A mixed method study of a gratitude diary intervention on tinnitus-related distress in adults

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A thesis submitted in partial fulfilment of the requirements for the degree of Professional Doctorate in Counselling Psychology

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January 2022

Abstract

Background: Tinnitus is a persistent condition which constitutes a challenging and life-changing experience for which there is no medical cure. There is wide-spread consensus that individuals' interpretation of tinnitus affects how distressing they find it. Research suggests individuals with greater levels of dispositional gratitude are less distressed by tinnitus. However, there is no published research examining whether an experimental manipulation of gratitude reduces tinnitus-related distress.

Method: A mixed method design was adopted to evaluate the application and experience of a 3-week gratitude diary intervention in adults with distressing tinnitus. Measures were collected pre- and post-intervention. Primary outcome measures were tinnitus-related distress (Tinnitus Questionnaire) and psychological wellbeing (Warwick-Edinburgh Mental Wellbeing Scale). Outcomes were evaluated using paired t-tests and correlational analysis. In addition, semi-structured interviews were conducted to explore participants' experience of the intervention and analysed using reflexive thematic analysis. Finally, quantitative and qualitative results were integrated to develop mixed methods inferences.

Results: Fifteen participants completed the intervention and analysis showed a statistically significant reduction in tinnitus-related distress but no change in psychological wellbeing. Correlational analysis found a strong negative relationship between tinnitus duration and tinnitus-related distress, suggesting those who had tinnitus for longer received less benefit. In addition, thematic analysis identified three themes capturing participants (N = 6) broadening awareness, feeling empowered, and changing relationship with tinnitus.

Conclusion: Findings suggest that a gratitude diary intervention is an acceptable intervention to reduce tinnitus-related distress in adults. Participants reported a changing relationship with tinnitus as greater awareness of the blessings in their lives seemed to have reduced their preoccupation with tinnitus. However, further research is required to compare the intervention against an active control condition and examine its utility in clinical samples.

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Abbreviations

CBT	**Cognitive Behavioural Therapy**
GAD-7	**Generalised Anxiety Disorder**
GQ-6	**Gratitude Questionnaire**
EGS	**Existential Gratitude Scale**
MBCT	**Mindfulness-based Cognitive Therapy**
PHQ-9	**Patient Health Questionnaire**
TA	**Thematic Analysis**
TQ	**Tinnitus Questionnaire**
WEMWBS	**Warwick-Edinburgh Mental Wellbeing Scale**

Acknowledgements

This project could not have happened without the generosity and support of many people. First, among those is my husband, Peter, your unwavering belief in me and your love have sustained me on my journey to become a counselling psychologist and beyond.

I thank my former supervisors at the Royal National ENT Hospital, Dr Elizabeth Marks and Dr Laurence McKenna. You have shown me how to put compassion at the heart of my clinical work and have inspired me to make research part of my career.

I thank my Director of Studies, Professor Cynthia Fu, for your encouragement and support throughout the project and for simply being there at the end of an email.

Special thanks go to my participants in the study, without whom this project would not have been possible. You have inspired me by your wish to make a difference to future tinnitus sufferers and wanting to raise awareness about a condition that is common but not spoken about. I am profoundly grateful for your trust in me and the science of gratitude. I hope I have done you justice.

Dedication

To my much loved and much missed sister Susanne

You died before we could celebrate my graduation, but it is because of you and your strength that I continued on this path to find a profession that gives me meaning and joy. You have been my champion all my life and taught me so much. I dedicate this thesis to you, the strength you showed in your battle with cancer, and your love for life. Even when you were in unbelievable pain you were thankful to be alive. I feel blessed to have had you as my “big” sister and the many life lessons you have taught me.

We have always shared poetry and literature – especially when our own words failed us. So, here is one more I know you have cherished:

My predominant feeling is one of gratitude.

I have loved and been loved.

I have been given much and I have given something in return.

Above all, I have been a sentient being, a thinking animal,

on this beautiful planet, and

that in itself has been an enormous

privilege and adventure.

Oliver Sacks, 201

Chapter 1. Introduction

This thesis examines the feasibility of using a gratitude diary intervention to reduce distress and improve psychological wellbeing in adults with tinnitus. A mixed method approach was adopted to examine the effectiveness and explore participants' subjective experience of the intervention.

The chapter provides a summary of tinnitus-related distress and the origins of gratitude research. The chapter concludes with a rationale for the study and reflections on my interest in the topic.

1.1 Tinnitus-Related Distress

Tinnitus, or ringing in the ears, is not considered an illness, however, people who have it face multiple psychosocial challenges including low mood and anxiety which is comparable to the burden of illness experienced by people with a range of persistent physical health conditions (Cima et al., 2019). However, not everybody who has tinnitus will also be distressed by it. There is widespread agreement that a person's interpretation of tinnitus can determine how distressing they find it (McFerran et al., 2019). Common among individuals with tinnitus are feelings of hopelessness, loss of enjoyment in life, a desire for peace and quiet, and feeling persecuted by tinnitus (Wilson & Henry, 1998). Such negative interpretations of tinnitus and its significance for a person's wellbeing create and maintain tinnitus-related distress (McKenna et al., 2014).

Hence, psychological therapies for tinnitus address individuals' thoughts about tinnitus. For example, cognitive behavioural therapy (CBT) focuses on changing the content of unhelpful thoughts while mindfulness-based cognitive therapy (MBCT) practices observing all experiences, positive and negative with a focus on allowing rather than changing or avoiding them (McKenna et al., 2017).

Using the concept of tinnitus-related distress is not without problems within counselling psychology. The use of labels such as anxiety and depression implies an acceptance of the medical model which is associated with a focus on pathology (Weston, 2016). However, as counselling psychologists we work in a

context where these terms are widely used (Golsworthy, 2004). Milton (2010) emphasises the importance to engage with but also challenge the medical model and work with clients to go beyond assumptions about diagnoses and discover the subjective experiences and meanings that individuals hold. Hence, I acknowledge that the term “distress” does not fully explain what it means to live with tinnitus.

1.2 The Emergence of Gratitude as Research Topic

Since World War II, psychology has focused on pathology and the treatment thereof (Seligman & Csikszentmihalyi, 2000). In response to this, the positive psychology movement emerged at the beginning of 21st century with a focus on improving well-being and optimal functioning through positive experiences and strengthening positive traits (Duckworth et al., 2005). The development of an inventory of 24 character strengths identified gratitude to be associated with wellbeing (Park et al., 2004).

Gratitude has been conceptualized as an emotion and disposition (Wood et al., 2008) and described as antidote to negative cognitions (Marks et al., 2020). Empirical evidence from longitudinal, cross-sectional, and intervention studies proposes that gratitude can improve wellbeing in two ways: indirectly, as a protective agent against the impact of negative experiences on emotions and states; and directly, as a causal agent where levels of gratitude may be manipulated to improve wellbeing (e.g. Emmons & McCullough, 2003; Hirsch et al., 2021; Sirois & Wood, 2017.)

The field of gratitude research has been dominated by quantitative research examining the effectiveness of gratitude interventions conducted predominantly in healthy populations. However, little is known about individuals’ subjective experience of such interventions particularly in populations with physical health conditions.

1.3 Rationale for the Research

Receiving a diagnosis of tinnitus and being told that there is no medical cure for it can exacerbate feelings of hopelessness and omits the fact that psychological approaches have shown to enhance adjustment and eventual recovery (Marks et al., 2019). Recent research suggests a protective agency of gratitude against tinnitus-related distress (Reeves et al., 2021) which may facilitate to change one's focus from the annoyance of tinnitus onto something more helpful (Marks, et al., 2020).

The present study examined whether it is possible to harness the protective agency of gratitude to reduce tinnitus-related distress and improve psychological wellbeing. By adopting a mixed method approach equal attention was given to participants' subjective experiences of nurturing a grateful outlook and how this impacted on their experience of tinnitus. This will allow further learning on the feasibility of using gratitude interventions in physical health conditions and provide clinically relevant material for professionals who are interested in including gratitude interventions as part of their therapeutic approach.

Deepening our understanding of the value of gratitude interventions to improve psychological wellbeing is of wide-reaching significance for counselling psychology. Counselling psychology focuses on "facilitating growth and the actualisation of potential" (Cooper, 2009, p. 120) hence as a profession we move beyond the limitations of the medical model as we aim to build wellbeing and facilitate psychological adjustment and growth (Tulip, 2020).

1.4 Personal Reflections

As reflexive researcher, I acknowledge that this research has been shaped by my personal and professional experiences, values, and beliefs. The following will provide a tentative and partial summary of my influences as full insight into one's own positionings is rarely possible (Finlay, 2002).

I have developed an interest in the relationship of physical and mental health before starting my doctoral training. For four years, I worked in a specialist psychology service for adults with audiovestibular conditions including tinnitus where I learnt about the importance not to pathologize the experience of distressing tinnitus. Clients often sought to find fault within themselves as they questioned why they were bothered by tinnitus. Hence, I aimed to understand their subjective experiences and how their difficulties affected their mental and physical health, and their relationships.

I believe it is important for me to state that I do not have tinnitus and therefore accept I can never truly know what it is like to live with tinnitus. I am however ceaselessly curious about how people make sense of tinnitus. Furthermore, the advantage of being an “outsider researcher” (Braun & Clarke, 2021, p. 18) meant I could approach the research without getting absorbed into any personal struggles with tinnitus.

My interest in gratitude as a research topic is personal and inspired by my sister Susanne who died of cancer in 2019. Throughout her illness her motto remained “no requests, no complaints, just thankful to be alive”. At times, the pain of my grief can be overwhelming and so I connect with my own gratitude for having had her in my life.

I cannot deny that my clinical work with tinnitus clients and the way I think about gratitude have shaped the questions I have tried to answer in this study and how I have made sense of the findings. However, by holding these influences in conscious awareness I hoped to remain open and curious to all possible findings.

Chapter 2: Literature Review

2.1 Chapter Overview

The following chapter is divided into two main parts in which the current scientific understanding of tinnitus and gratitude are discussed in the context of relevant research and theoretical conceptualisations. First, an overview of the impact of tinnitus on individuals' wellbeing and a discussion of the role of psychological processes in the development and maintenance of tinnitus-related distress will be presented. This will be followed by early empirical evidence on the potentially helpful role of gratitude in reducing tinnitus-related distress.

The second part will present how gratitude has been conceptualised and its place within positive psychology. This will be followed by a review of the literature on gratitude as protective factor against poor psychological and physical health. Furthermore, the empirical evidence on the efficacy of gratitude interventions in improving psychological and physical health outcomes will be examined with particular focus on gratitude diary interventions in populations with physical health conditions. The chapter concludes with the rationale for the examining the feasibility of applying a gratitude diary intervention in adults living with persistent tinnitus. The above is discussed from a Counselling Psychology perspective and gaps in the literature are addressed throughout.

2.2 Search strategy

A literature search was conducted for papers related to gratitude and tinnitus. Online literature searches were conducted using APA PsycINFO, APA PsycARTICLES, EBSCO CINAHL databases, and SCOPUS. First, the search term 'tinnitus' was entered into the databases and results limited to English language papers and human research populations. This returned 2,286 articles of which five were considered relevant. A second and separate search using

the term ‘gratitude’ returning 1,285 results. These were reviewed, and 10 empirical studies, i.e. gratitude diary intervention in populations with physical health conditions were found to meet the criteria. In addition, searches were conducted on Google Scholar, and alerts were created on the University of East London Library electronic search tool. The search was last updated in early December 2021.

2.3 Tinnitus

Tinnitus can be defined as the conscious awareness of a sound experience in the ears or head in the absence of a corresponding sound source (Bauer, 2018). Most people will be aware of the condition and may associate it with ringing in the ears, however, there is considerable variability in the loudness and type of tinnitus sound people report. Tinnitus can occur in one or both ears and can include ringing, buzzing, whooshing, clicking, whispering, single tones, white noise, music, etc. (McKenna et al., 2010). Only about 1% of people seeking medical assistance for tinnitus have objective tinnitus, i.e. the sound can be heard by an examiner (Meehan & Nogueira, 2014). For the vast majority, tinnitus is subjective, defying objective measurement or diagnosis (Trevis et al., 2017), consequently clinicians and researchers are reliant on individuals’ self-reports of symptoms and their impact.

This lack of objective measurement means global prevalence of tinnitus is difficult to establish (McCormack et al., 2016). Around a quarter of adults are estimated to experience transient tinnitus-like symptoms following brief, loud noise exposure at some point in their life which resolves within minutes, days or weeks (Shargorodsky, et al., 2010). If the noises persist for more than three months, it is classed as a persistent condition and is unlikely to resolve (Cima, et al., 2019). The National Health Service (NHS) Joint Strategic Needs Assessment Guidance (2019) reported that 10% of the UK population experience tinnitus at some point in their lives. Of those, 2.8% will find it moderately, 1.6% severely annoying, and in 0.5% of cases, i.e. 300,000 adults, tinnitus will severely disrupt people’s ability to live a normal life.

An estimated 750,000 tinnitus-related consultations are conducted per year in England alone (El-Shunnar, 2011**). This re**presents a considerable financial burden on the NHS with an annual healthcare bill of £750 million (Stockdale et al., 2017). The financial burden to society as a whole is believed to be far greater, however a recent systematic review identified a lack of studies estimating the economic burden of tinnitus on patients, their families and society (Trochidis et al., 2021). Furthermore, many people seeking help for tinnitus may not be getting the support they are looking for. A survey on service provision in the UK conducted among members of the British Tinnitus Association (*N* = 937) found apart from one respondent all consulted their GP in the first instance and 76.6% were referred to secondary care for further investigation while 19.5% reported they did not receive any intervention from their GP (McFerran et al., 2018). In fact, it is well documented that people are often told by their GP 'there's nothing that can be done' or 'you just have to live with it' suggesting not only tinnitus will continue, but also that there is no hope that the related distress and intrusiveness could reduce (Henry et al., 2010; Newman et al., 2011, Marks et al., 2019).

To-date, there is no medical cure for tinnitus. One reason for this is a lack in understanding of its underlying causes. Several theories have been proposed regarding its causes as tinnitus is associated with hearing loss, noise exposure (McKenna et al., 2010), ageing (Seydel et al., 2013) and stress (Mazurek et al., 2015). Most locate its origins in abnormal activity and connectivity in auditory and non-auditory pathways which are interpreted by the brain as noise annoyance (Hesse, 2016; Shore et al., 2016). Therefore, it has been suggested that the processes that cause tinnitus to persist and lead to distress occur in the brain rather than in the ears (Baguley, 2006; McFerran et al., 2019).

2.3.1 Impact of Tinnitus

Distressing or bothersome tinnitus has been described as a negative emotional and auditory experience associated with "physical and psychological harm" (Cima, 2017, p. 132). Tinnitus is associated with poor quality of life (Baguley et

al., 2013; Bartels et al., 2008; Nondahl et al., 2007), strained social relationships, and inability to work or engage in social activities (Anderson & Edvinsson, 2008; Kleinstäuber et al., 2013). As is the case in many persistent conditions, having distressing tinnitus can be a life-changing experience which impacts not only the individual themselves but also those around them. There is high variability in the psychosocial difficulties experienced among those living with distressing tinnitus (Trevis et al., 2017). These include depression and anxiety (Bartels et al., 2008; Zirke et al., 2013), insomnia (Schecklmann et al., 2015), problems concentrating (Hallam et al., 2004), and stress (Mazurek et al., 2015). In addition, prevalence of suicidal ideation may be greater among people with tinnitus. Data from a 1-year service evaluation study conducted at an audiology department at a NHS hospital in England (N = 420) found that 13% of respondents reported suicidal ideation in the past fortnight (Aazh & Moore, 2018). This compares unfavourably with reported suicidal ideation in the general population in England which estimates 5.4% of adults had suicidal thoughts in the past year (McManus et al., 2014).

2.3.2 Psychological Processes in the Generation and Maintenance of Tinnitus-Related Distress

Psychology researchers and clinicians have long grappled with the question why tinnitus is experienced as distressing by some yet not others. Hallam et al. (1984) proposed the habituation model of tinnitus, which has become one of the most influential psychological perspectives on tinnitus. Hallam et al. (1984) suggest habituation to tinnitus happens naturally to most people as recurrent continuous stimulation is typically habituated by sensory perception, i.e. filtered out of conscious awareness. With time, internal noises are no longer responded to just as it is possible to become unaware of external sounds like the humming of an air-conditioning unit. Hallam et al. (1984) suggest that high levels of stress inhibit some individuals' ability to habituate to tinnitus. In a reciprocal feedback loop, increased awareness of tinnitus leads to an increase in stress arousal, which further heightens awareness of tinnitus thereby inhibiting habituation to occur. Consequently, Hallam et al. (1984) suggested tolerance of tinnitus could be boosted by reducing levels of autonomic nervous system arousal.

While Hallam et al.'s (1984) habituation model identifies the consequences of tinnitus on wellbeing and suggests treatment options, it does not offer any hypotheses about the cognitive processes that may be involved in the generation and maintenance of tinnitus distress. Building on the habituation model, McKenna et al. (2014) proposed a cognitive-behavioural model of tinnitus distress which emphasizes the importance of negative thoughts and beliefs about tinnitus. McKenna et al. (2014) formulate tinnitus distress within Beck's (1976) theory of emotions, i.e. individuals experience distress if they have overly negative thoughts about tinnitus, its significance, and negative beliefs about their ability to tolerate the noises. These negative thoughts trigger stress arousal and emotional distress which are maintained by repetitive catastrophic and negative thinking leading to unhelpful, fear-based strategies such as selective attention, monitoring of tinnitus, and unhelpful safety behaviours including avoidance, suppression, and distraction. The authors suggest several feedback loops are involved, resulting in greater awareness of the feared tinnitus and even more negative thoughts, thus leading to distorted perceptions of the intensity and complexity of tinnitus. While these attentional processes are intended to protect from the perceived threat tinnitus poses, they are in fact unhelpful as they make it more difficult to switch attention away from distressing tinnitus. Regarding the model's clinical application, McKenna et al. (2014) recognize that unconscious processes are also involved in the maintenance of tinnitus-related distress, hence the authors suggest therapy address specifically conscious processes to address patients' beliefs.

2.3.4 The Role of Attention in Tinnitus

As tinnitus-related distress can be understood within Beck's (1976) theory of emotions, researchers have explored the role of attentional biases in individuals with bothersome tinnitus. For example, Ooms et al. (2013) examined the processing of affective information in an experimental study with 67 adults with self-reported tinnitus-related distress. Participants were presented with computer images of happy and angry faces. Reaction times showed that automatic processing of positive affective information was impaired but not that of negative affective information (Ooms et al., 2013).

Research has also shown attention-switching to be impaired in adults with persistent tinnitus. Trevis et al. (2016) conducted an experimental study with 26 participants with self-reported bothersome tinnitus and 29 participants with normal hearing comparing their performance on a range of cognitive control and inhibition tasks. Slower reaction times indicated significant impairments in cognitive control and inhibition in participants with bothersome tinnitus compared to individuals in the control condition. Furthermore, participants with bothersome tinnitus reported poorer emotional wellbeing than those without while controlling for levels of trait anxiety. Thus, these findings suggest that reduced control over the ability to switch attention may be a core mechanism in maintaining awareness of tinnitus and consequently maintaining the associated distress.

2.3.5 Content and Role of Thoughts in Tinnitus-related Distress

To capture beliefs about the negative consequences of tinnitus, Watts et al. (2018) retrospectively analysed responses of 678 individuals who attended clinical assessments at a British tinnitus centre between 1989 and 2014 to the question: 'Why is tinnitus a problem?'. Content analysis produced 18 domains identifying the most common beliefs as: tinnitus 'spoils' the quality of daily activities and experiences, the belief that tinnitus is 'inescapable' and a future with tinnitus is to be 'feared'.

Watts et al. (2018) only focused on negative cognitions arising from bothersome tinnitus and did not collect any data on thoughts that may support a less problematic perspective on tinnitus. Handscomb et al. (2017) conducted a factor analysis of Wilson and Henry's (1998) Tinnitus Cognitions Questionnaire to gain a better understanding of the relationship between negative and positive thinking styles and tinnitus-related distress. The study consisted of a large non-clinical sample (N = 342) of adults with either bothersome or non-bothersome tinnitus. Confirming that the Tinnitus Cognitions Questionnaire is a valid measure of positive and negative thinking styles in tinnitus, Handscomb et al. (2017) found that negative thinking styles are associated with more bothersome tinnitus, while positive styles are not associated with non-bothersome tinnitus.

The authors concluded that many people who are not bothered by their tinnitus appear not to feel the need to use positive thinking, i.e., “I have coped with the noise before, so I can cope again this time” as a coping strategy. Anecdotal evidence gleaned during the study seemed to suggest people who are not bothered by their tinnitus may simply not be thinking about it. Handscomb et al. (2017) therefore proposed that lack of negative thinking rather than presence of positive thinking characterizes those with non-bothersome tinnitus. Handscomb et al. (2017) suggest that interventions supporting positive appraisals of tinnitus should be examined as a deliberate strategy for people with moderately bothersome tinnitus as this may help them to cope better by enabling them to switch from negative to positive thinking. However, the authors warn that those with severely bothersome tinnitus appear to be unable to engage in positive thinking. Hence, interventions that nurture a positive outlook may be more applicable to individuals who are less negatively affected by tinnitus.

The above study shows that little is known how people experience tinnitus, and Dauman and Erlandsson (2012) warned that the field’s overreliance on quantitative research risks leading to a poor understanding of the experience of distressing tinnitus. To address this shortfall, Pryce and Chilvers (2018) conducted a grounded theory study to better understand individuals’ experience of living with tinnitus and the role of thoughts, beliefs, and interpretations of tinnitus in a sample of 13 adults. The authors identified sense making as a core category operating through the eight themes i.e., the process of rationalizing tinnitus and understanding its meaning to a person’s sense of self and wellbeing (see Table 1). For example, when tinnitus is understood as uncontrollable i.e., there is no “off-switch”, thus fuelling a struggle to regain control over tinnitus and get away from the noises. This struggle, or negative appraisal of tinnitus, keeps a person’s awareness on the noises. Paradoxically, participants who did not consider tinnitus as something that needed to be controlled or “switched off” described no longer being dominated by the negative emotional impact of tinnitus on their wellbeing. They were able to change their perspective on tinnitus as and recognize certain blessings, for example, feeling gratitude that having tinnitus is not as bad as having a serious illness.

Previous models had already identified that the way people make sense of their tinnitus influences how distressed they are by it (e.g. McKenna et al., 2014).

However, Pryce and Chilvers (2018) explained the role of seeking to control tinnitus and impaired attention-switching in the maintenance of distress. They further noted that those who were able to put tinnitus into perspective by comparing their own suffering with other people's greater suffering did so without guidance. Hence, they concluded this strategy presented a logical cognitive process of sense-making of a persistent condition. Hence, Pryce and Chilvers (2018) suggested future therapeutic interventions should focus on broadening a person's perspective to reduce the perceived severity of the consequences of tinnitus.

Table 1

Themes from Pryce & Chilvers (2018)

Major Themes	Core Category
• Losing silence and a sense of control • Perceiving a sense of loss leads to negative emotional responses • Valuing apparent control through the use of effective coping strategies • Wanting ultimate control, the elusive off-switch • Articulating a condition that is difficult to explain • Putting tinnitus into perspective • Achieving tinnitus acceptance • Influencing perspectives and expectations	**S** **E** **N** **S** **E** **M** **A** **K** **I** **N** **G**

While this study helped to extend our understanding of the content of the thoughts in people who are distressed or not distressed by tinnitus, there are some methodological limitations. For example, the authors did not state a

research question hence it was difficult for the reader to establish the aims of the research. Secondly, the authors noted their concern their professional knowledge of existing medical and psychological models of tinnitus may influence their interpretation of participants' data however, they did not provide any detail how this tension was managed. Thirdly, there appeared to be a limited theoretical commitment to grounded theory, which requires analysis leading towards theory development. Pryce and Chilvers (2018) appeared to have applied grounded theory as a set of procedures for coding data very much akin to thematic analysis. Braun and Clarke (2006) called this grounded theory "lite". For example, the concept of control appeared across four themes suggesting this may be an important element in a theory of tinnitus-related distress where sense-making has a particular quality.

Concepts of control and gaining perspective on tinnitus were also identified in a qualitative study by Marks et al. (2020). Participants (N = 9) for this study were recruited from a pool of participants who had taken part in a randomized controlled trial examining the effectiveness of a mindfulness-based cognitive therapeutic approach (MBCT) adapted for tinnitus (McKenna et al., 2017). This approach is based on McKenna et al.'s (2014) cognitive-behavioural model of tinnitus distress and encourages mindful awareness towards all experiences, positive and negative, and allowing rather than avoiding unwanted sounds (McKenna et al., 2017). In addition to mindfulness meditations other positive psychology concepts such as kindness, compassion, and gratitude[1] were integrated in the treatment protocol thus offering different strategies that encourage a broadening of awareness beyond tinnitus (McKenna et al., 2017).

Participants were interviewed six months after completing the programme and interpretative phenomenological analysis was applied to explore participants' experiences of the intervention and their relationship to tinnitus. The resulting four supraordinate themes are summarised in Table 2. All participants recognised that prior to treatment, their attempts to control tinnitus had exacerbated their difficulties. By adopting a broader, more flexible awareness beyond tinnitus, participants expended less effort to control tinnitus and were

[1] Treatment protocol included a diary to record pleasant experiences (McKenna & Marks, 2010)

able to pay attention and feel gratitude towards blessings in their lives (Marks et al., 2020).

Table 2

Themes from Marks et al. (2020)

Supraordinate themes	Subordinate themes
Relating to tinnitus in a new way	• Staying present • Equanimity (allowing & letting be)
Holistic beliefs	• Reduced stress • Enhanced wellbeing
Connection, kindness, and compassion	• With other people • With one's self
Factors supporting engagement and change	

The role of gratitude appeared across two supraordinate themes, holistic beliefs and connection, kindness and compassion. Marks et al. (2020) concluded that gratitude can help gain a different perspective on tinnitus, e.g. gratitude was felt when comparing their own suffering to the greater suffering of others. This shift in participants' perspective decreased their sense of overwhelm and increased feelings of gratitude thus acting as "powerful antidotes to negative cognitions" (Marks et al., 2020, p.6). Importantly, however, this shift in perspective did not deny participants' emotional pain related to tinnitus. Instead, it encouraged a broadening of awareness to include other experiences in addition to tinnitus. Once this broader awareness became more integrated into participants' lives, they seemed to feel gratitude spontaneously when connecting with others or seeing kindness and generosity in others. Paying attention to the blessings in one's life seemed to transform the experience of tinnitus as "it just melts everything away for a moment" (Marks et al., 2020).

Marks et al. (2020) concluded clinical treatments should include interventions that encourage a change in individuals' perspective on their fearful and

catastrophic thoughts about tinnitus by considering it in the bigger context of all human suffering. Through keeping a gratitude diary and gratitude meditations individuals could be encouraged to experiment with noticing aspects of their life for which they can be grateful.

The study's limitations include issues around reflexivity, which is key in qualitative research (Marks et al., 2020). For example, the lead researcher was also a trial clinician in the MBCT trial, from which the participants were recruited. The therapeutic relationship may have influenced participants' responses as they may have wanted to please the researcher. Another researcher – one not involved in the trial – may have co-created different data. While removing all bias is not the goal in qualitative research, the published article did not describe whether or how these tensions were addressed.

Building on Marks et al.'s (2020) findings, the potential role of positive psychology aspects in reducing tinnitus-related distress was further explored in a cross-sectional study by Reeves et al. (2021). The study examined the relationship between dispositional gratitude, mindfulness, and self-compassion and tinnitus in a non-clinical sample (N = 182) who self-reported persistent tinnitus symptoms. Participants completed five online questionnaires on dispositional gratitude, mindfulness, self-compassion, tinnitus cognitions, tinnitus distress, and psychological distress. Correlational analyses indicated a moderate significant negative association between tinnitus distress and gratitude (r = -0.31) and self-compassion (r = -0.44), and a small significant negative correlation with mindfulness (r = -0.3). Similarly, moderate significant negative correlations were found between psychological distress and gratitude (r = -0.33) and mindfulness (r = -0.46) and self-compassion (r = -0.5). Thus, Reeves et al. (2021) stated that greater levels of gratitude, mindfulness and self-compassion were associated with lower levels of tinnitus and psychological distress.

These findings are in line with similar results from samples with other chronic health conditions such as inflammatory bowel disease and arthritis (Sirois & Wood, 2017), rheumatic and musculoskeletal conditions (Hirsch et al., 2021). However, there were some significant limitations. For example, the sample lacked in diversity with 96.9% identifying as White British. Furthermore, those who responded to the study's recruitment advertisement were likely to have

valued mindfulness, self-compassion, and gratitude. It is, therefore, possible they may have had relative high levels of these characteristics. Thus, generalizability of the results is limited. Recognizing the limitations of the study's cross-sectional design, Reeves et al. (2021) concluded an improved understanding of the role of positive psychology constructs and how these may help individuals with tinnitus develop greater resilience may open new avenues for research, theory, and treatments.

In summary, existing theoretical models of tinnitus and empirical research suggest a person's perspective on what tinnitus means to them is a central influencing factor on whether they are distressed by it. Recent qualitative studies have highlighted a potential role of gratitude in a person's perspective on tinnitus (Pryce & Chilvers, 2018; Marks et al., 2020). In addition, cross-sectional data suggest greater levels of gratitude are associated with less tinnitus-related distress and improved psychological well-being (Reeves et al., 2021). However, little is known whether it is possible to encourage a change in person's perspective on tinnitus by nurturing their grateful outlook. Hence, the following section will explore the existing theoretical base on gratitude and empirical evidence of gratitude interventions with particular focus on the relationship of gratitude and wellbeing in populations with physical health conditions.

2.4 Gratitude

2.4.1 Introduction

Over the past 20 years, the nature and importance of gratitude has been the subject of numerous research studies. Interest in the concept of gratitude is intertwined with the discipline of positive psychology which offers an alternative model to the dominant medical model of human functioning (Maddux, 2008). Fredrickson (1998, 2001) proposed the broaden-and-build theory of positive emotions in response to psychology's problem-focused approach which attends to the role of negative emotions in the development and maintenance of

psychological difficulties. Instead of focusing on distress and pathology, positive psychology emphasizes factors that contribute to wellbeing and optimal functioning such as positive experiences and positive personality traits (Duckworth et al., 2005; Seligman & Csikszentmihalyi, 2000).

The following will discuss how the concept of gratitude has been defined in the scientific literature, present existing research on gratitude's protective quality against adversity specifically in physical health conditions, and explore empirical evidence suggesting a potential causal link between gratitude and improved wellbeing in physical health conditions. As parallels have been drawn between tinnitus and psychological models of persistent pain (Moller, 1997) the literature reviewed here will focus on empirical studies in populations with persistent health conditions associated with pain.

2.4.2 Conceptualizations of Gratitude

Gratitude has been pronounced a "multi-layered concept that defies easy description or analysis (Emmons, 2004, p.10). The following will discuss how gratitude has been defined as emotion, personality trait, and as existential concept.

As emotion, gratitude is a time-limited state of being thankful or appreciative of the good things in life, such as the presence of a beloved person, someone's positive behaviour towards us, or receiving gifts (Johnson & Wood, 2017; Lambert et al., 2009) as well as impersonal entities such as God and nature (Emmons & Shelton, 2002).

In addition to an emotion, gratitude has also been conceptualised more broadly as a disposition, a trait-like characteristic like openness or agreeableness. Gratitude as disposition describes an individual difference in how easily, often, and intensely a person experiences the emotion of gratitude, and also the range of circumstances that elicit grateful emotions (McCullough et al., 2004).

When McCullough et al. (2002) developed the first measure of dispositional gratitude, they defined it as "a generalized tendency to recognise and respond

with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains" (p. 112). Wood et al. (2008, 2010) have argued for a broader understanding of dispositional gratitude which goes beyond feeling gratitude for others' benevolence. A factor analysis by Wood et al. (2008) demonstrated that dispositional gratitude is a higher order factor which consists of 12 lower order facets, including: appreciating others, focusing on positive aspects of what a person possesses, appreciating how one's life could be worse; feeling in awe of beauty or nature; and appreciating the impermanence of life. Hence, Wood et al. (2008, 2010) define dispositional gratitude as a generalised tendency "towards noticing and appreciating the positive in the world" (p. 891) while connecting with the present moment and in the knowledge of one's mortality.

Early definitions of dispositional gratitude that emphasize the role of positive experiences as the only source of grateful emotions have been criticized for neglecting the possibility of feeling gratitude when tragedy and difficulties occur (Jans-Beken & Wong, 2019; Wood et al., 2016). The capacity for feeling grateful for a broad range of experiences is illustrated in Chun and Lee's (2013) thematic analysis based on the narratives of 15 adults with spinal cord injury. During in-depth interviews participants described instances when they experienced gratitude, e.g. for family support, new opportunities that have come about following their life-changing injury, their positive sense of self in recognition of their strength and resilience in the face of challenges, and gratitude towards God from a Christian perspective. Chun and Lee (2013) concluded living with illness challenges a person's sense of self and the world and does not exclude the ability to appraise life positively.

The capacity to find gratitude at times of difficulty points to an existential quality in gratitude. The concept of existential gratitude expands the definition of dispositional gratitude by adding the capacity to count blessings when life is difficult (Jans-Beken & Wong, 2019). Existential gratitude reflects emotions are complex and consist of a mixture of positive and negative feelings rather than opposite ends of a single spectrum (Frederickson, 2004). It also recognizes that simply reducing negative emotions does not automatically result in happiness and improvements in quality of life (Duckworth et al., 2005). As proponent of the utility of nurturing gratitude to improve psychological wellbeing, Emmons (2013)

argued that it is untenable to suggest positive thinking exercises have the potential to change the fact that “life has its share of disappointments, losses, hurts, setbacks, and sadness”. Furthermore, Jans-Beken and Wong (2019) suggest wellbeing relies on a person’s ability to hold positive and negative thoughts and emotions at the same time and negotiate a “dynamic adaptive balance” (p. 2). Hence, being able to tolerate ambivalence and to flexibly move between opposing emotions may play an important role in wellbeing.

The foundation of this dialectical conceptualization of gratitude and wellbeing can be found in Frankl’s tragic optimism. Frankl (1985) argued that it is possible to remain hopeful and optimistic for the future despite tragic life experiences. Like tragic optimism, existential gratitude implies a person’s capacity to feel gratitude despite suffering and difficulty, and experience personal growth (Frankl, 1985; Jans-Beken & Wong, 2019).

2.4.3 Why Study Gratitude?

The question scholars have been trying to answer is whether there are any benefits to be had from feeling gratitude or having a grateful disposition. Fredrickson (1998, 2001) suggests in her broaden-and-build theory that positive emotions like gratitude undo adverse physiological effects of negative emotions and extend cognitive functioning through broader, more flexible, and helpful thinking styles. According to this theory, negative emotions lead to a narrowing in attention thus facilitating thoughts and behaviours that are problem-focused. In contrast, positive emotions have a broadening effect which allows individuals extend their attentional focus to facilitate a wider range of cognitive and behavioural response options when faced with difficulty (Fredrickson & Branigan, 2005). Fredrickson (2001) further suggests repeated experiencing of positive emotions over time enables individuals the development of an enduring set of psychological resources that sustains a person’s wellbeing.

Fredrickson and Levenson (1998) suggest nurturing a grateful outlook may help broaden a person’s perspective on challenging situations or difficulty thus encouraging cognitive and behavioural flexibility. Fredrickson (2004) suggest

repeated experiences of feeling gratitude may gradually shift negative affective styles and lead to the development of lasting dispositional gratitude. Furthermore, based on her broaden-and-build theory, Fredrickson (2004) proposes that gratitude can improve and maintain wellbeing in two ways: indirectly, as a protective factor against negative emotions and experiences, and directly as a causal agent of wellbeing.

2.4.4 Protective Agency of Gratitude

This section explores Fredrickson's (2004) hypothesis of gratitude's protective role in psychological and physical health difficulties. The accumulated evidence was recently evaluated in a meta-analysis by Portocarrero et al. (2020), aggregating 404 effect sizes from 158 different samples (N = 100,099) to establish the magnitude of the protective agency of dispositional gratitude. Portocarrero et al. (2020) reported results on indicators of wellbeing including subjective and psychological wellbeing as well as negative wellbeing comprising of psychological distress, such as negative affect, anxiety, stress, depression, suicidal ideation, and presence of mental health difficulties. Analysis demonstrated dispositional gratitude to be more strongly associated with positive than negative wellbeing. The meta-analytic correlation for all indicators of positive wellbeing is moderately strong with r = 0.42, 95% CI [0.40, 0.45]. The relationship between psychological wellbeing and dispositional gratitude is slightly stronger as data from 33,222 participants with r = 0.44, 95% CI [0.40, 0.48]. The correlation for all indicators of negative wellbeing is somewhat weaker with r = -0.33, 95% CI [-0.35, -0.30].

Portocarrero et al. (2020) concluded that individuals with higher levels of dispositional gratitude present with higher levels of wellbeing than psychological distress, thus supporting the hypothesis of a protective agency of dispositional gratitude. Furthermore, among the indicators for negative wellbeing, depression was most strongly negatively correlated with dispositional gratitude, raising the question whether gratitude's protective quality also holds for more severe mental health difficulties. Portocarrero et al. (2020), however, criticised researcher over-reliance on healthy student samples in existing studies. The

authors, therefore, suggested the possibility that dispositional gratitude may be more influential and carry greater benefits for wellbeing in clinical or medical populations.

Understanding whether dispositional gratitude has a protective effect also against more complex psychological difficulties such as depression is important as depression is a common comorbidity in many persistent physical health conditions. For example, depression is associated with such factors as loss of function and psychosocial challenges (e.g. Sirois & Wood, 2017; Toussaint et al., 2017). Hence, understanding factors that may help improve psychological wellbeing in individuals living with chronic physical health conditions is an important area for research and clinical practice.

Sirois and Wood (2017) conducted the first study to investigate the longitudinal association of gratitude and depression in individuals living with persistent conditions. Participants had inflammatory bowel disease (IBD, *N* = 427) and arthritis (*N* = 423). Participants completed outcome measures on gratitude, depressive symptoms, self-rated health, pain, perceived stress, social support, illness cognitions and psychological thriving. A total of 144 participants with IBD and 163 with arthritis completed outcome measures at baseline and six months with over half reporting significant depressive symptoms. Sirois and Wood (2017) found that after controlling for disease-related and psychological variables which are known to predict depression including gender, age, social support, illness cognitions, and stress higher levels of gratitude predicted lower levels of depressive symptoms over six months across both samples. These findings indicate a potentially important role of gratitude in depressive symptoms in populations with persistent physical health conditions. However, due to the study's cross-sectional design no conclusions can be drawn about the causal agency of gratitude. It is also unclear whether experimentally increasing gratitude in populations living with persistent health conditions is possible and would lead to a reduction in depression, thus further supporting the hypothesis that gratitude has a protective function.

Toussaint et al. (2017) explored the relationship between gratitude and depression, anxiety, and quality of life in a cross-sectional study including 173 fibromyalgia patients and 81 healthy controls. Compared to healthy controls,

participants with fibromyalgia reported lower levels of dispositional gratitude and quality life, but greater levels of anxiety and depression. Differences between the two groups were partially explained by lower levels of dispositional gratitude in fibromyalgia participants. Thus, Toussaint et al. (2017) propose gratitude may be a core resiliency factor which may facilitate more helpful coping which in turn may increase quality of life. The study shows that in the presence of persistent physical illness and disability positive dispositions like gratitude may be compromised. The findings further suggest the potential of nurturing gratitude as a strategy to facilitate better coping with persistent illness.

Further evidence from a large cross-sectional study suggests a link between gratitude, functional disability and psychological outcomes in adults with rheumatoid musculoskeletal conditions (N = 1,218). Hirsch et al. (2021) found gratitude to be significantly and negatively albeit weakly related to functional disability (r = -0.14), depression (r = -0.18), stress (r = -0.21), and anxiety (r = -0.11). Furthermore, indirect effects of gratitude on functional disability were found via levels of stress and depression. Hirsch et al. (2021) concluded that gratitude's protective factor may be due in part its self-soothing quality. The authors suggest that gratitude may help to down-regulate a person's stress response by encouraging positive re-appraisals of their illness. Hirsch et al. (2021) suggested that addressing psychological difficulties directly via nurturing a person's dispositional gratitude or grateful outlook has the potential to improve physical health outcomes in individuals with persistent rheumatoid musculoskeletal conditions.

There is growing evidence that dispositional gratitude may have a protective quality when faced with adversity such as physical health conditions. However, it is impossible to claim a causal association between dispositional gratitude and psychological and physical health outcomes in this populations as studies present correlational data from cross-sectional and longitudinal designs only. The question whether a person's level of dispositional gratitude can be manipulated to improve psychological wellbeing will be discussed in the following section.

2.4.5 Causal Agency of Gratitude

The feasibility of improving psychological and physical wellbeing by experimentally manipulating individuals' dispositional gratitude was first examined by Emmons & McCullough (2003) in a series of three experiments. The research pioneered the use of a self-guided gratitude diary intervention requiring participants to record the blessings in their lives. In study 1, 192 undergraduate students were assigned to one of three experimental conditions. For nine weeks they were asked to record once a week either five things they were grateful for, five hassles, or five life events. In studies 2 and 3, frequency and duration of the interventions were changed from weekly to daily recordings for two and three weeks respectively. Study 2 included 157 undergraduate students and the events condition was replaced with a downward social comparison condition. Study 3 included 65 adults with congenital, adult-onset neuromuscular disease. Unaware they were participating in an experimental study on gratitude, all participants were asked to complete daily experiences questionnaires, with 33 also recording five blessings. Emmons & McCullough (2003) hypothesized that participants assigned to the gratitude conditions would show increased psychosocial functioning compared to those in the control conditions in the three studies.

The studies produced mixed results on the benefits of gratitude on wellbeing. For example, in study 1, participants in the gratitude condition rated current and prospective life more favourably, reported fewer symptoms of physical illness and exercised more as compared to participants in the hassles and events conditions. However, contrary to the authors' hypothesis, the gratitude condition failed to produce a statistically significant increase in positive affect or reduction in negative affect. In contrast, in study 2, the gratitude condition was associated with more positive affect compared to the hassles condition, but also no difference in negative affect, and the health benefits found in study 1 were not replicated.

In study 3, keeping a daily gratitude diary showed statistically significant increases in positive affect and life satisfaction and a decrease in negative affect. Furthermore, participants reported improvements on clinically important outcomes such as increased sleep duration and refreshing sleep. Additional,

mediational analysis showed that gratitude was uniquely responsible for the improvements in positive affect, but not negative affect.

In summary, the findings in Emmons & McCullough's (2002) study series provided mixed results and any effects may have been the result of non-specific factors common to any therapeutic intervention (Wampold, 2007). Noteworthy is that the positive effects of the gratitude intervention may have been inflated as these were most clearly found when compared to the hassles condition rather than neutral conditions. Furthermore, a lack of baseline measures did not allow assessment of homogeneity of the different conditions across the variables. Despite these criticisms, it is notable that the observed benefits were achieved through a relatively simple and cost-effective intervention.

Emmons & McCullough's (2003) study has become a key investigation in gratitude research and is probably the most cited within the field. Since the study's publication, gratitude interventions have been developed and applied in a range of settings (Boggiss et al., 2020; Dickens, 2017). Moreover, gratitude exercises have grown quite prominent in popular culture as a means of self-help as can be seen in the availability of gratitude apps and books (Cregg & Cheavens, 2021). However, variability found in meta-analytical studies raises the question on the generally assumed efficacy of gratitude interventions on psychological outcomes. Dickens (2017) identified all published experimental studies up to March 2016 and included data from 38 independent studies with a combined total of 5,223 participants in the analyses. The author identified considerable variability in the type of intervention, population, and measures across the studies.

Meta-analysis demonstrated small to medium effect sizes for several psychological outcomes including subjective wellbeing, happiness, life satisfaction, grateful mood and disposition, positive affect and reduce depressive symptoms. However, evidence for effects of gratitude on stress and negative affect was mixed and there was no clear effect on physical health outcomes such as sleep or exercise. Dickens (2017) identified several flaws in the existing body of evidence including an over-reliance of healthy student samples and the use of negative control conditions which risk overstating the potential benefits of gratitude interventions.

More recently, Boggiss et al. (2020) assessed the potential efficacy of gratitude interventions on physical health or health behaviour outcomes in an updated systematic review. The authors originally identified 1,433 studies but only 19 studies with a combined total of 2,361 adults and adolescents met their inclusion criteria. Outcome measures included objective health outcomes, self-reported physical symptoms and health status, and self-reported health behaviors. Gratitude interventions were found to show most promise for self-reported health behaviours, specifically subjective sleep quality. While the authors did not report effect sizes for the included studies, Boggiss et al. (2020) concluded that the available data provide only cautious support for the positive effect that gratitude interventions may improve subjective sleep quality specifically. The authors further stated that other outcome measures remain understudied hence no firm conclusion about the efficacy of gratitude interventions could be drawn.

While all studies in Boggiss et al.'s (2020) review included a physical health element, most studies included healthy student samples. While only three studies included adults with physical health conditions: neuromuscular disease (Emmons & McCullough, 2003), asthma (Cook et al., 2018), and asymptomatic cardiovascular disease (Redwine et al., 2016). Hence, Boggiss et al. (2020) suggested that improvements in outcomes among participants with physical health conditions were found but treated with caution as only one study assessed each outcome.

Furthermore, neither Dickens (2017) nor Boggiss et al. (2020) have been able to clarify which type of gratitude intervention is most effective. Gratitude interventions can be classed into those that nurture appreciative feelings (e.g. gratitude diary) and those strengthening interpersonal relationships (e.g. gratitude letters) (Kaczmarek et al., 2015). Research suggests diaries are more popular when participants are given a choice to self-initiate either a diary or letter intervention (Kaczmarek et al., 2015). A study by Huffman et al. (2014) found gratitude diaries to be more acceptable to participants with high levels of suicidal ideation than other positive psychology interventions that required greater introspection.

2.4.6 Can Gratitude Diary Interventions Improve Wellbeing for People with Physical Health Conditions?

It has been suggested that individuals living with persistent physical health conditions are often pre-occupied by thoughts and feelings about their condition and have a narrow focus on their symptoms and how to find relief (Büssing et al., 2013). This is not to say that they are completely unable to experience times of wellbeing. To date, little is known whether a gratitude diary intervention is effective in improving the psychological wellbeing in populations with persistent physical health conditions and how levels of dispositional gratitude may affect these improvements. The following will examine quantitative and qualitative evidence of the application of gratitude diary interventions in populations with physical health conditions.

In a brief clinical communication, Cook et al. (2018) showed that keeping a gratitude diary for four weeks lead to clinically and statistically significant improvements in self-reported burden of asthma symptoms in a small sample of 25 adults. The gratitude diary condition in this study was compared to a general diary condition, however, due to the small sample size subgroup analyses regarding which individuals benefitted most were not conducted. Furthermore, no measure of dispositional gratitude was included, hence it is impossible to know whether the gratitude diary achieved its positive effect because of increased levels of dispositional gratitude. Cook et al. (2018) suggested that improved subjective experience of the burden of asthma symptoms are likely to have a positive influence on individuals' quality of life. The authors concluded that gratitude diaries are likely to produce beneficial outcomes in people with asthma.

Cross-sectional evidence suggests that functional impairments in individuals with persistent health conditions may be improved by addressing psychological difficulties with the help of gratitude interventions (e.g. Hirsch et al., 2021). Sztachańska et al. (2018) examined whether a gratitude diary intervention, could improve daily psychological functioning of women who had been diagnosed and completed treatment for breast cancer. The study adopted a similar approach to that of Emmons and McCullough (2003). Aside from baseline trait measures of anxiety, acceptance of illness, coping, well-being,

and gratitude, participants completed daily measures on affect, self-esteem, acceptance of illness, and optimism, support, coping, and gratitude. Participants (*N* = 61) were allocated to either a daily gratitude diary or daily events diary control condition. Results from 42 participants who completed the intervention showed that keeping a daily gratitude diary for two weeks improved daily psychological functioning and increased levels of gratitude. Compared to participants in the control condition who recorded daily events, participants in the gratitude condition reported significantly higher levels of gratitude, self-esteem, optimism, acceptance of illness, perceived social support, and more adaptive coping strategies. Furthermore, Sztachańska et al. (2018) explored the within-person relationships between gratitude and daily functioning. Participants' gratitude measures were positively correlated with measures of daily functioning, which were increased with greater levels of gratitude but were reduced on days when they felt less grateful. Overall, the authors concluded a gratitude diary intervention is an effective and a low-cost self-management tool to improve daily functioning in women with breast cancer which has the potential to be effective in other oncology populations (Sztachańska et al., 2018).

Few experimental studies examining the effectiveness of gratitude diary interventions exist in populations with physical health conditions. Even less is known how gratitude diary interventions are experienced in the context of physical health condition.

Moosath and Jayaseelan (2016) explored the experience of keeping a daily gratitude diary for 30 days among eight oncology patients using thematic network analysis, identifying four global themes: emotions experienced during the exercise, benefits of the exercise, alternative ways of expressing gratitude, and reasons why people do not express gratitude. Participants' responses suggest that keeping a gratitude diary helps to broaden their perspective thus allowing things beyond their illness come into awareness, such as helpful relationships. The actual act of keeping the diary itself also seemed to provide distraction from the symptoms of their illness. Gratitude diaries also seemed to enable participants to reframe negative experiences by noticing things for which they felt gratitude. This appeared to lessen their negative thoughts about their illness (Moosath & Jayaseelan, 2016).

To the best of my knowledge, this is the only published qualitative study of a gratitude diary intervention in the context of physical illness. However, there are several limitations affecting the quality and validity of the study. For example, the authors did not provide any information about the study's procedure. Supporting evidence from direct quotes were provided only for two themes. Results and discussion were presented together with little discussion locating the results in the existing body of empirical evidence.

2.5 Conclusion

A better understanding of the concept of gratitude and its application in psychological therapy is an important area for the field of Counselling Psychology (Wong, 2019). As Counselling Psychologists, we do not hold a simplistic view of gratitude but accept that life is full of suffering yet we approach psychological therapy and our clients not from a position of pathology and dysfunction, instead we strive to build on clients' strengths and focus on what is possible and achievable. A better understanding of the utility of gratitude as a psychological intervention adds to the skills and tools to be used with a wide range of client groups, including those with persistent physical health conditions.

Over the past 20 years, research into gratitude has shown its protective agency against adverse life events including physical health conditions (e.g. Portocarrero et al., 2020), and experimental studies have demonstrated that simple interventions such as keeping a gratitude diary may improve people's mental, emotional and physical wellbeing. However, the application of gratitude diary interventions in populations with physical health conditions is still in its infancy.

As gratitude interventions have moved into clinical practice, it is important to better understand their application in different populations including those who live with persistent physical health conditions. Particularly as positive psychology interventions, as a whole, have been criticized for placing an implicit burden on people with physical illness to be grateful or happy when they are in

the midst of suffering (Ehrenreich, 2009, as cited in Jans-Beken & Wong, 2019). However, to date, little is known how people who keep a gratitude diary make sense and experience the practice due to the lack of good quality qualitative research.

Evidence from qualitative and quantitative studies indicates that dispositional gratitude may play a role in tinnitus-related distress. For example, a gratitude diary formed part of a MBCT treatment protocol which has been examined in a randomized clinical trial (McKenna et al., 2017). While the trial did not measure levels of gratitude, in a qualitative follow-up study gratitude was considered an "antidote" to negative cognitions (Marks et al., 2020). In addition, cross-sectional evidence points to the protective agency of dispositional gratitude on tinnitus distress (Reeves et al., 2020). However, keeping a gratitude diary has not been examined as a stand-alone intervention in tinnitus.

This research seeks to address this gap and develop our understanding of the role of dispositional gratitude in managing tinnitus-related distress and thereby extend the literature on tinnitus and that of gratitude. The intention of this study was not to promote unreflective positive thinking but encourage a practice of gratitude that can hold both, a recognition that life with tinnitus can be difficult but blessings are to be experienced despite tinnitus. Hence, the study aimed to examine the feasibility of applying a gratitude diary intervention in adults with tinnitus. A mixed method approach was adopted to assess its effectiveness in reducing tinnitus-related distress and improving psychological wellbeing and to explore how participants' experiences of nurturing gratitude in the context of tinnitus.

Chapter 3: Methodology

Introduction

This chapter outlines the aims and the epistemological underpinnings of the study. This will be followed by the rationale for adopting a mixed methods research design and data collection strategies for quantitative and qualitative data. The chapter concludes with a description of the procedure adopted to carry out the study.

3.1 Study Aims

This study aimed to contribute rich and clinically relevant findings as well as adding a new angle to the understanding what may help reduce the psychological impact of tinnitus. A gap in the tinnitus literature regarding the potential of gratitude-based approaches in the management of tinnitus has been highlighted. Hence, an intervention designed to promote individuals' grateful outlook was hypothesised to reduce distress in people living with tinnitus and improve their psychological wellbeing.

The study's aims were to:

1) identify whether keeping a gratitude diary is effective in reducing tinnitus-related distress and improve psychological wellbeing in adults living with tinnitus;
2) explore the experience of keeping a gratitude diary in adults living with tinnitus;
3) examine the feasibility of using a gratitude diary in adults with tinnitus.

3.2 Research Hypotheses and Questions

The following hypotheses were developed to evaluate the effectiveness of a gratitude diary on outcome measures, based on previous theories and research findings:

The principal hypothesis: A gratitude diary intervention significantly reduces the distressing impact of tinnitus. The null hypothesis states there is no difference between the effects of the gratitude diary intervention and the distressing impact of tinnitus at baseline.

Second hypothesis: A gratitude diary intervention significantly improves psychological wellbeing in adults with tinnitus. The null hypothesis states there is no difference between the effects of the gratitude diary intervention and psychological wellbeing at baseline.

In addition, the study sought to address the following research questions:

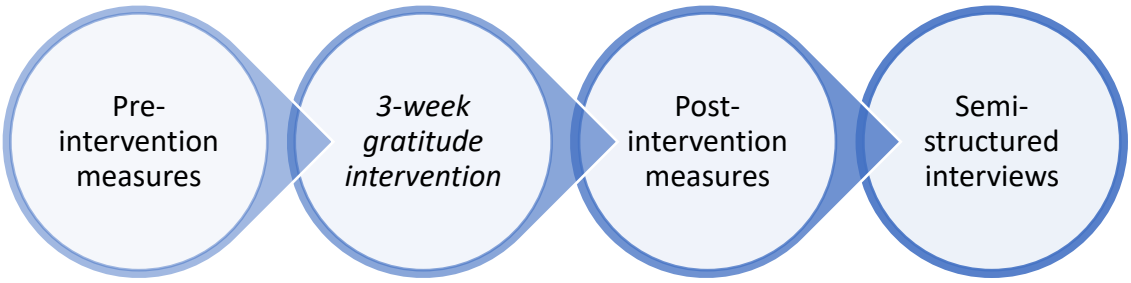
- What are participants' subjective experiences of keeping a gratitude diary intervention?
- How does the gratitude diary intervention impact on their experience of tinnitus?
- Will participants find this intervention acceptable and helpful?

3.3 Research Design

A mixed methods research design was adopted to address the hypotheses and research questions set out above. The quantitative arm will help evaluate whether keeping a gratitude diary for three weeks can reduce tinnitus-related distress and improve psychological wellbeing in adults with tinnitus. The qualitative arm will explore participants' experiences of keeping a gratitude diary. Quantitative data collection preceded qualitative data collection. Quantitative and qualitative data were analysed separately giving equal status to both methods. Figure 1 illustrates the sequencing of data collection.

Figure 1

Data Collection Sequence



3.4 Epistemological Position

As counselling psychologist, I adopt the scientist-practitioner model which encourages an "openness to all the paradoxes, divergences and different perspectives" (Kasket, 2016, p. 233) which is found in the empirical literature, various epistemological positions, and different methodological approaches used to explore human experiences. This stance is reflected in my clinical work where I integrate multiple therapeutic models to respond flexibly to my clients' needs. Similarly, I am neither a purely quantitative nor qualitative researcher but position myself as pluralistic researcher and believe a multitude of research methods, designs, and interventions can exist and add value to the empirical literature.

Researchers who hold that the two broad historical traditions of inquiry, i.e. qualitative and quantitative, cannot be mixed are called purists (Howe, 1988). Purists assume qualitative and quantitative data are linked with opposing philosophical assumptions (Smith, 1983). Quantitative purists assert assumptions which are consistent with a positivist and post-positivist worldview (Creswell & Plano Clark, 2018). Positivism holds knowledge is objective, value-free, and universal laws can be discovered using experimental methodology (Leahey, 1992; Ponterotto, 2005). Positivism proposes that like natural sciences, social and behavioural sciences should adopt the same hypothetico-

deductive methodology to test mental models of generalisable causal laws which appear to govern reality (Marks & Yardley, 2004; Ponterotto, 2005). In this view, research is context-free with researchers remaining "emotionally detached and uninvolved with the objects of study" (Johnson & Onwiegbuzie, 2004, p. 14). This assumption, however, has been rejected by post-positivists who accept that a researcher's values, background knowledge, hypotheses, and theories influence what is observed (Reichardt & Rallis, 1994). Like positivists, post-positivists are also committed to objectivity and finding the truth about a phenomenon. However, while they accept that reality exists, they hold that reality can only be known imperfectly and probabilistically due to the physical and intellectual limitations of researchers and methods (Ponterotto, 2005). Hence, unbiased, objective measurement becomes an unattainable goal in the drive to discover universal laws that govern human behaviour (Bishop, 2015; Robson & McCartan, 2016). Post-positivist researchers further assume cause-and-effect thinking and confidence in researchers' understanding of a phenomenon can be increased if certain patterns of results emerge from a substantial body of empirical evidence (Slife et al., 1995).

The view that quantitative research methods used to test, predict, and control phenomena are the only useful and valid way of understanding the world is rejected by qualitative purists who adopt an interpretivist/constructivist perspective. Interpretivist/constructivist epistemologies are based on a relativist perspective that accepts the world is only knowable through conceptual frameworks which may differ from person to person and group to group. From this assumption, universality does not exist and knowledge is inherently embedded in language, culture and values (Bishop, 2015). Qualitative purists argue that eliminating subjectivity from our knowledge about the world as well as time- and context-free generalisations are neither possible nor desirable (Guba & Lincoln, 1994). Thus, knowledge created through research is subjective and influenced by researchers' assumptions and bias (Creswell & Plano Clark, 2018). This perspective assumes multiple realities exist, research is value-bound, and logic flows from specific to general, with theory being generated inductively from the data (Johnson & Onwuegbuzie, 2004; Marks & Yardley 2004). It further holds that an understanding of phenomena is formed

through participants' subjective views which are shaped by social interactions and their personal histories and environments (Denzin, 2012).

As my identity as counselling psychologist is embedded within a humanistic relational framework, I struggle with the idea of emotionally detaching myself from those who participate in my research. Moreover, solely quantifying participants' experiences using outcome measures without listening to their individual voices feels reductionist and professionally inauthentic. While I believe qualitative methods may be more relevant to understanding the reality and experiences of those living with chronic health conditions like tinnitus, I also believe quantitative methods can help assess participants' changes in wellbeing. This approach reflects my experience in clinical practice where the combination of subjective, qualitative knowledge based in clinical judgement is integrated into empirical evidence drawn from quantitative research.

I further accept reality can only be partially measured and understood and understand that generalisations are not applicable to all (Madill et al., 2000). Acknowledging the influence of my clinical experience on my worldview as researcher, I am drawn to a pluralistic research perspective. This perspective encourages the use of both qualitative and quantitative methodologies thus providing the opportunity to both make generalisations and explain participants' subjective experience within one study. However, this also expects an ethical commitment on part of the researcher towards diversity and a rejection of overarching, absolute truths (Cooper & Dryden, 2015). Rescher (1993) understands pluralism as the philosophical perspective that "any substantial question admits a variety of plausible but mutually conflicting responses" (p. 79). Pluralistic research holds that there are many truths, and no single methodology is superior to all others, but a range of paradigms or analytic techniques are needed to understand different lines of inquiry and outcomes. Thus, adopting a pluralistic perspective offers an opportunity to access diverse dimensions of human experiences by viewing participants not from a single but instead from a combination of different ontological positions (Frost & Nolas, 2011).

I believe any phenomenon experienced by humans has both qualities and quantities that can be described both subjectively and objectively. Hence, I

consider myself a mixed method researcher and believe that combining important assumptions and values from different perspectives and methodologies offers the opportunity to tap into different aspects of participants' experiences which may add distinct insights into my overall research aims.

3.5 Mixed Methods Research

Mixed methods research is a type of research where quantitative and qualitative research techniques, methods, or approaches are combined within the design of a single study. It has been described as an "intuitive way of doing research" (Cresswell & Plano Clark, 2018, p. 1) as it provides "multiple ways of making sense" (Greene, 2008, p. 20) of the world. To achieve this, mixed method research rejects the dualism of qualitative and quantitative purists and suggests researchers adopt a stance that is "inclusive, pluralistic, and complementary and (…) take an eclectic approach to method selection and the thinking about and conduct of research" (Johnson & Onwuegbuzie, 2004, pp. 17–18).

The advantage of combining quantitative and qualitative methods in one study is the opportunity to gain broader insights into phenomena that one type of method on its own does not allow (Maxwell & Mittapalli, 2010; Tashakkori & Teddlie, 2010). It also offers an opportunity to overcome each method's inherent weaknesses while capitalising on their inherent strengths, thus offsetting inevitable method biases (Greene, 2008). For example, two of the advantages of quantitative approaches are the possibility to include large samples and the ability to generalise research findings to larger populations based on random sampling and inferential statistical analysis. However, it could be argued that quantitative research is weak in understanding the context people live in as its aim is to detect effects at a group-level thus losing individuals' perspectives (Johnson & Schoonenboom, 2016). For example, mechanisms predicted at group-level may not apply to all individuals, but quantitative research does not provide insight into this (Robinson, 2011). Understanding individuals' perspectives is, however, important for clinical practitioners who apply the knowledge generated by research to improve outcomes for individuals in specific rather than generalised situations

(Sandelowski, 2004). Hence, qualitative approaches can be used to make up for these weaknesses of quantitative approaches. Recent years have seen a push towards gathering experiential as well as observable outcome data within so-called “gold standard” randomised controlled trials to fully understand the effect of an intervention, how it works, for whom and under what circumstances (Bazeley, 2018; Johnson & Schoonenboom, 2016). Therefore, combining different forms of data allow for more detailed explanatory frameworks and new theories to be developed based on the two-way relationship between theory and data (Hiles, 2014; Johnson & Schoonenboom, 2016).

3.5.1 Epistemological Considerations for Mixed Methods Research

The philosophical challenges of mixed methods research stem from the fact that quantitative and qualitative approaches are typically associated with opposing epistemologies. In fact, Kuhn (1996, cited in Tashakkori and Teddlie, 2010) argued a synthesis of two separate epistemologies is incommensurable as data from one cannot be directly compared to data from another as each assume a different concept of what constitutes reality. However, this bifurcation between quantitative and qualitative methods has been called into question as some consider it no “longer meaningful for helping us understand the purpose and means of human inquiry” (Schwandt, 2000, p. 210). Furthermore, locating data within opposing epistemologies limits the possibility of seeing them and the world they represent beyond these dimensions (Bazeley, 2018).

Mixed methods research has been increasingly recognised as the third major research approach alongside quantitative and qualitative approaches (Johnson et al., 2007). Even some of the strongest supporters of qualitative research recognise the utility of quantitative data is often underappreciated by qualitative researchers (Lincoln & Guba, 1985) as “within each paradigm, mixed methodologies … may make perfectly good sense” (Guba & Lincoln, 2005, p. 200). Furthermore, reviewing the use of mixed methods designs within counselling psychology, Hanson et al. (2005) highlighted their relevance for the discipline and encouraged their application arguing that by using all available

tools more evidence can be collected thus enabling a deeper understanding of psychological phenomena.

At the heart of mixed methods research lies ontological pluralism, i.e., the belief that a variety of paradigms may serve as underpinning ontology for the use of mixed methods (Teddlie & Tashakkori, 2012). Hence, mixed methods research rejects the one-to-one linkage of methods with paradigms e.g., quantitative methods with positivism/post-positivism and qualitative methods with interpretivism/constructivism. Instead, researchers are encouraged to consider paradigms as tools which can be used creatively to fit a certain research situation (Maxwell, 2011). Pragmatism is considered the most useful and leading philosophical paradigm adopted by many mixed method researchers (Bishop, 2014; Creswell & Plano Clark, 2018; Johnson et al., 2017; Tashakkori & Teddlie, 2010). Pragmatism is a set of ideas articulated by US philosophers Charles Sanders Peirce, John Dewey and William James which all addressed the fundamental disagreement between qualitative and quantitative paradigms through the development of a workable solution (Biesta & Burbules, 2003). Pragmatism disputes the traditional assumption of incommensurability without completely eschewing the different philosophical traditions. Pragmatism acknowledges their differences but does not consider them mutually exclusive and therefore allows them to co-exist (Biesta, 2010; Greene & Hall, 2010). Hence, it accepts the existence of an objective reality independent of our subjective experience while also accepting that we can only know ‘how’ we experience that reality. Within pragmatism objectivity and subjectivity exist along a continuum and a researcher’s position may change as they move from using objective measures to engaging in analysis of subjective experience (Biesta & Burbules, 2003). With the rejection of the objective-subjective dualism and pragmatism proposes a pragmatist view of intersubjectivity. In an intersubjective world we have a shared responsibility for thinking along different lines of inquiry, cooperating in how we carry out research, and communicating a shared understanding of what is being researched (Biesta & Burbules, 2003; Johnson & Onwuegbuzie, 2004).

Pragmatism’s acceptance there are multiple routes to knowledge ultimately justifies the use of diverse research approaches if these help researchers obtain useful answers to their research questions and aim to improve understanding,

explanation, prediction, and clinical practice (Bishop, 2015; Johnson & Grey, 2010). Johnson (2009) further developed the pragmatist paradigm by combining it with Greene's (2008) dialectical approach to mixed methods, thus creating dialectical pragmatism. The dialectical approach welcomes multiple ways of seeing, hearing, and making sense of the world through the prisms of opposing paradigms (Greene & Hall, 2010; Shannon-Baker, 2015). It views "better" understanding as the primary goal of mixed methods research - without striving for convergence in the data but by seeking divergence and dissonance as these may provide new insights which could not have been discovered without looking at phenomena through the prisms of different paradigms (Greene & Hall, 2010). Like pragmatism, the dialectical perspective holds that the methods used should depend on the study at hand. Together, dialectical pragmatism requires a careful listening and considering of multiple viewpoints and engaging in a respectful dialogue with quantitative and qualitative perspectives to learn from the tensions that arise between them (Johnson & Grey, 2010).

As stated above, my philosophical foundation is grounded in pluralism which is consistent with a dialectical pragmatist research paradigm as they share common values of welcoming diversity of thought, reject supremacy of one approach over another, and finding workable solutions. Both allow the logical positions of quantitative and qualitative research to coexist within one explanatory framework (Hardiman, 2015; Hiles, 2014). Hence, I acknowledge that by choosing a mixed method approach I need to engage with the traditional paradigmatic dualism of quantitative and qualitative epistemologies. However, I believe that by adopting a dialectical pragmatic position a respectful engagement with quantitative and qualitative research methods is possible. This will ultimately serve the needs of this research study: to understand and explain whether a gratitude diary is effective in reducing tinnitus-related distress, how and for whom.

3.6 Rationale for Mixed Method Design

Having discussed the strengths of qualitative, quantitative research and mixed methods, the following will offer a rationale why adopting a mixed methods

design was considered the most appropriate approach for the present study. This study adopted an equal status mixed methods approach where quantitative and qualitative data bear equal importance for addressing the study's research questions (Creswell & Plano Clark, 2018). Intrinsic to this design was an explanation-driven inquiry logic, which aimed to examine the two-way relationship between theory and data thus bringing together the strengths and weaknesses of qualitative and quantitative methods (Hiles, 2014).

3.7 Rationale for Including Quantitative Data

The study's research aim was to identify the extent to which keeping a gratitude diary can reduce tinnitus-related distress and improve psychological wellbeing. Identifying the 'extent' of a change can best be measured through questionnaires. To examine this aim a quantitative approach was adopted, while accepting that any measurement is not completely unbiased and objective. Thus, within the quantitative arm of the study, I adopt a post-positivist epistemology.

While an experimental pre-post comparison is considered the best research strategy for evaluating the impact of interventions, it cannot always explain why any changes have occurred for some but not for others, how the intervention is experienced by participants, and how it might be improved (Creswell et al., 2003). Furthermore, any findings from the study's quantitative arm summarises outcomes at a group-level, however, these may not represent the experiences of all individuals (Robinson, 2011). To overcome these limitations a qualitative data element was included.

3.8 Rationale for Including Qualitative Data

As this is the first study examining whether it is feasible to use a gratitude diary to reduce tinnitus-related distress in adults it was important to develop as broad and deep an understanding as possible. To explore aspects of the intervention that a quantitative approach could not, collecting and analysing data was hoped

to provide a more nuanced understanding of how keeping a gratitude diary is experienced by different participants. Being encouraged to nurture a grateful outlook when life is challenging can be experienced in a variety of ways. Thus, it was anticipated qualitative data may provide context for the study's quantitative findings by offering divergent and convergent perspectives of gratitude, tinnitus, and psychological wellbeing.

3.8.1 Rationale for Thematic Analysis Grounded in Contextualism

The following will outline why thematic analysis (TA) was chosen to analyse participants' experiences of the intervention and that this chosen approach is consistent within the epistemology of contextualism. TA has been described a powerful method when seeking understanding of subjective experiences across a dataset (Braun & Clarke, 2012). A key feature of TA is its flexibility to be applied to a wide range of research questions and designs (Terry & Hayfield, 2021).

Braun and Clarke first outlined the process of conducting TA in 2006 and have since refined their suggested method to emphasize its reflexive nature. Braun and Clarke (2019) consider a researcher's critical reflection of their contribution on the research process to be key within TA. Hence, analysis occurs because and not despite the researcher's subjectivity, their values, histories, and philosophical influences (Braun & Clarke, 2019). Reflexive TA is a suitable method to be used in experiential research and is informed by a "hermeneutics of empathy" (Braun & Clarke, 2021, p. 160), i.e. its interpretative orientation is not to simply summarize participants' data but to make sense of the meaning captured within it.

Within the family of TA approaches, there are two ways of analyzing data: either inductively 'bottom-up' where the analysis is located within the data or deductively 'top-down' where the analysis is shaped by existing theoretical frameworks (Braun & Clarke, 2021). Reflexive TA adopts an inductive approach thereby emphasizing the importance of linking themes directly to the data without trying to fit them into a pre-existing frame of coding (Braun & Clarke, 2019). This is particularly helpful in areas of research where little prior

knowledge exists as is the case within this study. Furthermore, within reflexive TA themes do not ‘emerge’ from the data but are developed by the researcher who actively thinks about the data, identifies patterns, and creates links as they make sense of them (Anzul et al., 1997; Braun & Clarke, 2019). Hence, the researcher’s role is to reframe, interpret, and connect elements of the data to create themes (Kiger & Varpio, 2020; Terry & Hayfield, 2021). Hence, analysis becomes a creative rather than technical process, and is a result of the researcher’s engagement with the data and the application of their analytic skills and experiences, personal and conceptual standpoints (Terry et al., 2017).

Braun and Clarke (2006) hold that TA is a method rather than a methodology and therefore can be applied within different theoretical and paradigmatic frameworks from post-positivism to interpretivism/constructivism. Hence, a researcher can harness TA to serve their perspective’s distinct purpose (Kiger & Varpio, 2020). The epistemological basis for the qualitative arm is contextualism which lies between post-positivism and constructionism (Braun & Clarke, 2021; Henwood & Pidgeon, 1994) and reflexive TA shares some of its core values.

Contextualism is associated with the writings of US philosopher Stephen Pepper (1891-1972) who assumed humans cannot be separated from the context they live in and the meaning this gives to their lives (Madill et al., 2000). Within contextualism, multiple accounts of reality are possible and without striving for accuracy some are considered to be of greater value or utility than others (Madill et al., 2000). Key dimensions affecting the production of knowledge within contextualism include participants’ own understanding; researcher’s interpretations; and the importance of cultural and environmental influences that shape participants’ views and researchers’ interpretations (Pidgeon & Henwood, 1994). Thus, contextualism requires a reflexive researcher. The goal of reflexivity is not to eliminate bias but to consider and make visible how a researcher’s values and knowledge have shaped interpretations (Madill et al., 2000). Contextualism acknowledges that analysis is partial and subjective and reveals underlying meanings but always requires analysis to be grounded within the data. It is the key role given to the researcher and the welcoming of divergence why I believe reflexive TA and contextualism go well together to seek not a “correct” but a “better” understanding of

participants' experiences in this study. Together, they fit well within this study's dialectical pragmatist perspective.

In summary, as researcher I am grounded within dialectical pragmatism as I believe the most appropriate approach to evaluate the feasibility of using a gratitude diary intervention to reduce tinnitus-related distress is by combining quantitative and qualitative methods. In line with this paradigm, a workable research strategy was developed to contribute to the evidence base that strives to improve the lives of adults with tinnitus. This design sought to integrate both nomothetic and idiographic elements into one study. This fits with my belief that different research methodologies offer complementary perspectives with each being valued equally for the insights they contribute. Hence, a quantitative approach was used to measure the extent to which tinnitus-related distress was reduced as a result of the intervention. Reflexive TA was chosen to analyse qualitative data as little is known about the applicability of the intervention and experience of gratitude by individuals with tinnitus. This supports the experiential orientation adopted in my research which is consistent with the discipline of counselling psychology in the UK which values the importance of individuals' subjective experiences (Woolfe, 2016).

3.9 Quantitative Arm

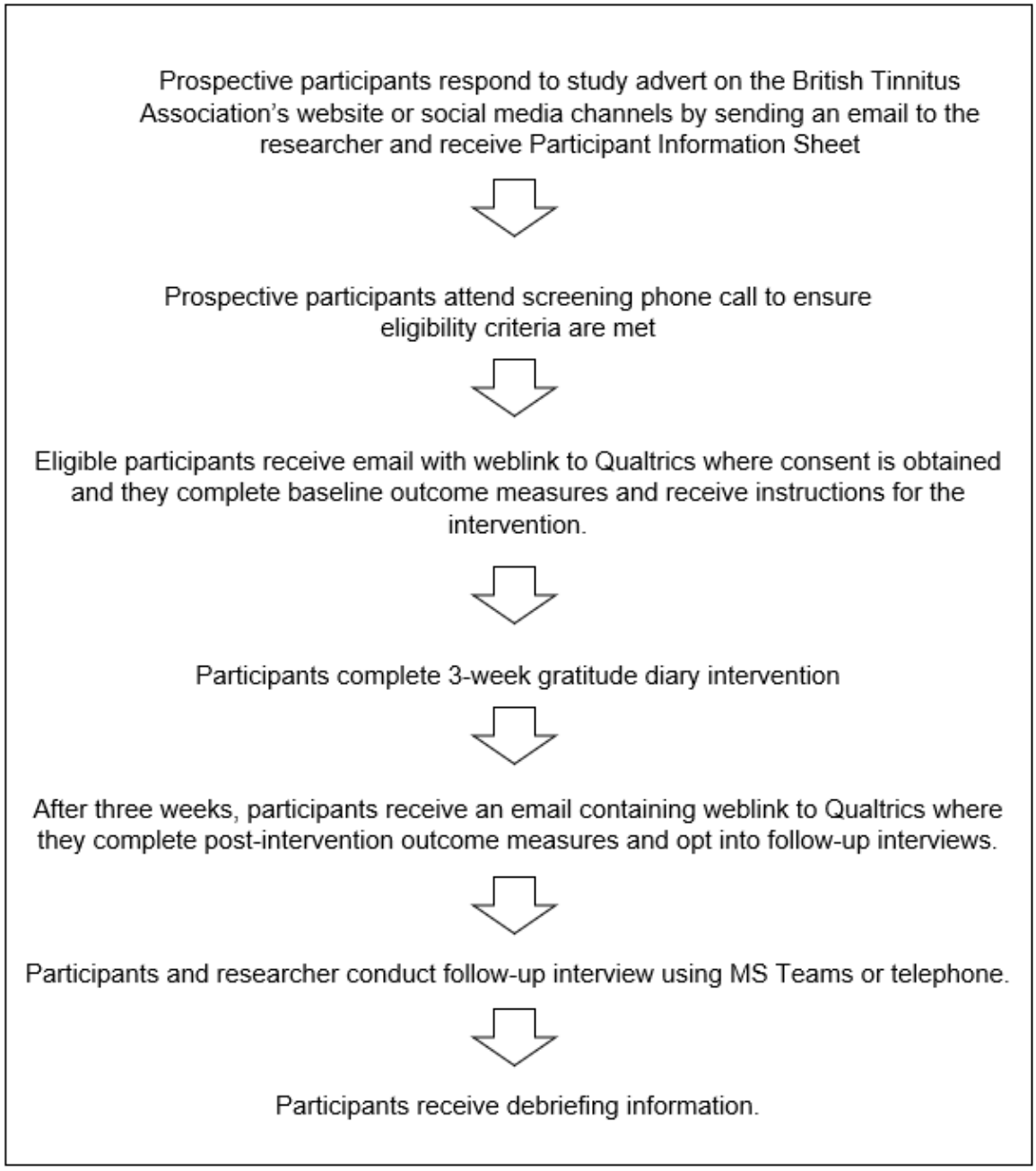
3.9.1 Recruitment

Invitation to participate in the study was posted on the website of the British Tinnitus Association's website and Facebook page (Appendix A: Study advertisement). Prospective participants were invited to email the researcher for further information and to arrange a screening phone call. Prior to screening, a participant information sheet (Appendix B) was emailed to each prospective participant.

Figure 2 summarises the research process from prospective participants' perspective.

Figure 2

Participants' Research Process



3.9.2 Inclusion and Exclusion Criteria

The target population for this study was a non-clinical sample of adults aged 18 years and older who have had tinnitus for more than three months. Participants

of any ethnicity or nationality, educational qualification, and marital status could take part as long as they had sufficient command of English to complete the questionnaires, were resident in the UK and had their tinnitus assessed by a medical professional. The exclusion criteria were self-reported current psychological treatment for tinnitus, presence of severe mental health difficulties, suicidal ideation, or self-harm.

3.9.3 Sampling Strategy

The study aimed to recruit a non-clinical sample, because the purpose of this study is to assess the feasibility of using a gratitude diary intervention in adults with tinnitus. This study included an opportunistic sample of adults who had responded to the study advertisement on the British Tinnitus Association's website and Facebook page, for which ethical approval had been obtained.

3.9.4 Screening Process

Prospective participants were screened via telephone. First, participants were asked to consent to taking part in the screening process (see Appendix C - Screening Consent Form). During screening, the following data were recorded on paper (Appendix D – Screening Assessment Form): participant's age, country of residence, tinnitus duration, whether their tinnitus had been assessed by a medical professional, and whether they were currently undergoing psychological therapy for tinnitus. To exclude those with severe mental health difficulties, presence of suicidal ideation or self-harm prospective participants completed the Patient Health Questionnaire (PHQ-9) and Generalised Anxiety Disorder (GAD-7) questionnaire. Prospective participants who confirmed presence of suicidal ideation on PHQ-9 and those with PHQ-9 scores of 20 or more and GAD-7 scores of 16 and more were excluded.

Participants who did not meet the inclusion criteria were thanked for wanting to take part in the study and also given resources if they required further support (Appendix E - Information for excluded participants).

3.9.5 Intervention Materials

In recognition of the burden tinnitus places on participants wellbeing, the gratitude intervention adopted Emmons & McCullough's (2003) and Wong's (2016) design. Instead of writing about good things, participants were asked to write about blessings they were grateful for. The goal of this approach was to encourage participants to reflect on the people, things, or experiences for which they are thankful despite the difficulties imposed by tinnitus. Wong (2016) suggested that this approach is relevant to individuals in all life circumstances and cultural backgrounds but particularly when faced with difficulty.

Participants received the following instructions which were adapted from Emmons & McCullough (2003) and Wong (2016):

There are many things in our lives, both large and small, that we might be grateful about. Over the next three weeks, please spend two or three times per week writing down up to five things in your life that you are grateful or thankful for. This can include being thankful

- *to be alive with all the opportunities life presents*
- *for family members, your partner, friends, and all those you have contributed to your life*
- *for your home, nature, the world we live in.*

A blank gratitude diary with instruction of how to make the most of the practice (Appendix F: Gratitude diary with guidance) was created using Microsoft Word which participants could complete either by hand or electronically. Participants received twice weekly email reminders to complete their diaries, repeating the guidance.

3.9.6 Quantitative materials

A total of six measures were used in the study. A description of each of these is presented below. The measures were chosen to assess changes in tinnitus-related distress, psychological wellbeing, gratitude, negative affect, and anxiety. Socio-demographic information was collected for each participant at baseline only. The outcome measures were hosted on Qualtrics, an online survey platform.

Demographics Questionnaire

The demographics questionnaire (Appendix G) was developed by the researcher to collect data about participants' age, gender, ethnicity, educational qualification/level, marital status, tinnitus duration, whether they have had previous treatment for tinnitus, and whether other physical health problems were present.

Tinnitus Questionnaire (TQ)

The TQ (Hallam et al., 1988; Appendix H) was the primary outcome measure and used to measure tinnitus-related distress. While no clinical effectiveness studies of questionnaires to assess tinnitus exist, a recent review by the National Institute for Health and Care Excellence (NICE; 2020) on the management and assessment of tinnitus identified the most commonly used questionnaires. These include the Tinnitus Handicap Inventory (THI; Newman et al., 1996), Tinnitus Functional Index (TFI; Meikle et al., 2012), TQ and Mini-TQ (Hiller & Goebel, 2004). While the TFI and THI both cover a broad range of components, NICE (2020) recommended the use of the TQ and TQ-Mini if an investigation's focus was the psychological impact of tinnitus. Furthermore, the TQ is considered suitable for tinnitus outcome studies (Baguley et al., 2000). Prior research estimated clinically significant change required a reduction of at least 11 points (McKenna et al, 2017).

The TQ was originally developed during a research programme (1981-1988) into methods for reducing the annoyance and emotional distress that tinnitus may cause (Goebel & Hiller, 1994). Due to its presentation the TQ has found

popularity in research as respondents seemed to complete it more easily than other tinnitus questionnaires (Hallam, 2008). The TQ has been used primarily as a screening instrument, measuring change after treatment interventions, and to examine relationships between different facets of tinnitus and psychological variables (Hallam, 2008).

Consisting of 41 statements, TQ explores the impact of tinnitus across five factors: emotional disturbance, intrusiveness, insomnia, auditory perceptual disturbance, and somatic complaints. Statements such as “I am a victim of my noises” were rated on a 3-point scale (True = 2, Partly True =1 and Not True = 0). Scores for items 5 and 38 were reversed. Scores were calculated for each factor as well as an overall score. A higher score indicates greater severity, ranging from 0-82. Scores of 25, 44 and 59 represent thresholds in severity from moderate, medium, less severe, to severe.

The total TQ scale has high internal consistency (Cronbach’s $\alpha = 0.95$) and each of the five dimensions assessed by the TQ has a satisfactory, if lower, level of internal consistency: emotional distress (Cronbach’s $\alpha = 0.94$); auditory perceptual difficulties (Cronbach’s $\alpha = 0.89$); intrusiveness (Cronbach’s $\alpha = 0.87$); sleep disturbance (Cronbach’s $\alpha = 0.82$) and somatic complaints (Cronbach’s $\alpha = 0.76$). The TQ’s test-retest reliability was assessed in two samples (n=60 and n=138) and was shown to be equally high in both studies (correlation = 0.94, $p < 0.01$) (Hiller et al., 1994).

Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)

The WEMWBS (Tennant et al., 2007; Appendix K) is a 14-item scale which was used to measure mental wellbeing covering subjective wellbeing and psychological functioning. WEMWBS has been validated for use in the UK with those aged 16 and above. Validation involved both student and general population samples.

All items are worded positively and address aspects of positive mental health and ask respondents to rate their experience of positive mental health over the past two weeks, e.g. “I’ve been feeling relaxed” with possible answers ranging on a Likert scale from 1 (none of the time) to 5 (all of the time). The scale is

scored by summing responses to each item with overall scores ranging from 14 to 70, with higher scores representing higher levels of psychological wellbeing.

The measure's internal reliability ranges from Cronbach's α = 0.89 - 0.91, for student and general population samples respectively, thus falling well above the recommended lower limit. The scale's high reliability can be seen in its test-retest reliability at one week for the student sample (correlation = 0.83, $p < 0.01$). A secondary analysis of 12 intervention studies in the UK (n = 2,712) has shown that the scale is able to measure clinically meaningful change at individual and group level in a wide variety of settings across mental health services, including relatively small samples (n = 33) (Maheswaran et al., 2012). The ability to detect change is believed to be due to its evaluation of individual mental health across both the hedonic and eudaimonic dimensions (Wiebe et al., 2003).

Patient Health Questionnaire

The PHQ-9 (Kroenke et al., 2001; Appendix I) is a self-report measure consisting of nine items designed to establish a person's probable depressive symptoms during the previous two weeks. Its items correspond to the nine diagnostic criteria for depressive disorders in the Diagnostic and statistical manual of mental disorders (DSM-V, American Psychiatric Association, 2013). It has been used in hundreds of research studies and is used by a variety of medical and mental healthcare settings (Kroenke et al., 2016).

The items enquire how often in the past two weeks the respondent has been bothered by particular depressive symptoms using a Likert Scale with scores of 'not at all' (0), 'several days' (1), 'more than half the days' (2), and nearly every day (3). The scores range from 0-27, with higher scores indicating greater severity. Scores of 5, 10, 15, and 20 represent thresholds of severity levels from mild, moderate, moderately severe, to severe.

The measure's internal consistency ranges from Cronbach's α = 0.86 - 0.89, and test-retest reliability (correlation = 0.84, $p < 0.01$) has been shown across two samples of primary care and obstetrics-gynaecology patients which 3,000 participants in each group. In terms of validity, sensitivity has been shown in

theses samples to range between 68% and 95% and specificity between 84% and 95% (Kroenke et al., 2001). These results are similar for men and women.

Generalized Anxiety Disorder

The GAD-7 (Spitzer et al., 2006; Appendix J) is a seven-item, self-report measure used to measure participants' anxiety levels during the previous two weeks. Like the PHQ-9, it was developed to correspond to the DSM. The items enquire how often the respondent has been bothered by certain anxiety symptoms using a Likert Scale with scores of 'not at all' (0), 'several days' (1), 'more than half the days' (2), and nearly every day (3). The scores range from 0-21, with higher scores indicating greater severity. Scores of 5, 10, and 15 represent thresholds for levels of severity from mild, moderate to severe.

The measure has excellent internal reliability with Cronbach's α =.92 and test-retest reliability is also good (correlation = 0.83, $p < 0.01$). At the threshold-score of 10 or higher, the measure achieves 89% for sensitivity and 82% for specificity. These results are similar for men and women. The measure was developed and validated in primary care settings, but evidence supports reliability and validity of the GAD-7 in the general population (Löwe et al., 2008).

Gratitude Questionnaire (GQ-6)

The GQ-6 (McCullough et al., 2002; Appendix L) was used as a measure of dispositional gratitude. It consists of six statements – four positive such as "I have so much in life to be thankful for" and two negative statements such as "When I look at the world, I don't see much to be grateful for." Items were designed to assess how often people feel gratitude. Participants indicate their level of agreement on each item on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The scale is scored by summing responses to each item with overall scores ranging from 6 to 42, with higher scores representing higher levels of dispositional gratitude.

The GQ-6 was selected as measure of dispositional gratitude due to its emphasis on the emotional component of gratitude as opposed to measures

that assess moral reciprocity as was not encouraged in the intervention. Evidence suggests that the scale is positively correlated with optimism, life satisfaction, forgiveness and prosocial behaviour, and negatively correlated with depression, anxiety, materialism and envy (McCullough et al., 2002).

A recent meta-analysis (Card, 2019) compared internal consistency across age, country and data collection method of four gratitude measures: the GQ-6, Gratitude, Resentment, and Appreciation Test (GRAT, Watkins et al., 2003); GRAT-short (Thomas & Watkins, 2003); and the Gratitude Adjective Checklist (McCullough et al., 2002). The study included 74 studies (*N* = 34,053). The GQ-6 is by far the most widely used measure and across 58 studies it had very good internal reliability (Cronbach's α = 0.81) (Card, 2019). While measures with more items, for example the GRAT has 39 items have shown to have greater internal consistency with Cronbach's α = 0.92 across five studies, the aim was to keep the burden on participants low. Furthermore, unlike the other three measures, the GQ-6 has been used in the UK and is the only reliable measure across a wide age-range. Finally, it has also shown to retain its very good internal consistency when administered online (Card, 2019).

Existential Gratitude Scale (EGS)

The EGS (Jans-Beken & Wong, 2019; Appendix M) was used as a measure of existential gratitude. The EGS was recently developed in response to criticism that existing dispositional gratitude measures mainly focus on positive aspects neglecting the fact that people can feel gratitude in adversity and suffering (e.g. Emmons, 2013). Jans-Beken & Wong (2019) provided preliminary data on the developed EGS which shows that in a general population sample of 186 participants psychological difficulties associated with post-traumatic stress disorder were predictive of existential gratitude but not of dispositional gratitude. However, to-date data on reliability and validity are scant, hence this measure was used in addition to the more commonly used GQ-6.

The EGS consists of 10 positive statements, e.g. "I am grateful for my life even in times of suffering" and three negatively worded statements, e.g. "I am resentful that life has treated me badly". Participants rate their level of

agreement on each item on a Likert scale ranging from 1 (completely disagree) to 7 (completely agree). The negatively formulated items are excluded from the overall score as these and are used as filler-items to assess response bias. For a total score the mean is calculated of the 10 positive items, thus potential scores ranging from 10 to 70 with high scores indicating higher levels of existential gratitude.

The internal consistency of the EGS is very good with Cronbach α = .87. However, no data on test-retest has been collected to-date.

3.9.7 Pilot Testing

Pilot testing of studies ensures the feasibility of the design and that participants will understand the materials, intervention, and procedures involved (van Teijlingen & Hundley, 2002). Based on the feedback collected during pilot testing, researchers can revise and refine any aspect of the planned study, i.e., data collection materials and intervention. The aim of pilot testing is, therefore, to increase internal validity of the research.

Two adults with tinnitus were asked to go through the outcome measures, gratitude diary materials, and interview protocol, before recruitment began. They provided feedback that the intervention was clearly explained and made two suggestions regarding the language used in the intervention and interview protocol so it would be acceptable to people with tinnitus. They further confirmed that the workflow of the online questionnaires worked as intended and did not report any technical difficulties. This confirmed the planned research procedure and no further changes were made.

3.9.8 Quantitative Procedure

Participants who met the inclusion criteria were accepted onto the study. Following the screening phone call, the researcher emailed participants a link to Qualtrics, where they provided informed consent to take part in the study (Appendix N: Consent Form) and completed the baseline questionnaires which

took approximately 20 minutes to complete. Once completed, participants received the instruction for the gratitude diary. After three weeks, the gratitude diary intervention ended, and participants received an automated email via Qualtrics to complete the questionnaires again, including a question regarding the frequency of their diary entries. On completing the questionnaires, participants were emailed the debriefing information (Appendix O: Debriefing Information).

3.9.9 Quantitative Data Analysis

Data were analysed using IBM SPSS statistical software platform version 26 (released 2019). Statistical analysis comprised descriptive and inferential statistics. Descriptive statistics were generated establishing the mean, median and standard deviation on demographic data and pre- and post-intervention measures of tinnitus, dispositional and existential gratitude, psychological wellbeing, depression, and anxiety, and summarised in tables and graphs of absolute scores and changes.

Normality testing was carried out prior to conducting inferential analysis. Data were analysed using paired-samples t-tests to determine whether participants' responses indicate that there has been a statistically significant change in each outcome measure, from pre- to post-intervention. For outcome measures that failed to meet the assumptions for normality, (i.e. psychological wellbeing and grateful outlook as measured by GQ-6) the non-parametric alternative to the paired t-test, Wilcoxon matched-pairs signed ranks test was used. Effect scores were calculated to determine the actual size of change.

Furthermore, correlational analyses were conducted to explore associations between tinnitus duration and changes in tinnitus-related distress.

3.10 Qualitative Arm

3.10.1 Recruitment

On completing post-intervention measures, participants were invited to express their interest on Qualtrics whether they wished to take part in a follow-up interview to explore their experience of keeping a gratitude diary. For professional doctorate projects between six and 15 interviews are recommended (Braun & Clarke, 2013; Terry et al., 2017).

My initial plan was to purposely select participants to equally include individuals whose tinnitus-related distress improved and those whose did not. However, as only a small number of participants expressed interest, an interview was offered to all of them.

3.10.2 Qualitative Materials

The interview protocol (Appendix P) consisted of seven questions relating to the aims of the study and included questions about participants' experience of keeping a gratitude diary, if and how this may have impacted on their tinnitus experience specifically and their wellbeing more generally. Participants were also asked whether they believed that the intervention was appropriate for people living with tinnitus.

3.10.3 Qualitative Procedure

The researcher contacted participants who had expressed their interest to be interviewed by email to arrange a mutually suitable time and date. Semi-structured interviews were conducted with each participant either via videoconferencing using Microsoft Teams or telephone as a back-up when the Internet failed. Interviews were recorded via Microsoft Teams. Participants provided verbal consent to take part in a recorded interview (Appendix Q: Interview consent form. They were reminded about confidentiality, storage of recordings and transcripts. They were also informed they could skip any

questions they wished not to answer. Each interview lasted approximately 30 minutes. Following the interview, the debrief information sheet (Appendix R: Interview Debrief Information) was emailed to them.

3.10.4 Qualitative Data Analysis

Analysis followed the six recursive phases of TA described by Braun & Clarke (2006): (1) dataset familiarisation; (2) systematic and rigorous coding of each transcript; (3) generating initial themes by identifying common patterns across the dataset; (4) developing, discarding and collapsing themes; (5) refining, defining and naming themes; and (6) writing up.

Preparing the Data

A written record for the audio-recordings was produced which served as the foundation for analysis. A notation system adapted from Braun & Clarke (2013) was developed to ensure consistency of transcription (Appendix S). Verbatim transcripts were produced by the researcher within a week of the interviews. Starting point were the digital transcripts which were automatically generated by Microsoft Teams. These were reviewed and edited and initial analytic ideas were noted for each data item and across the dataset.

I acknowledge that creating these transcripts from the audio-recordings inevitably involved some processing of the data leading to change in the data (Sandelowski, 1994). I adopted a relatively uncomplicated relationship between language and reality. However, consistent with my epistemological position, I recognised my values and assumptions would influence both the interview questions and the reading and interpretation of the data. Keeping a reflective diary was therefore an important part of the research process as this helped me consider how my values and assumptions as a person, clinician, and researcher may influence the interpretation of the data.

Familiarisation and Coding

Producing transcripts, listening and re-listening, reading and re-reading the transcripts multiple times facilitated familiarisation with the dataset and initial ideas for interpretation were noted. These notes began to formulate answers to

the research questions how keeping a gratitude diary was experienced by people with tinnitus. In the next step of the analysis, each transcript was manually worked through to identify codes. An iterative process was adopted during coding where after the initial coding, the codes were reviewed and revised, and each transcript was coded a second time. This helped to develop the initial semantic codes to more latent codes (Braun & Clarke, 2021; Terry & Hayfield, 2021). During coding, clustering, prototype theme creation an inductive 'bottom-up' approach was adopted as data were not fitted to any existing theory (Braun & Clarke, 2021).

Codes and their associated quotes were compiled in an Excel spreadsheet to enable easy identification of codes that were frequently uses across the whole dataset (Appendix T: Coding Screenshot).

Theme Identification, Refinement and Defining

Once coding was completed, codes were clustered into three potential broad patterns of meaning as illustrated by a photograph (Appendix U: Clustering). Clusters were based on central organising concepts which linked different codes (Braun & Clarke, 2021) and helped deeper interpretation the underlying meaning of the codes. Initial clusters related to the broadened awareness, having a sense of agency, improved sense of wellbeing, and reduced tinnitus. Prototype themes were created once clusters had been tested against the data. This showed overlap across different themes and required going back to the original codes to clarify the boundaries of each theme.

Final themes were assessed whether they adequately captured the data and provided a coherent and accurate representation of the data, thus telling a story about participants' experience of keeping a gratitude diary and how this impacted on their experience of tinnitus. Presenting my thematic table and definitions of the final themes and subthemes to a tutor helped clarify the names for each theme.

3.11 Data Integration

The overall aim of the integration process was to amalgamate the differing perspectives of the qualitative and quantitative arms into a comprehensive understanding of participants' experience of keeping a gratitude diary and to what extent the intervention may have reduced their tinnitus-related distress and improved their psychological wellbeing. To integrate data from the two different arms, this study followed Cresswell & Plano Clark's (2018) suggested process of drawing inferences across different elements of a mixed methods study which is based on a pragmatic approach.

As both arms were analysed and inferences drawn for each of them individually, the integration process involved comparing each arm's findings in the context of the aims and research questions of the study. The challenge of data integration was comparing data from two different epistemological positions, i.e. post-positivism and contextualism. From my adopted dialectic pragmatist position, this did not present an unsurmountable barrier as the two sets of results worked together to answer the research question with each contributing towards gaining a better understanding of the impact of the intervention. Both sets of results carried equal amount of value and each approach helped to overcome the shortcomings of the other. Any divergences between the two sets of results were welcomed as they helped to identify future research questions.

3.12 Ethical Considerations

This study received ethical approval from the University of East London's Ethics Committee on 30 June 2020 (Appendix V). To manage the ethical implications, all participants provided full, informed consent. In case of any concerns regarding their mental health, participants were able to contact the researcher via email. In such instances the participant would have been signposted to various counselling services for further help. The same contact details were given to prospective participants who did not meet the inclusion criteria to ensure they had access to support in case either the screening process or the rejection to take part in the study had upset them (Appendix E: Information for Excluded Participants). The

debriefing sheet also included contact details for these counselling services (Appendix O: Debriefing Information).

No deception was used, and participants were informed about the purpose of the study and use of their data (Appendix B – Participant Information Sheet). Participants were able to withdraw from the study until 1 December 2021. In this case, the researcher would have deleted their data.

Chapter 4: Results

4.1 Quantitative Analysis

4.1.1 Participant Characteristics

A total of 24 participants (20 women; 4 men) were initially recruited for the study. Of those 21 (18 women; 3 men) completed baseline measures and 16 (all women) completed post-intervention measures (Figure 3). Participants reported an average duration of tinnitus of 7 years (*SD* = 7.8), ranging from 6 months to 30 years (Table 3). However, there was one extreme outlier which was more than 1.5 box-lengths from the edge of the box in a boxplot (Figure 4). The assumption of normality was violated, as assessed by the Shapiro-Wilk's test (p >.001). On inspection this value was considered to be extreme as illustrated by the frequencies of the entire sample in Table 4. Once removed, the average tinnitus duration changed to 5.5 years (*SD* = 4.428), and the data were then consistent with a normal distribution in the population, as indicated by the Shapiro-Wilk's test W = .906, p = .103. Thus, data from 15 participants were included in the analysis.

Table 3

Tinnitus Duration and Participants Age

Variable	Range	Mean	Median	SD
Tinnitus Duration (*N* = 16)	0.5 – 30	7.078	5.0	7.460
Tinnitus Duration (outlier removed)	0.5 – 15	5.5	4.0	4.428
Participants Age (*N* = 15)	25 – 69	52.667	55.0	11.368

Figure 3

Profile of Participant Recruitment and Flow Through Data Collection

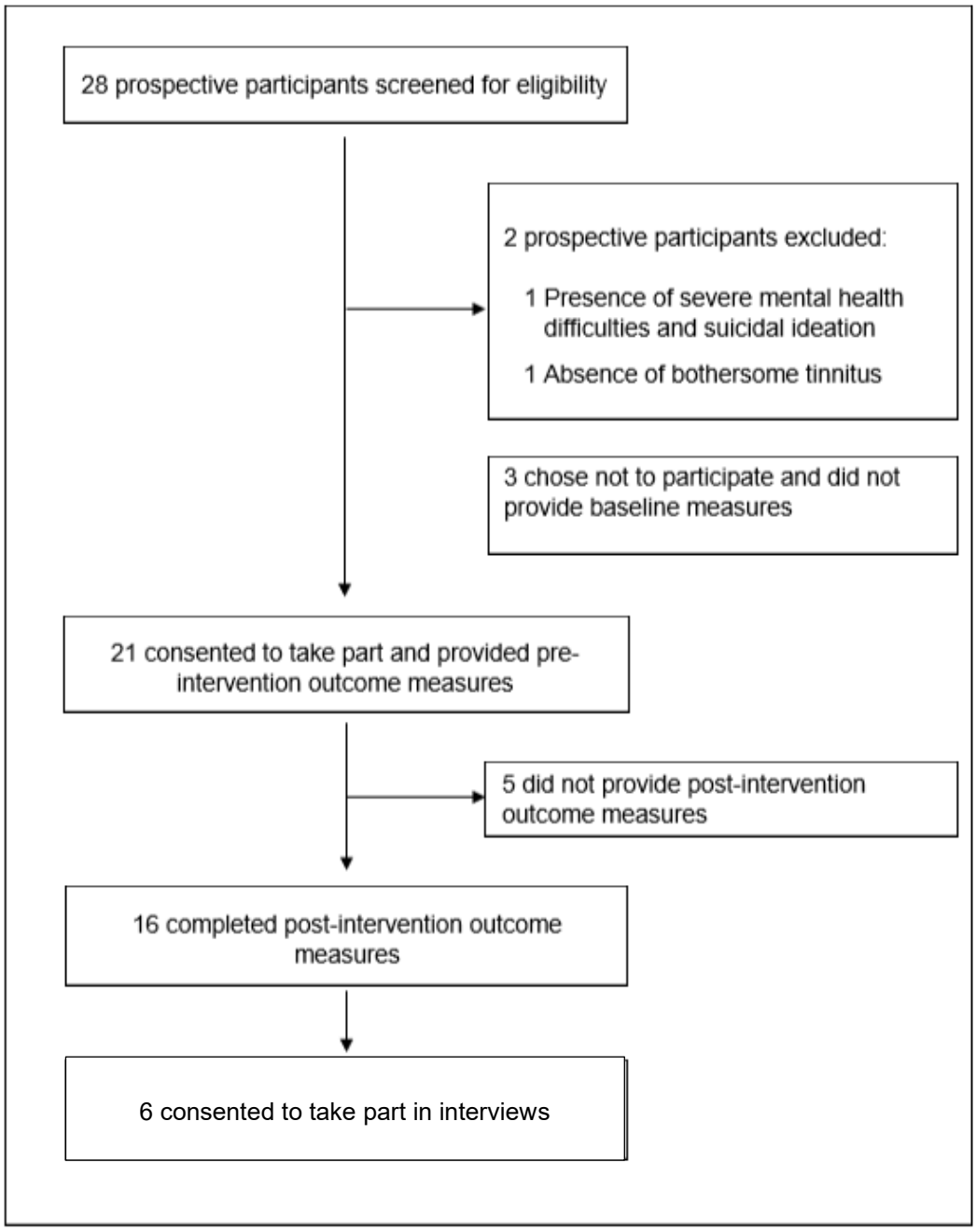


Figure 4

Tinnitus Duration in Years Boxplot (N = 16)

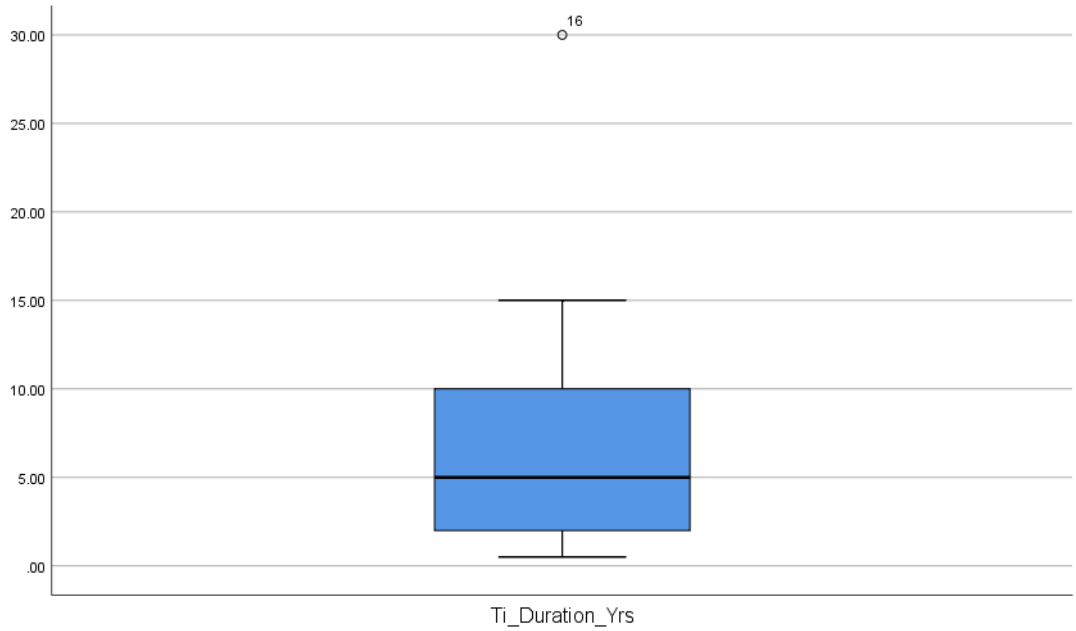


Table 4

Frequencies of Tinnitus Duration in Years

Duration in Years	Number of Participants	Percentage
.50	1	6.3
1.25	1	6.3
1.50	1	6.3
2.00	2	12.5
2.50	1	6.3
3.50	1	6.3
4.00	1	6.3
6.00	2	12.5
7.00	1	6.3
10.00	2	12.5
12.00	1	6.3
15.00	1	6.3
30.00	1	6.3

Participants' average age was 52 years (*M* = 52.667, *SD* = 11.368). All participants described themselves as White British, Irish, or Other. The highest education level attained varied: six participants (40%) had a postgraduate degree, five participants (33.3%) an undergraduate degree, two participants had (13.3%) GCSE/CSE/O-levels or equivalent, one participant (6.7%) had no formal qualification, while one participant (6.7%) preferred not to answer this question. The majority (11 participants, 73.3%) were in a relationship, married and co-habiting, two (13.3%) were in a relationship/married but living apart, one (6.7%) was single, divorced or widowed, and one participant (6.7%) was single, never married. Sample characteristics are summarised in Table 5.

Of the participants, 11 (73.3%) had previously sought treatment for tinnitus, including hearing aids/tinnitus masker (*N* = 2, 13.3%), (acupuncture (*N* = 2, 13.3%), sound therapy (*N* = 1; 6.6%), physiotherapy (*N* = 1; 6.6%), and psychological therapy (*N* = 1; 6.6%).

Almost half of the participants (*N* = 7, 46.7%) reported living with other physical health conditions including hearing loss (*N* = 3, 20%*)*, chronic pain conditions (*N* = 2, 13.3%), tachycardia *(N* = 1, 6.6%), and a blood disorder (*N* =1, 6.6%).

Table 5

Demographic Characteristics of Sample (N = 15)

Variable	Category	N	%
Gender	Female	14	84.2
	Male	1	5.8
Ethnicity	White British, Irish, Other	15	100
Education	No formal education	1	6.7
	GCSE/CSE/O-levels or equivalent	2	13.3
	Undergraduate degree (e.g. BSc, BA, etc.) or professional qualification	5	33.3
	Postgraduate degree	6	40.0
	Prefer not to say	1	6.7
Marital status	Single, never married	1	6.7
	Single, divorced or widowed	1	6.7
	In a relationship/married and co-habiting	11	73.3
	In a relationship/married but living apart	2	13.3
Previous tinnitus treatment	Yes	11	73.3
Other physical health conditions	Yes	7	46.7

4.1.2 Hypothesis Testing

The two hypotheses were evaluated using paired samples t-tests after ensuring all five assumptions of the t-test were met. This statistical test was chosen based on the within-subjects design (Field, 2009). Table 6 shows the descriptive and inferential statistics of the primary outcome measures for tinnitus-related distress (TQ) and psychological wellbeing (WEMBWS).

4.1.3 Hypothesis 1: The Gratitude Diary Intervention Will Reduce the Distressing Impact of Tinnitus

A paired-samples t-test was used to determine whether there was a statistically significant mean difference for tinnitus-related distress as measured by the TQ after participants had completed the gratitude intervention compared to before the intervention. One outlier was detected that was more than 1.5 box-lengths from the edge of the box in a boxplot (Figure 5). On inspection, this value did not appear to be extreme and was kept in the analysis. The assumption of normality was not violated, as assessed by the Shapiro-Wilk's test $W = .929$, $p = .267$ and visual inspection of a Normal Q-Q Plot (Figure 6). Participants reported a reduction in tinnitus-related distress after the intervention ($M = 21.133$, $SD = 14.937$) compared to baseline ($M = 28.867$, $SD = 11.256$). The mean TQ-scores pre- and post-intervention indicate the sample's tinnitus-related distress reduced from medium to moderate severity. The gratitude intervention elicited a mean reduction of tinnitus-related distress of $M = -7.733$, 95% CI [1.554, 13.921], $t(14) = 2.684$, $p = .009$, $d = 0.69$. The mean difference was statistically different from zero. Therefore, the null hypothesis was rejected, and the alternative hypothesis accepted. Furthermore, Cohen's effect size of $d = .69$ represents a moderate effect size.

When including the data from the outlier identified on p.59, the results did not differ greatly. In fact, the assumption of normality was not violated, as assessed by the Shapiro-Wilk's test $W = .939$, $p = .336$. Participants reported a reduction in tinnitus-related distress after the intervention ($M = 24.125$, $SD = 18.747$) compared to baseline ($M = 31.313$, $SD = 14.627$). The mean TQ-scores pre- and post-intervention still indicated a reduction in tinnitus-related distress of the

overall sample from medium to moderate severity. The gratitude intervention elicited a mean reduction of tinnitus-related distress of M = 7.188, 95% CI [1.327, 13.048], $t(15) = 2.614$, $p = .010$, $d = 0.65$. The mean difference was statistically different from zero. Therefore, the null hypothesis was rejected, and the alternative hypothesis accepted. Furthermore, Cohen's effect size of $d = .65$ represents a moderate effect size.

While the reduction in tinnitus-related distress was statistically significant, clinically significant change has been estimated to require a reduction of at least 11 points (McKenna et al., 2017). As highlighted in Table 7, a total of seven participants reported a 11-point improvement in tinnitus-related symptoms, however, for the whole sample the mean difference is only a 7-point improvement. The table also indicates whether participants scores have placed them into a different category of severity.

Table 6

Primary outcomes: Tinnitus-Related Distress (TQ) and Psychological Wellbeing (WEMWBS)

	Mean	Median	SD	Confidence interval	*t*	*z*	*p*	Effect size *d*
TQ								
pre	28.867	24.0	11.256	22.633 to 35.100				
post	21.133	14.0	14.937	12.861 to 29.405				
difference	7.333	10.0	11.158	1.554 to 13.912	2.684		.009	0.69
WEMWBS								
pre	50.800	52.0	7.785	46.489 to 55.111				
post	54.133	55.0	6.105	50.753 to 57.514				
difference	-3.333	5.0	6.873	-7.140 to .473		1.83	.068	0.9

Figure 5

Boxplot of Difference Scores for Tinnitus-Related Distress as Measured by TQ

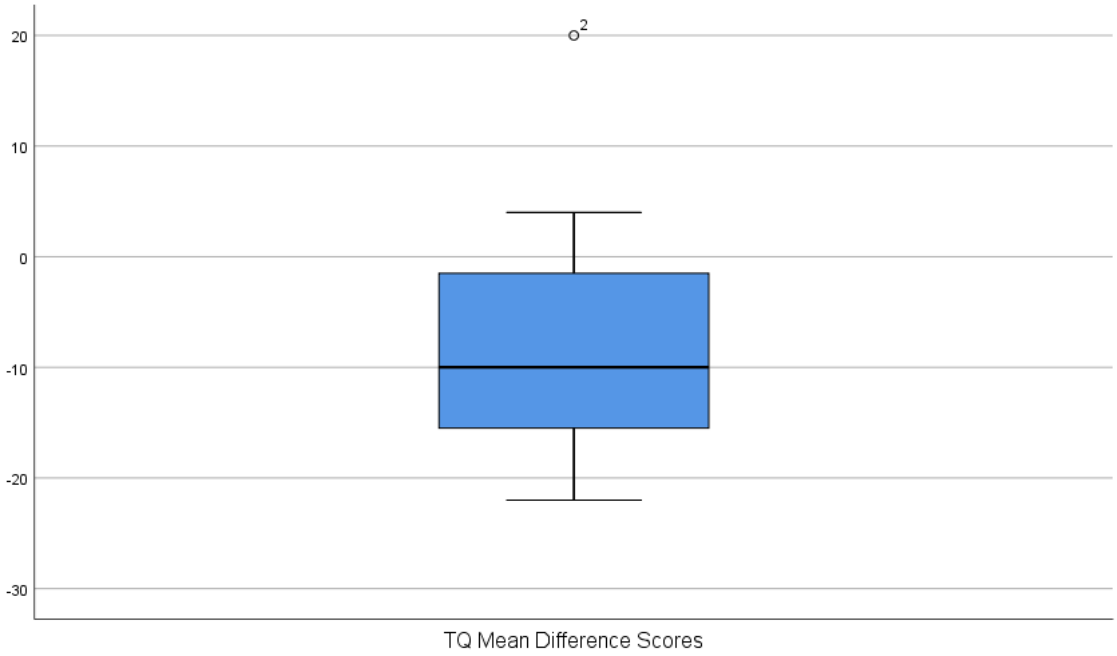


Figure 6

Normal Q-Q Plot of Difference Scores for Tinnitus-Related Distress as Measured by TQ

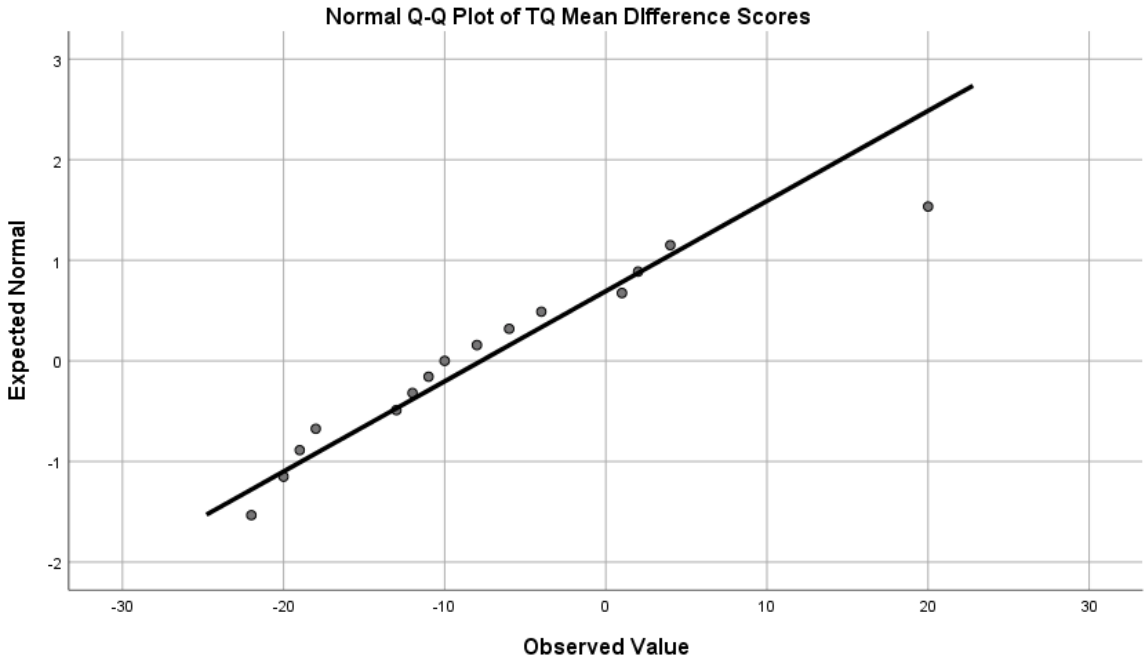


Table 7

Scores in Tinnitus-Related Distress as Measured by TQ

Participants	Pre-intervention Scores	Post-intervention Scores	Difference Scores
1	32.00	10.00	-22.00
2	33.00	13.00	-20.00
3	62.00	43.00	-19.00
4	28.00	10.00	-18.00
5	24.00	11.00	-13.00
6	22.00	10.00	-12.00
7	19.00	8.00	-11.00
8	26.00	16.00	-10.00
9	21.00	13.00	-8.00
10	20.00	14.00	-6.00
11	37.00	33.00	-4.00
12	22.00	23.00	1.00
13	22.00	24.00	2.00
14	24.00	28.00	4.00
15	41.00	61.00	20.00
16[1]	68	69.00	1.00

Categories of Severity – Colour Key:

Moderate	Medium	Less Severe	Severe

[1] 16 are data reported by excluded participant.

4.1.4 Hypothesis 2: The Gratitude Diary Intervention Will Improve Psychological Wellbeing

The intention was to use a paired-samples t-test to examine whether there was a statistically significant mean difference between participants' psychological well-being as measured by the WEMWBS following the gratitude intervention compared to before. However, one outlier was detected which was more than 1.5 box-lengths from the edge of the box in a boxplot (Figure 7). The assumption of normality was violated as assessed by Shapiro-Wilk's test p = .007 and visual inspection of a Normal Q-Q Plot (Figure 8). Hence, the non-parametric alternative to the paired t-test, the Wilcoxon signed-Rank test was used.

Figure 7

Boxplot of Difference Scores for Psychological Wellbeing as Measured by WEMWBS

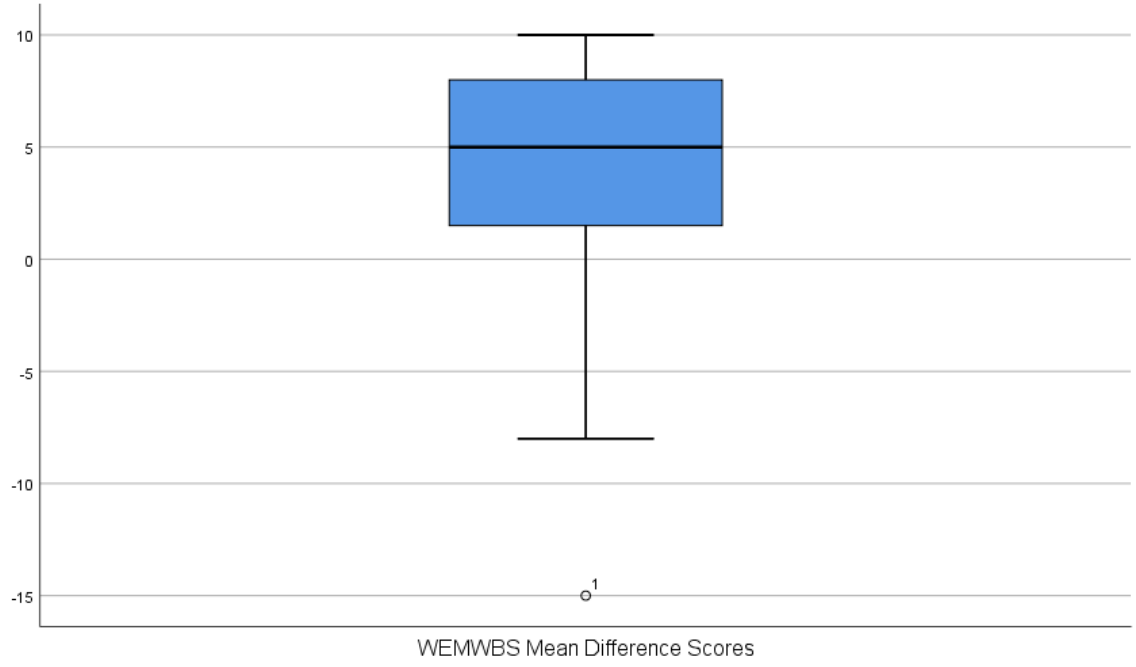
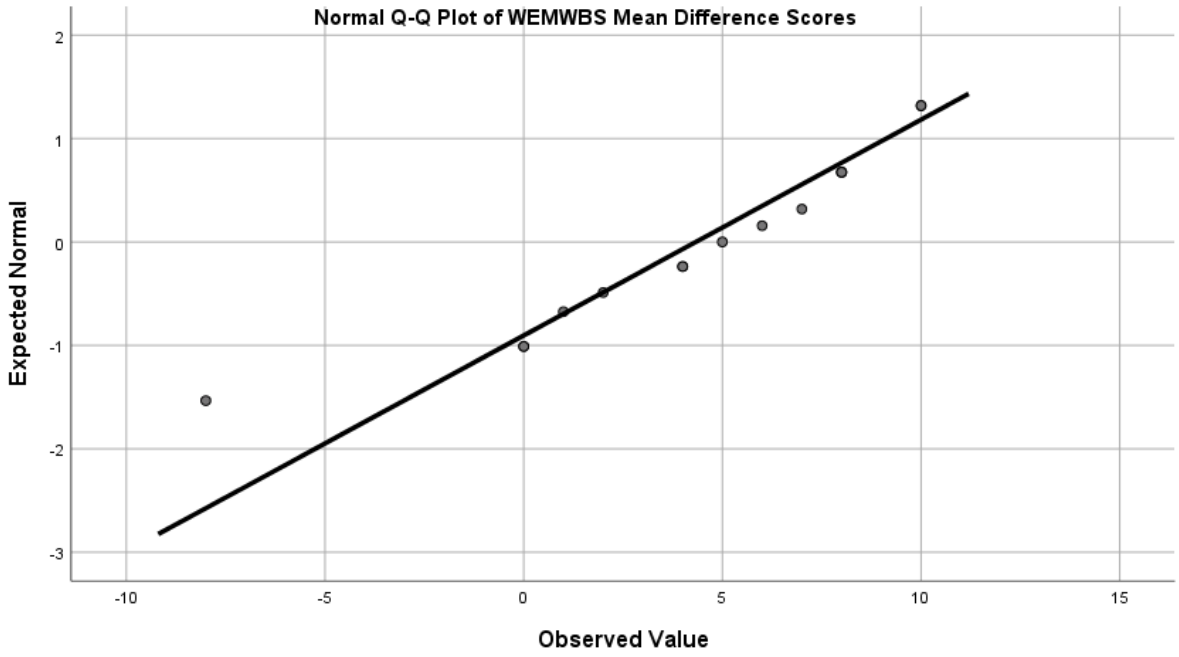


Figure 8

Normal Q-Q Plot of Difference Scores for Psychological Wellbeing as Measured by WEMWBS



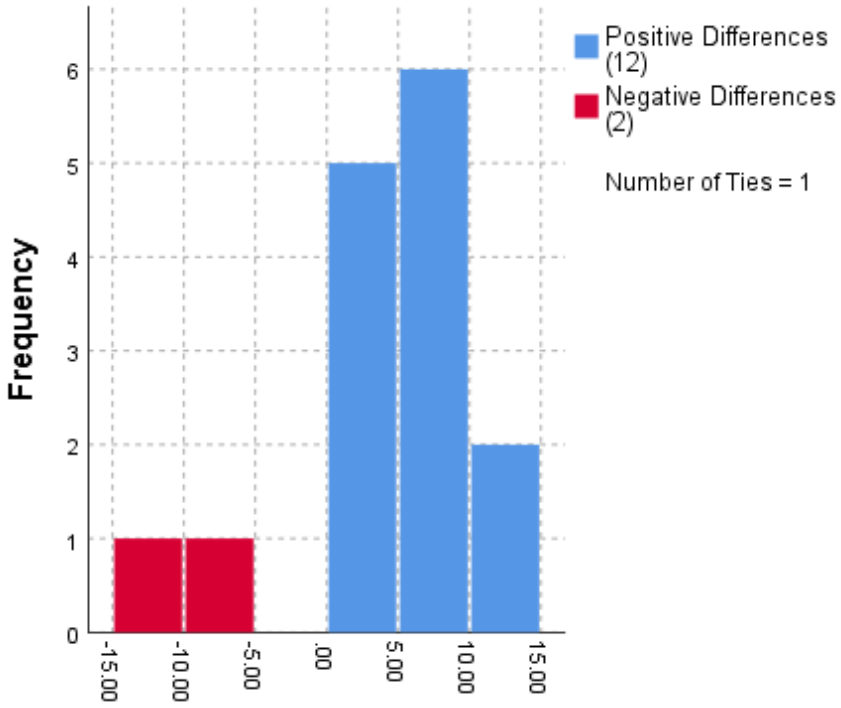
Of the 15 participants included in the analysis the gratitude intervention elicited an improvement in psychological wellbeing in 12 participants, whereas two participants saw a worsening of their psychological wellbeing, and one participant reported no change (Figure 9). Overall, the gratitude intervention did no elicit a statistically significant median increase in psychological wellbeing (*Mdn* = 5.0) as a result of the intervention (*Mdn* = 55.0) compared to baseline (*Mdn* = 52.0), $z = 1.83$, $p = .068$. Therefore, the null hypothesis was accepted and the alternative hypothesis rejected.

When including all 16 participants in the analysis, normality assumptions were also violated as assessed by Shapiro-Wilk's test $p = .011$. Hence, the Wilcoxon signed-rank test was used indicating the gratitude intervention elicited an improvement in psychological wellbeing in 12 participants, whereas 2 participants saw a worsening of their psychological wellbeing, and 2 participants reported no change. Overall, the gratitude intervention did no elicit a statistically significant median increase in psychological wellbeing (*Mdn* = 4.5) as a result of

the intervention (*Mdn* = 54.0) compared to baseline (*Mdn* = 51.5), $z = 1.83$, $p = .068$. Therefore, the null hypothesis was accepted and the alternative hypothesis rejected when including data from all participants.

Figure 9

Related Samples Wilcoxon Signed-Rank Test for Median Differences in Psychological Wellbeing as Measured by WEMWBS



4.1.5 Secondary Outcome Measures Analysis

Further analyses were conducted to examine the impact of the gratitude diary intervention on participants' mental health, specifically depressive symptoms as measured by PHQ-9 and anxiety as measured by GAD-7. These were followed by analyses of participants' grateful outlook as measured by the Gratitude Questionnaire (GQ-6) and the Existential Gratitude Scale (EGS). Table 8 shows the secondary outcomes over time.

Table 8

Secondary outcomes: Depressive Symptoms (PHQ-9), Generalised Anxiety (GAD-7), Grateful Outlook (G6) and Existential Gratitude (EG)

	Mean	Median	SD	Confidence interval	*t*	*z*	*p*	Effect size *d*
PHQ-9								
pre	4.600	4.0	3.521	2.650 to 6.550				
post	3.200	3.0	2.783	1.659 to 4.741				
difference	1.400	1.0	1.920	.337 to 2.463	-2.824		.007	.73
GAD-7								
pre	2.533	3.0	1.922	1.469 to 3.598				
post	1.933	2.0	1.534	1.084 to 2.783				
difference	-0.600	-1.0	2.063	-1.743 to .543	-1.126		.140	.29
GQ-6								
pre	28.400	29.0	3.832	26.278 to 30.522				
post	31.333	30.0	7.451	27.207 to 35.460				
difference	2.933	1.0	7.723	-1.343 to 7.210		1.346	.178	
EGS								
pre	49.467	48.0	9.625	47.887 to 60.613				
post	52.0	51.0	10.156	48.772 to 62.353				
difference	2.533	3.0	8.052	-1.926 to 6.993	1.218		.121	.31

4.1.6 PHQ-9: Depressive Symptoms

A paired-samples t-test was used to determine whether there was a statistically significant difference in mean between participants' level of depressive symptoms as measured by the PHQ-9 after the gratitude intervention compared to before. There were no outliers in the data, as assessed by inspection of a boxplot (Figure 10). The assumption of normality was not violated, as assessed by the Shapiro-Wilk's test W = .973, p = .901, and visual inspection of a Normal Q-Q Plot (Figure 11). Participants' reduction in depressive symptoms after the gratitude intervention (M = 3.200, SD = 2.783) as opposed to before the intervention (M = 4.600, SD = 3.521). The gratitude intervention elicited a mean reduction of depressive symptoms M = -1.400, 95% CI [-2.463, -.337], t(14) = 2.824, p = .007, d = 0.73. The mean difference was statistically different from zero. Therefore, the null hypothesis was rejected and the alternative hypothesis accepted. Furthermore, Cohen's effect size of d = .73 represents a moderate effect size. However, participants' mean scores on PHQ-9 both before and after the intervention were below the lower limit for mild depressive symptoms which is set at 5.

Figure 10

Boxplot of Difference Scores for Depressive Symptoms as Measured by PHQ-9

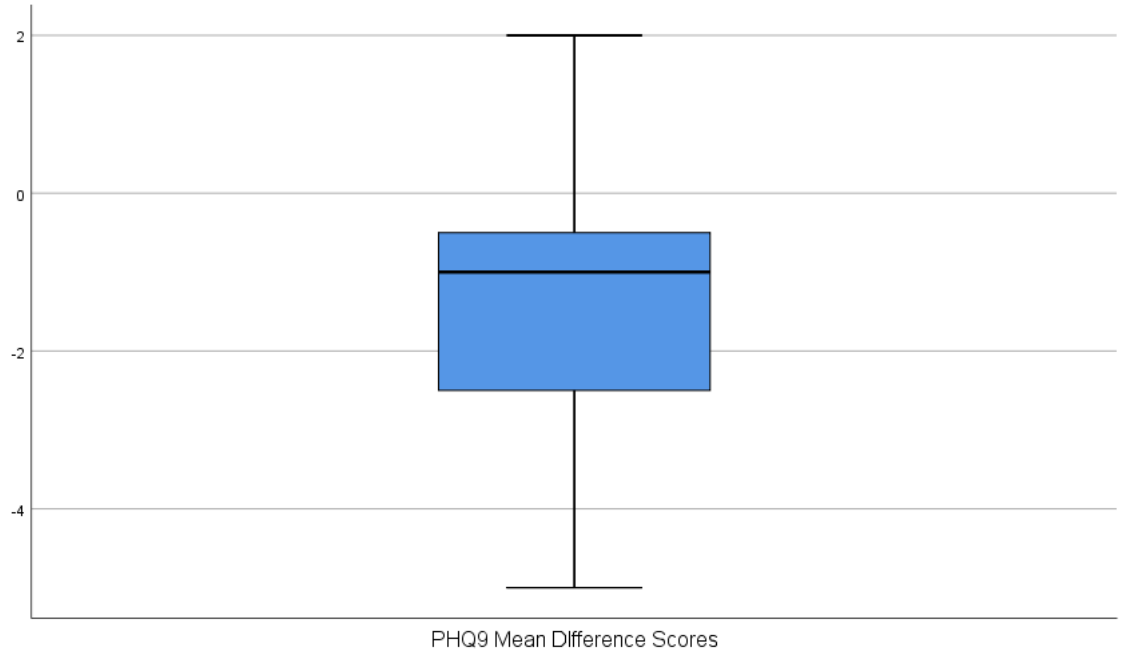
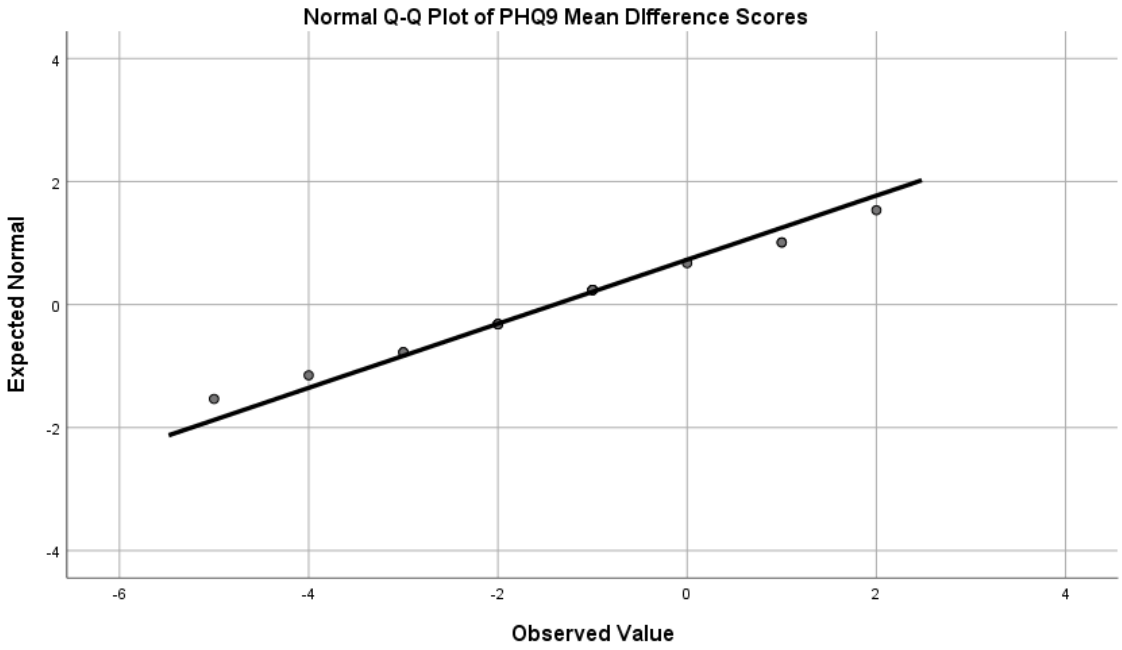


Figure 11

Normal Q-Q Plot of Difference Scores for Depressive Symptoms as Measured by PHQ-9



4.1.7 GAD-7: Generalized Anxiety Disorder

A paired-samples t-test was used to determine whether there was a statistically significant mean difference between participants' level of generalized anxiety after the gratitude intervention as opposed to before. There were no outliers in the data, as assessed by inspection of a boxplot (Figure 12). The assumption of normality was not violated, as assessed by the Shapiro-Wilk's test W = .950, p = .517, and visual inspection of a Normal Q-Q Plot (Figure 13). Participants' reduction in generalized anxiety after the gratitude intervention (M = 1.933, SD = 1.534) as opposed to before the intervention (M = 2.533, SD = 1.922). While the gratitude intervention elicited a mean reduction of depressive symptoms M = -.600, 95% CI [-1.743, .543], t(14) = -1.126, p = .140, d = 0.29. Results show the mean difference was not statistically different from zero, therefore, the null hypothesis was accepted, and the alternative hypothesis rejected.

It should be noted that participants' GAD-7 scores both before and after the intervention were below the lower limit for mild anxiety symptoms which is set at 5.

Figure 12

Boxplot of Difference Scores for Generalized Anxiety as Measured by GAD-7

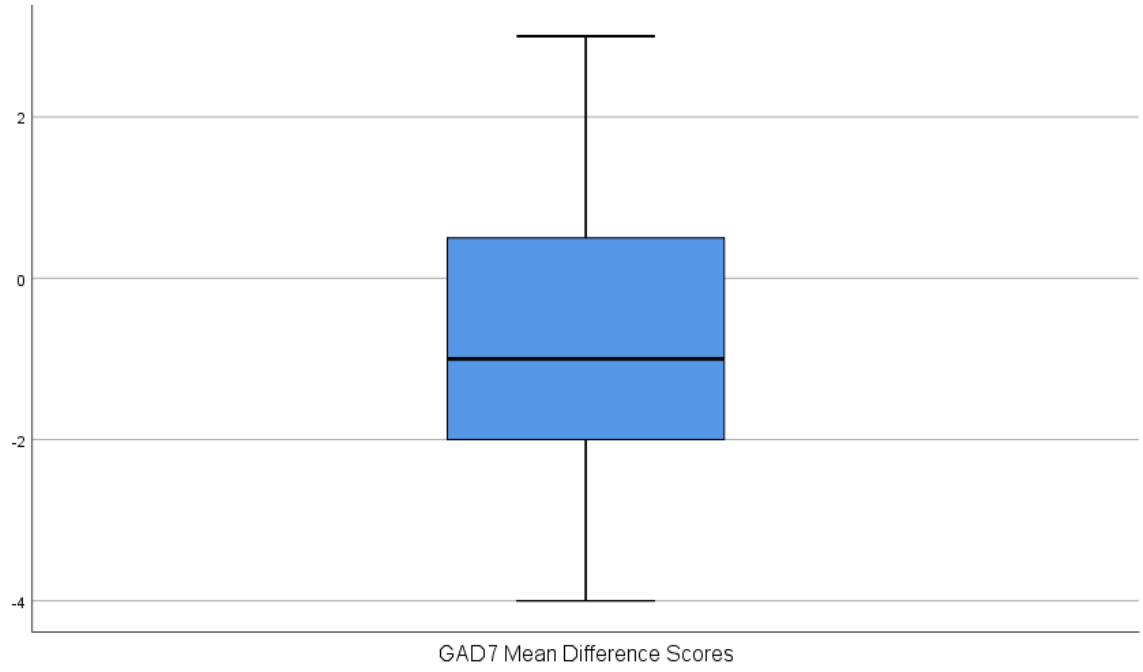
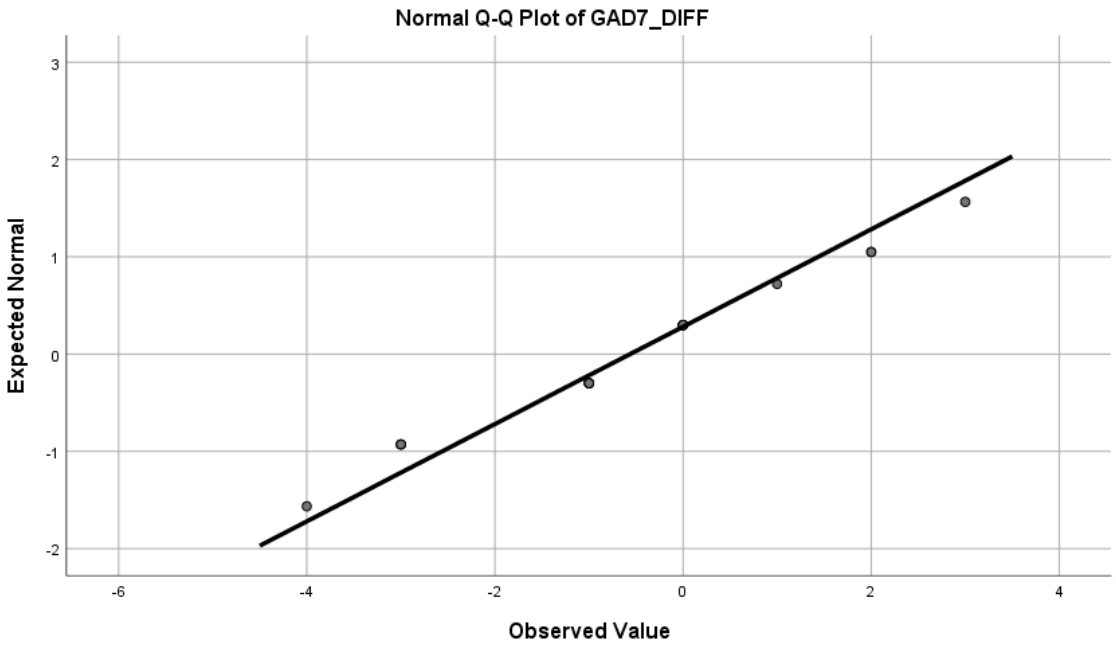


Figure 13

Normal Q-Q Plot of Difference Scores for Generalised Anxiety as Measured by GAD-7



4.1.8 GQ-6: Gratitude Questionnaire

To assess changes in participants levels of grateful outlook their responses to the gratitude questionnaire GQ-6 were examined. Several outliers were detected in the data as assessed by inspection of a boxplot (Figure 14). As the assumption of normality was also violated, as assessed by the Shapiro-Wilk's test p <.001, and visual inspection of a Normal Q-Q Plot (Figure 14), the non-parametric alternative to the paired t-test, the Wilcoxon signed-rank test was conducted.

Figure 14

Boxplot of Difference Scores for Grateful Outlook as Measured by GQ-6

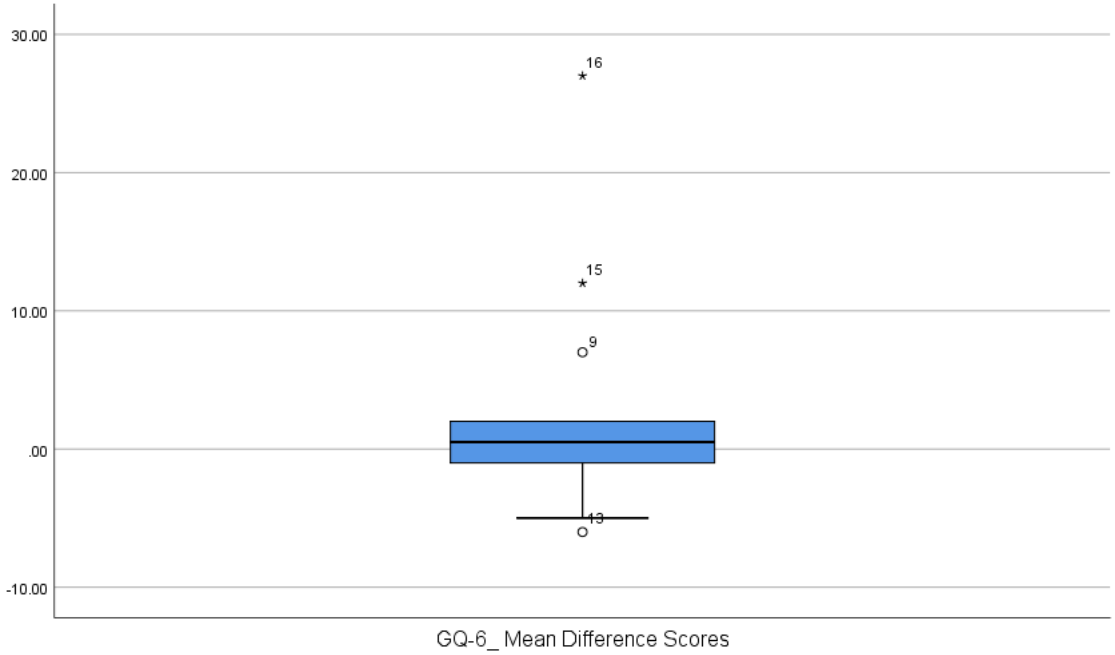
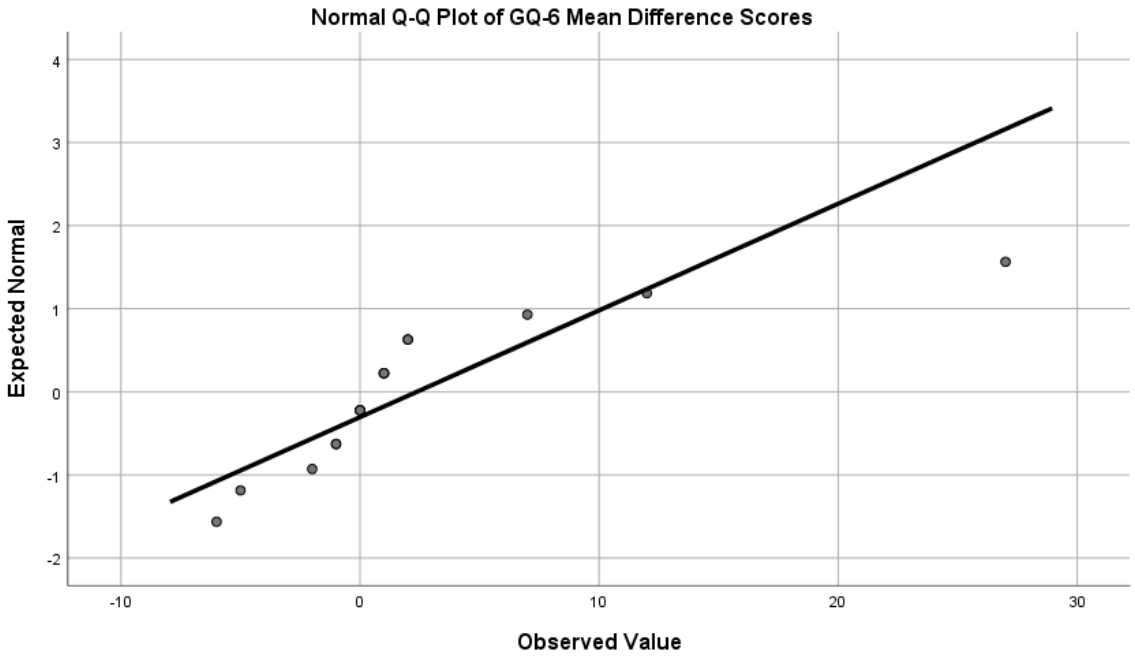


Figure 15

Normal Q-Q Plot of Difference Scores for Grateful Outlook as Measured by GQ-6

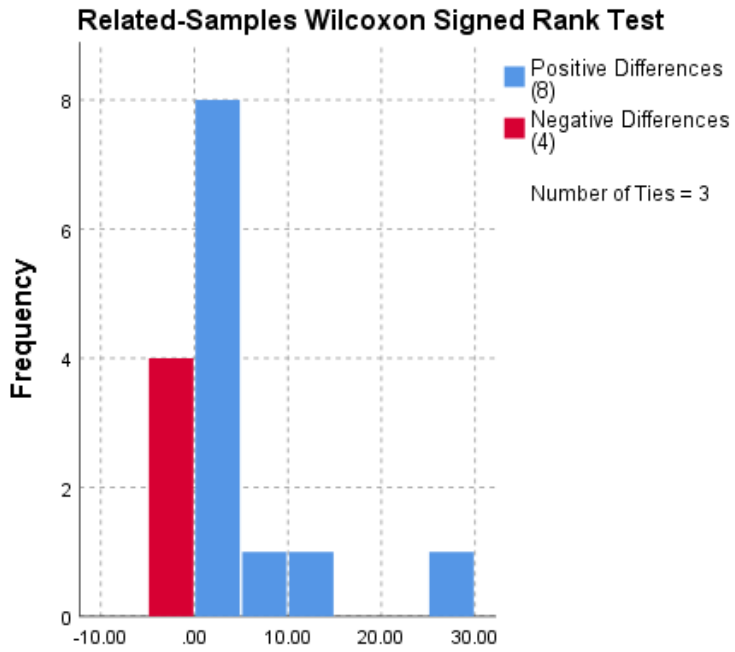


Of the 15 participants who completed outcome measures pre- and post-intervention, eight reported an increase, four a reduction, and three participants reported no change in grateful outlook (Figure 16).

Overall, the gratitude intervention did no elicit a statistically significant median increase in grateful outlook (*Mdn* = 1.0) as a result of the intervention (*Mdn* = 30.0) compared to baseline (*Mdn* = 29.0), $z = 1.346$, $p = .178$. Therefore, the null hypothesis was accepted, and the alternative hypothesis rejected.

Figure 16

Related Samples Wilcoxon Signed-Rank Test for Median Differences in Grateful Outlook as Measured by G6



4.1.9 EGS: Existential Gratitude Scale

Unlike the other measures the EGS is a new measure, hence its internal consistency was calculated. The scale had a high level of internal consistency

at pre- and post-intervention, as determined by Cronbach's alpha of 0.786 and 0.827 respectively.

To examine whether there was a statistically significant mean difference between participants' level of existential gratitude after the gratitude intervention as opposed to before a paired-samples t-test was conducted. One outlier was detected that was more than 1.5 box-lengths from the edge of the box in a boxplot (Figure 17). Inspection of this value did not reveal it to be extreme and was kept in the analysis. The assumption of normality was not violated, as assessed by the Shapiro-Wilk's test $W = .946$, $p = .458$ and visual inspection of a Normal Q-Q Plot (Figure 18).

Participants reported an increase in existential gratitude after the gratitude intervention ($M = 52.000$, $SD = 10.156$) compared to before the intervention ($M = 49.467$, $SD = 9.625$). While the gratitude intervention elicited a mean increase of $M = 2.533$, 95% CI [-1.926, 6.993], $t(14) = 1.218$, $p = 0.121$, $d = .31$ this mean difference was not statistically significant. Therefore, the null hypothesis was accepted, and the alternative hypothesis rejected.

Figure 17

Boxplot of Difference Scores for Existential Gratitude as Measured by EGS

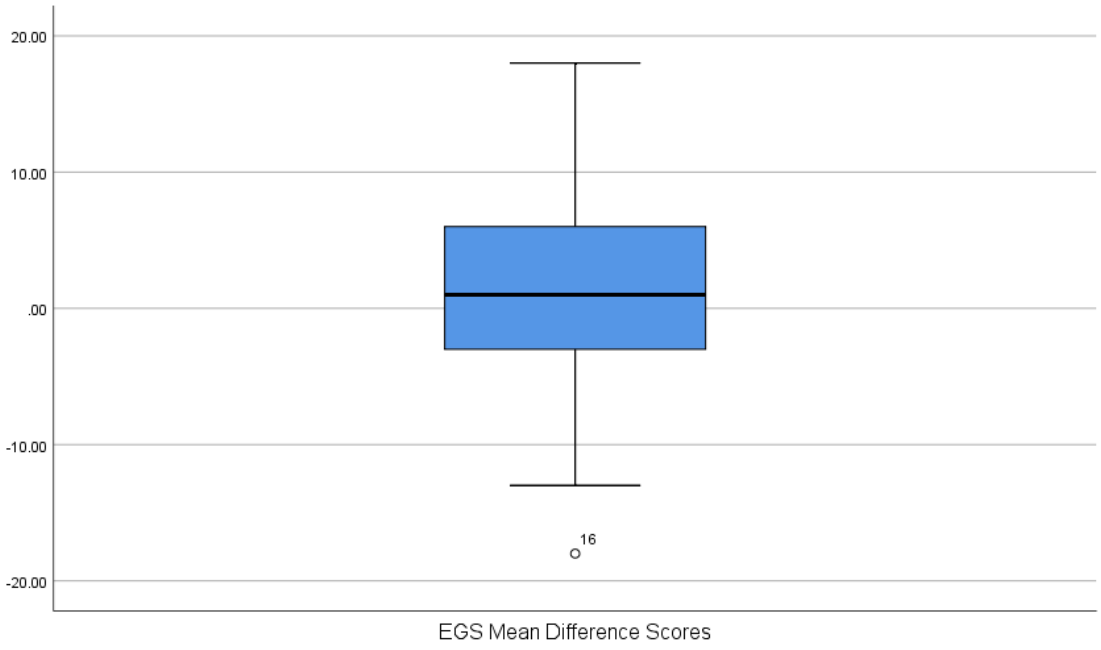
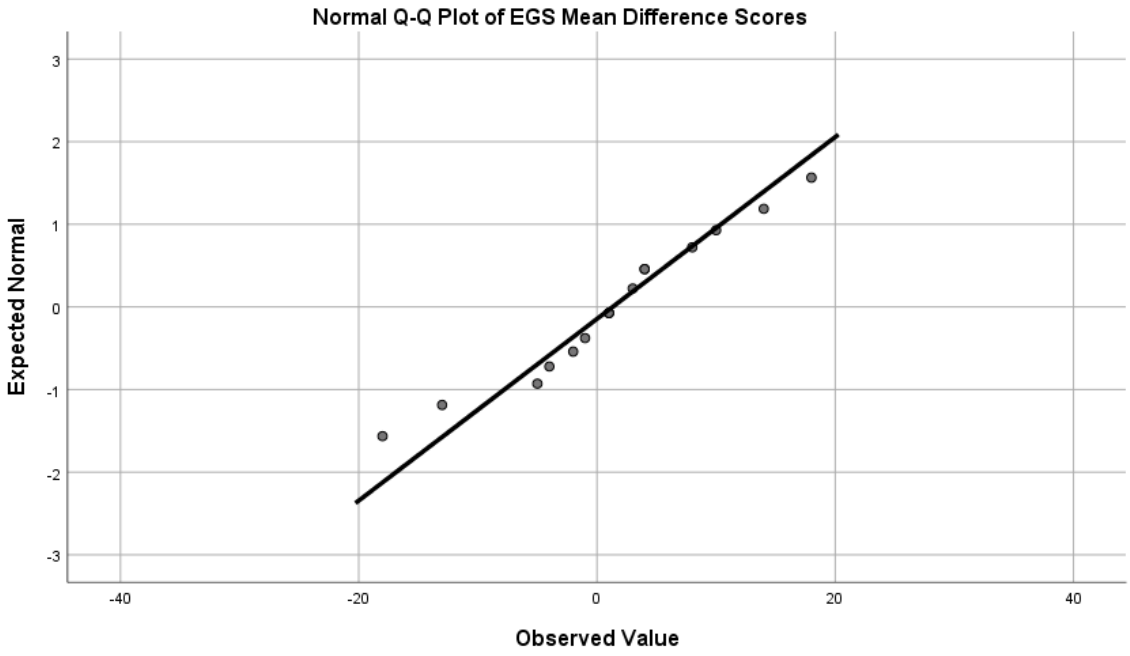


Figure 18

Normal Q-Q Plot of Difference Scores for Existential Gratitude as Measured by EGS



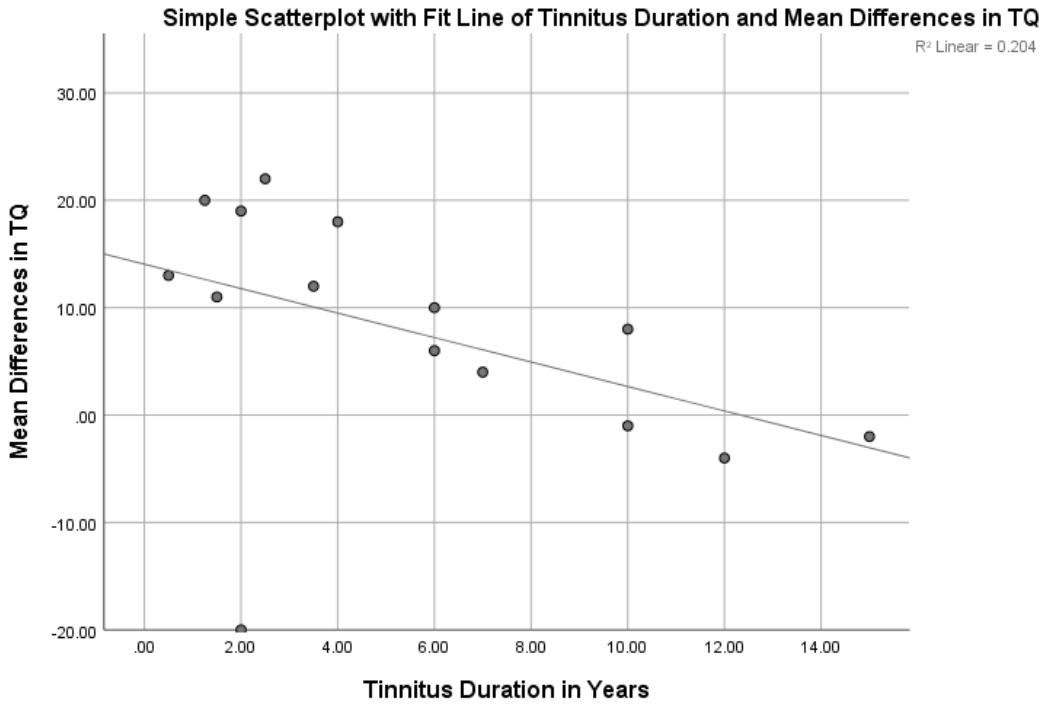
4.1.10 Correlational Analysis

A Spearman's rank-order correlation was run to assess the relationship between the difference in tinnitus-related distress as measured by TQ and participants' duration of tinnitus. Preliminary analysis showed the relationship to be monotonic as assessed by visual inspection of a scatterplot (Figure 18). There was a statistically significant strong[2] negative correlation between duration of tinnitus and reduction in tinnitus-related distress, $r_s(13) = -.632$, $p = .011$. This indicates longer duration of tinnitus complaint are associated with smaller reductions between pre- and post-intervention levels of tinnitus-related distress.

[2] Interpretation strength of Spearman correlation taken from Dancey and Reidy, 2007.

Figure 19

Simple Scatterplot of Participants' Tinnitus Duration and Mean Differences in TQ



4.2 Qualitative Analysis

Reflexive thematic analysis was used to interpret the data. I approached the analysis from the position of an outsider as I do not have tinnitus. I acknowledge that the interpretative process has been influenced by my experience of working with clients with tinnitus and my personal experience and belief in the benefits of viewing life through the prism of gratitude.

4.2.1 Participants Characteristics

Six participants expressed an interest in taking part in a follow-up interview and were therefore included. All participants were allocated a pseudonym to ensure

anonymity and confidentiality. Table 9 provides a summary of participants' pseudonyms, age, and tinnitus duration.

The average age of participants who were interviewed was 49.7 years (*SD* = 13.4), which ranged from 25 to 65 years. The average duration of tinnitus reported by participants was 4.7 years (*SD* = 3.5), which ranged from 6 months to 10 years. Participants seemed to enjoy the interview experience and rapport was established easily. All of them said they had hoped to develop a new coping skill to manage their own bothersome tinnitus and to contribute to research that would help reduce suffering in people with tinnitus. While tinnitus had not reduced for all participants, they all described having found a positive impact of the gratitude diary and would continue the practice.

Table 9

Interview Sample Age and Tinnitus Duration by Participant

Pseudonym	Age	Tinnitus Duration
Anna	25	10 years
Claire	51	6 years
Holly	50	15 months
Julia	57	3.5 years
Lily	65	6 months
Sonya	50	7 years

4.2.2 Overview of Findings

Three themes and two subthemes were generated in the thematic analysis (see Appendix X – Table of Theme Definitions). The main themes were broadening awareness, empowerment, and changing relationship with tinnitus. Together, the themes contributed towards answering the research questions:

- How is gratitude experienced in the presence of chronic tinnitus?
- What are participants' subjective experiences of tinnitus in the context of nurturing a grateful outlook?
- Will participants find keeping a gratitude diary an acceptable and helpful intervention?

4.2.3 Theme 1: Broadening Awareness

This first theme captured how over the course of the intervention participants' grateful awareness broadened to notice and interpret a wide range of experiences through the prism of gratitude. This included a realisation that blessings could be found in everyday experiences and adopting a broader grateful awareness was a choice. One subtheme, i.e. present moment awareness, explains how participants' grateful outlook expanded from reflecting about their daily experiences during the times when they wrote in their diaries to becoming aware of positive experiences and appraising them through the prism of gratitude in the present moment.

All participants described how writing in the diary gave them the opportunity to process the day's or week's experiences and reflect on these instances and appraise their significance. Thus, the diary appeared to encourage all participants to expand their awareness of the good things in their lives and they started "*to see the positivity in more things"* (Claire, line 296). This meant that positive experiences entered more readily into participants' conscious awareness.

> *The gratefulness diary has made me aware of the fact that actually I have had that conversation. Somebody did knock on the door and stood at the other end of the path* (Lily, lines 229-231)

The act of writing offered an opportunity to reflect on the day's event where positive experiences fade quickly:

> *sometimes I think you, you know, you're aware of it in the moment, then you forget about it* (Julia, lines 48-49)

The importance of catching those fleeting moments that engender gratitude in the diary was highlighted by all participants. Anna described writing in the diary

as a “deeper” (line 78) experience of gratitude as she was “thinking about why I'm grateful for things” (line 79), thus considering the meaning of these experiences.

This deepened sense of gratitude engendered by the act of writing was echoed by many who described that positive experiences can be overshadowed by negative experiences. However, with the help of the diary positive experiences can be remembered thus bringing them firmly into conscious awareness.

> *… because you're writing it down, erm, it makes it more, I dunno, more real, […] rather, it just being a passing thought because you're taking the time to actually write it down, you can just stop and appreciate it. And I, and I think rather than just thinking, 'Oh, yeah, that, that was nice. That was, er, you know, that was really like a nice moment'*. (Sonya, lines 367-373).

All participants described that a broad range of things or experiences can engender a sense of gratitude. These were typically things or experiences they could easily encounter in everyday life as Julia said, “I haven't done anything incredible” (line 53). However, they had previously not considered these experiences as remarkable. There was a sense that they had always existed, recognising “’There's so much to be grateful for. Why, am I not, you know, why am I not more grateful?'” (Claire, lines 151-153). Hence, participants seemed to realise that adopting a broader awareness is possible and is a choice.

> *how nice the sky is and how I like to walk through the leaves […] just really little things that, you know, I sort of tend to take for granted […] not the big things. It's not, you know, the great planned things. It's the everyday stuff* (Julia, lines 56-62).

> *The things I would take for granted, I've been able to think about the fact that I can actually get up and walk outside my front door and go for a walk and nobody stops me* (Lily, lines 108-110)

Furthermore, keeping a gratitude diary encouraged participants to consider the significance of valued experiences and this appeared to lead to a deepened sense of gratitude towards these.

> *I've always been very family-orientated, but I think it's taken it up a notch and you really appreciate spending the time with them and realise how important it is.* (Sonya, lines 177-179)

Three participants said that the gratitude diary helped them reflect on the support they received from others who have helped them during difficult times. This seemed to emphasise their sense of connectedness and reduced isolation with a condition that does not receive much attention. For Claire it was specifically relevant to tinnitus:

> *… one of the bits that I wrote about, about me cousin Mona, was how grateful I am for her being in me life because, you know, we've helped each other, erm, with our tinnitus over the years by talking about it and, and how we cope with it …* (lines 69-72)

Having developed a greater awareness of their blessings appeared to reduce the prominence of negative experiences and allowed them to adopt a more balanced view of life where there is space for positive experiences that engender a greater sense of wellbeing.

> *… it's almost like a counterbalance, rebalance everything and put everything back into perspective because I think that's the trouble sometimes […] you can blow things out of perspective if you're having a bad day and actually having something just be grateful for and to sit down and think 'Oh, actually there are some good things that happened today', just puts it all back into a sensible perspective* (Sonya, lines 268-273)

Four participants said with the help of the diary they were able to change how they viewed the magnitude of their struggle with tinnitus. They considered their own suffering in the broader context of human suffering. Counting their blessings seemed to reduce the severity of their own distress to the extent where they considered it a blessing they “only” have tinnitus.

> *[…] the other thing it's makes me think, ‘Oh, actually there's, there's people who are coping with a lot more’, erm, and a lot worse things to deal with than, than what I have to deal with on a day-to-day basis. And I think actually I'm very blessed really. I'm, you know, I have a good life, I've got a lovely family. So actually, I'm very lucky. And it's about just rem[-], yeah, reminding yourself of all those good things.* (Sonya, lines 309-314)

For Claire it was about comparing her tinnitus to that of other people’s whose tinnitus she considered to be worse than her own:

> *I wrote about, erm, the fact that things could be a lot worse. ((mhm)) You know. Erm, so even other tinnitus sufferers that I know or I've spoken to, that seem to be so debilitated by it […] you know, that other people have*

> *got it a lot worse than I have. […] I was grateful that mine wasn't so bad.* (lines 204-219)

As more positive experiences moved into participants' conscious awareness there appeared to be a more general shift in their focus away from negative experiences. Sonya explained how keeping a gratitude diary gradually made:

> *… me more aware of the, the positives, yeah. The happy things that are going on and yeah, not all the negatives and all the negative stuff on the news and, erm, but yeah, to focus on the, the good things that were going on.* (Sonya, lines 68-71)

Subtheme: Present Moment Awareness

Over the course of the intervention, participants' broadened awareness of the good things in life seemed to extend beyond the times when they wrote in their diary and they became aware of blessings in the present moment. This was common enough in the data that it was collated in a sub-theme as this seemed to describe a particular aspect of participants' broadening awareness of the blessings in their lives.

Anna described how her gratitude practice evolved from reflecting about the day's events in the gratitude diary to appraising experiences through the lens of gratitude as they were happening:

> *more reflective, more living in the moment, appreciating things when they're happening, as opposed to sort of retrospectively thinking, 'Oh yeah, