareness of these profound experiences by slowing down perception and allowing the beauty of nature to emerge fully. Mindfulness observation appears to amplify the emotional impact of nature, making awe more meaningful. For example, John and Mary who would normally experience cognitive busyness prior to

experiencing mindfulness in nature, described an attentional shift facilitating a significant engagement towards nature causing perceptual shifts from future-oriented thinking to emotions such as wonder and amazement. This shift allows individuals to reinterpret their concerns as less significant or overwhelming which supports emotional regulation, decreases rumination and improves overall mood. Observation and Acting with awareness appeared to be the bridge to experience a state of Awe which broadens Capizzi and Kempton's (2023) research that states Observation was a bridge to nature connectedness. This study reflects similar results as all participants' connection to nature deepened through mindfulness however it can be suggested that engaging these two facets simultaneously was the pathway to nature connection eliciting a state of Awe.

Importantly, some participants seemingly could not articulate why certain parts of nature evoked awe. This emphasises the indescribable quality of their experiences. From an IPA perspective, this highlights the limits of language in capturing lived experience and points to the value of qualitative approaches in accessing such phenomena. Awe appeared to be felt rather than understood, suggesting a pre-reflective dimension of wellbeing that operates beyond subjective interpretation.

Positive transformation and emerging possibilities

The final theme of this study, *Positive transformation and emerging possibilities*, reflects how mindfulness in nature extended beyond immediate wellbeing to influence participants' broader outlook on life. Feelings of calm and connection transitioned into positivity, confidence and openness to possibilities. This theme suggests that participants were not only feeling better but were also repositioning themselves in relation to their lives. For example, moving from being caught in stress, pressure, or limitation toward a lived sense of agency and openness. Nature-based mindfulness was experienced as a context where participants could re-author what was possible for them.

Participants described moments where mindful engagement with nature prompted reflections on potential, opportunity and personal strength. Helen and Caroline's accounts of *everything is possible* and belief that *anything can happen* illustrates shifts towards hope and

agency. From a psychological perspective, this aligns with theories linking positive affect to enhanced cognitive flexibility and optimism (Frederickson & Joiner, 2018). In particular the Broaden and Build theory (Frederickson, 2001) that posits emotions do more than simply feel good in the moment, rather they play a key role in shaping how people behave, think and cope over time. Importantly, the data suggests that this broadening was not abstract or motivational in a generic way, it was grounded in place and embodied experience such as wind, waves, views, and movement seemed to carry participants into a perspective where stressors became less dominant and possibility became more accessible.

Mary's account of pursuing mindfulness beyond the study highlights the potential for lasting impact. Her experience suggests that positive encounters with mindfulness in nature can foster intrinsic motivation to integrate mindfulness into daily life. This fits with evidence that mindfulness can support self-concordant or values-aligned behaviour (Brown & Ryan, 2003), yet this study illustrates the mechanisms more experiential. Rather than deciding cognitively that mindfulness is *good*, Mary describes it as something that is eye-opening and generative leading to "other really cool" shifts. In other words, mindfulness in nature became personally meaningful in a way that made continuation feel natural rather than effortful.

Finally, these reflections did not appear to be forced or goal-oriented. Rather they emerged from a mindfulness presence suggesting participants were not deliberately trying to think positively, but instead allowed their thoughts about the future to arise naturally. This process closely reflects the mindfulness supported by Non-judging and Acting with awareness whereby future-oriented thoughts were allowed to arise without pressure, evaluation, or the need to control them (Baer et al., 2006). Within this context, nature may act again as a supportive backdrop that softens cognitive effort, allowing future possibilities to be approached with curiosity over apprehension.

Limitations and future research

While this study provides in-depth insight into participants' experience of mindfulness in nature, several limitations should be acknowledged. First, the study focused primarily on the

Observing facet of mindfulness. This emphasis may have shaped the processes and outcomes identified, and it is possible that foregrounding other facets, such as Non-judging or Acting with Awareness, may yield different experiential patterns. Future research could explore how different facets of mindfulness interact with nature to support wellbeing.

Second, recruitment was open to adults 18 years and over, the final sample comprised of participants 35 years and above. This may reflect self-selection into mindfulness and nature-based practices. While age was not the focus of the analysis and no aged based claims are made, future research could explore whether younger adults make sense of mindfulness in nature differently. In addition, participants were recruited using purposive sampling consistent with IPA methodology, meaning individuals were selected on the basis of their interest in or experience with mindfulness and/or nature. While this facilitated rich, reflective accounts aligned with the study's aims, it may also mean that participants were predisposed to engage positively with the practices under investigation. As such, the findings reflect the experiences of individuals already oriented toward mindfulness and nature, and different experiential patterns may emerge among those with limited prior interest or differing perspectives.

Although the idiographic nature of IPA enabled deep and nuanced exploration of participants' lived experiences, the study captured experiences over a relatively short time frame. Longitudinal research designs may offer further insight into how ongoing or repeated engagement with mindfulness in nature contributes to wellbeing.

In contrast to studies where participants are explicitly taught mindfulness techniques prior to engaging in nature (Unsworth et al., 2016), this study keeping with the exploratory and interpretative nature of IPA did not impose a rigid definition or structured instruction of mindfulness. This allowed participants to engage with mindfulness in personally meaningful ways, but it also meant that participants may have engaged with different mindfulness processes. Future research could examine how more structured mindfulness approaches in nature settings compare with participant-led interpretations.

Conclusion

This study highlights how participants made sense of their experiences of mindfulness in nature, revealing the intricate interplay between embodied attention, environmental engagement, and psychological wellbeing. Through IPA, it becomes clear that wellbeing arose not merely from mindfulness or nature alone, but from the personally meaningful ways the participants interpreted, related to and co-constructed their surroundings. Engaging in processes of mindfulness in nature appeared to heightened nature connection and vice versa. Experiences of inner stillness, emotional regulation, restored energy, and emerging possibilities were shaped by sensory immersion, individual narratives, and relational engagement with the natural environment. The findings in this study illustrate the value of idiographic, phenomenological approach in capturing how mindfulness in nature supports both immediate restoration and longer-term growth, demonstrating that wellbeing is intimately tied to the ways people interpret and enact their relationship with world around them.

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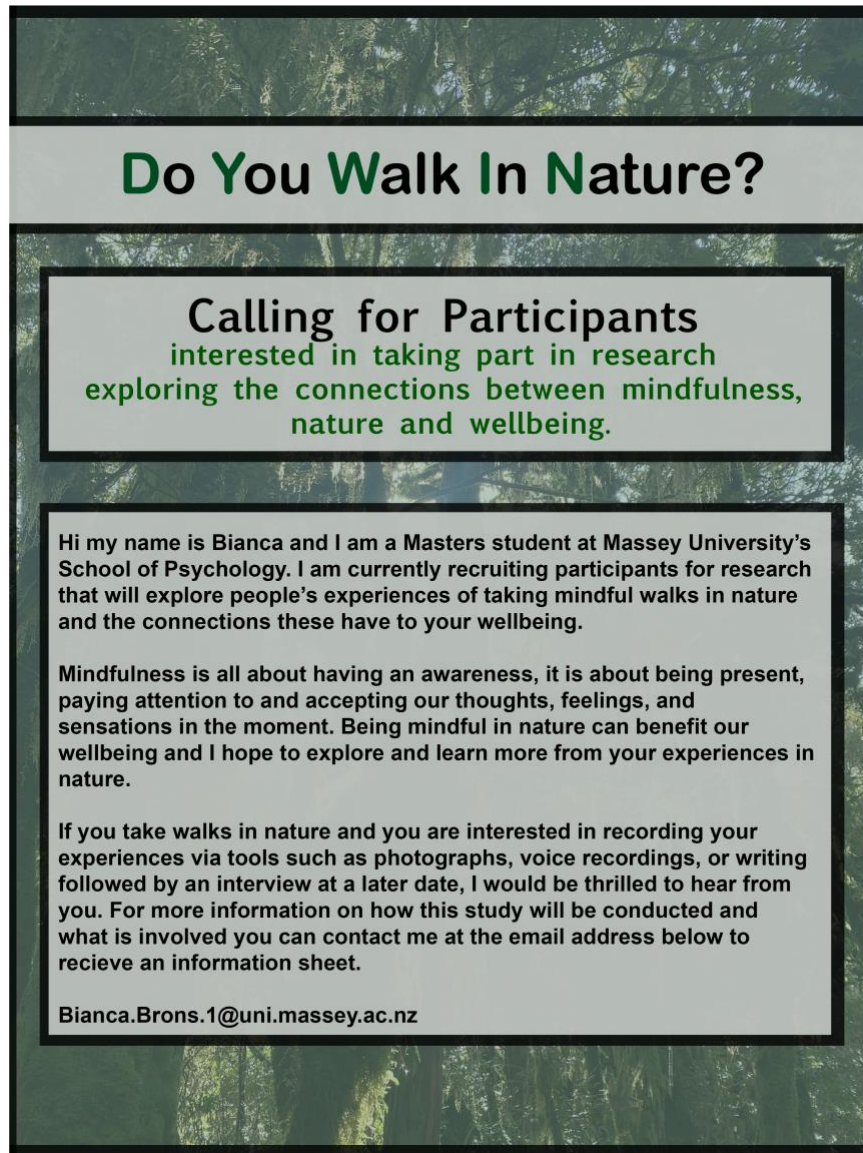
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Appendices

Appendix A. Participant advertisement



Do You Walk In Nature?

Calling for Participants
interested in taking part in research
exploring the connections between mindfulness,
nature and wellbeing.

Hi my name is Bianca and I am a Masters student at Massey University's School of Psychology. I am currently recruiting participants for research that will explore people's experiences of taking mindful walks in nature and the connections these have to your wellbeing.

Mindfulness is all about having an awareness, it is about being present, paying attention to and accepting our thoughts, feelings, and sensations in the moment. Being mindful in nature can benefit our wellbeing and I hope to explore and learn more from your experiences in nature.

If you take walks in nature and you are interested in recording your experiences via tools such as photographs, voice recordings, or writing followed by an interview at a later date, I would be thrilled to hear from you. For more information on how this study will be conducted and what is involved you can contact me at the email address below to receive an information sheet.

Bianca.Brons.1@uni.massey.ac.nz

Appendix B. Information Sheet



Participant Information Sheet

Mindfulness, nature and wellbeing.

Formal Study Title: *Connections Between Mindfulness, Nature and Wellbeing: A Qualitative Study.*

Sponsor: Massey University

Private Bag 11 222, Palmerston North 4442, New Zealand

Phone: +64 6 350 5701

Lead Researcher: Bianca Brons

Contact phone number: [REDACTED] email:

Bianca.Brons.1@massey.ac.nz

Ethics committee ref.: 4000028896

You are invited to participate in a study investigating the connections between mindfulness, walking in nature and wellbeing. It is your choice if you want to participate or not. You do not have to give a reason if you do not want to participate. If you want to participate now but change your mind later, you can withdraw from the study anytime.

This Participant Information Sheet will help you decide if you want to participate. It sets out why we are doing the study, what your participation would involve, the benefits and risks to you, and what would happen after the study ends. We will review this information with you and answer any questions you may have. You do not have to decide today whether you will participate in this study. Before you decide, you may want to discuss the study with others, such as family, whānau, friends. Feel free to do this.

If you agree to participate in this study, you will be asked to sign the Consent Form on the last page of this document. You will be given a copy of the Participant Information Sheet and the Consent Form to keep.

Voluntary Participation and Withdrawal From This Study

Participation in the study is voluntary, and you are free to decline to participate or withdraw from the research/study at any time.

What is the purpose and background of the study?

Hi my name is Bianca. I am glad you found this research of interest. Below you can find details for the proposed research project which will be go towards my thesis for the completion of the Masters Degree in Psychology at Massey University School of Psychology.

This qualitative research project endures to explore the experiences of participants who take walks in nature, experience being mindful and what effect this has on their wellbeing. Being mindful during a walk entails having an awareness of your own thoughts and feelings without judgement. Further, being mindful on a walk might mean that you are more aware of your surroundings and what you notice during your time in nature. I ask that my participants take their normal walks in nature over a one month period with a minimum of three walks and record their thoughts and feelings during their time outside however they desire. Some examples might include, taking photographs, voice recordings or writing. I am open to how they choose to record this. My goal of this research is to learn from your lived experience of walking in nature and what connections these have to your wellbeing. Research shows there are benefits of being mindful in nature and I endeavour to produce research that expands on this and overall adds more important information to Psychology literature. Ultimately I will be learning from you and your experiences.

If this sounds like something you are interested in taking part in, I gladly invite you to read through the recruitment process below and participate in this research by signing the consent forms provided on the last page.

How is the study designed?

During the months of August – October I will ask my participants to take part in a minimum of three walks in nature over a one month period. During these mindfulness walks I ask that my participants record this process and what they experience. You may choose how many walks you take, there is no maximum however there is a minimum of three needed. Research shows the longer people walk in nature, the more benefits they experience therefore, I ask my participants to walk for a minimum of 25 minutes and for as long as you desire. You may choose how you record your time in nature and how many times you record. Again, I do ask that a minimum of three recorded experiences occur. An example of how these recordings can take place are below. You are asked to take these walks alone to ensure you are being mindful and the experience is based solely upon your experience.

Recording example: If one participant chooses to record their experience via voice recording they might take out their phone when and if they have a thought or feeling they think is important or interesting. For example, you might see a tree that made you feel a certain way, whether you feel particularly calm, or simply anything that you want to record about your experience. You can take out your recording device, make a quick note of it and put your device away again until you choose to record again. The important thing is, is that you are choosing what you decide to record and I am open to hearing any and all things. This process can be discussed in more detail if you choose to participate and have more questions.

Upon taking your walk in nature you will be asked to fill out a short five question survey with some simple questions such as, 'how did you feel before your walk?', and 'how do you feel after your walk?' with a blank area for anything you want to add. Further, I ask that you record how long you spent in nature. These will be sent prior to the month of walking to ensure there is no cost to you for printing. I ask that my participants fill this out once they have completed their walks to ensure there are fresh ideas and thoughts in your mind however, there will be no pressure to complete these or if it is forgotten on the day you walk, no need to worry.

Once you have completed the amount of walks you choose for this research, I will ask that you can send me your chosen recordings via email to be securely stored and ready for analysis. If any recordings are written down, photographs or scans can be taken of these and sent via email. We will come back to these during our interview and talk more in depth where you will have the chance to explain any meaning or experience further.

Once all participants have completed their walks in nature it will be time for the interviews to begin. Only one interview is needed and it will be scheduled when it suits you best. They can be conducted via Zoom meetings or phone calls. If we happen to be in the same area I am more than happy to meet at your chosen location. The interviews will be between 45 minutes and 1 hour with some questions already prepared and based around mindfulness. For example, "did you notice anything

interesting about the way you felt during your walk” or “were there any particular thoughts that stood out to you during your walks”. There will be room to talk freely, share stories and discuss anything you choose to share about your nature experiences.

Upon completion of the interviews I will begin the analysis of all data and compile a thesis to present my findings. All findings will be available to you at request and upon completion. If you have any questions along the way about the project, I am happy to answer anything you might want to know.

Who can take part in the study?

Adults (18 – older).

People who walk in nature.

4-6 participants. Being a qualitative project and conducting interviews means each participant can provide rich and quality information to analyse which requires a smaller group.

Participants must be available to take walks over one month between August – October and one interview for 45 minutes - 1 hour between November – February on any day that you choose during this time period. If you are not available there may be some flexibility and we can discuss this if needed.

What are the potential risks of this study?

This research has been classed as low risk meaning any risk to participants has been assessed and deemed none or minimal. I ask for participants who walk in nature as they are likely to feel comfortable taking part in this activity already.

What are the potential benefits of the study?

Possible benefits will include the production of knowledge and experiences of people who walk in nature and how this can benefit psychological wellbeing. By producing research of this kind it adds to the psychology literature and in turn, can benefit what practitioners recommend to clients including interventions and wellbeing practices. Further, it can benefit anyone who reads this research and learns from the participant experiences.

What if something goes wrong?

If at any time a participant experiences poor mental wellbeing or a poor experience due to this project I ask they let me know and/or contact the appropriate professional. This could be the participants GP or local mental health professional if they experience any discomfort or unwellness.

What will happen to my information?

Only authorised persons will have access and use of the data collected from this project which includes myself and my supervisor Dr. Heather Kempton. All data collected will be securely and appropriately stored to ensure the participants privacy is upheld at all times. Any personal details of participants will be secure and deleted upon completion of this project. Further, participants confidentiality will remain throughout any publication by changing names to ensure their safety and privacy.

Rights to Access Your Information.

You have the right to request access to your information held by the research team. You also have the right to request that any information you disagree with is corrected.

Please ask if you would like to access any information.

If you have any questions about the collection and use of information about you, you should ask Myself, Bianca Brons.

Rights to Withdraw Your Information.

You may withdraw your consent at any time by informing the researchers.

If you withdraw your consent, your study participation will end, and the study team will stop collecting any information.

Information collected until your withdrawal from the study will continue to be used and included in the study. This is to protect the quality of the study.

Participant Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- *decline to answer any particular question;*
- *withdraw from the study (August - February);*
- *ask any questions about the study at any time during participation;*
- *provide information on the understanding that your name will not be used unless you give permission to the researcher;*
- *be given access to a summary of the project findings when it is concluded.*
- *ask for the recorder to be turned off at any time during the interview.*

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.

If you have any concerns about the ethical conduct of this research that you want to raise with someone other than the researcher(s), please contact Massey University Human Ethics by email humanethics@massey.ac.nz

Who do I contact for more information or if I have concerns?

If you have any questions, concerns, or complaints about the study at any stage, you can contact:

Bianca Brons (Researcher) – Bianca.Brons.1@uni.massey.ac.nz

Dr. Heather Kempton (Supervisor) – h.kempton@massey.ac.nz

Appendix C. Participant consent form



Consent form

Connections between mindfulness, nature and wellbeing: A qualitative study.

An interpreter for Te Reo, most Pacific languages, and Chinese is available on request.

Please tick in the optional box to indicate your consent for the listed item; for all other items, signing the consent entails agreement with the study procedures.

I have read the Participant Information Sheet or had it read to me in a language I understand and fully comprehend what it says.

I have been given sufficient time to consider whether or not to participate in this study.

I have had the opportunity to use a legal representative, whanau/ family support, or a friend to help me ask questions and understand the study.

I am satisfied with the answers I have been given regarding the study, and I have a copy of this consent form and information sheet.

I understand that participating in this study is voluntary (my choice) and that I may withdraw from the study at any time.

I consent to the research staff collecting and processing my information.

I understand that my participation in this study is confidential and that no material, which could identify me personally, will be used in any reports on this study.

I know whom to contact if I have any questions about the study in general.

I understand my responsibilities as a study participant.

I wish to receive a summary of the results of the study.

Yes ☐

No ☐

Declaration by participant:

I hereby consent to take part in this study.

Participant's name:

Signature:

Date:

Declaration by a member of the research team:

I believe that the participant understands the study and has given informed consent to participate.

Researcher's name: Bianca Brons

Signature

Date:

Appendix D. Post walk questionnaire

Name:

Date:

How long did you walk for:

Which number walk is this in your recording experience? :

Where did you choose to walk today? (brief explanation of type of nature e.g., forest, beach, farmland):

How did you feel before your walk today? (e.g., Any particular thoughts or feelings you might have experienced, any reason you might have chosen today to walk):

How do you feel after your walk today? (e.g., Did your nature experience bring up any certain feelings or thoughts you observed and want to write down):

Any notes you would like to add?: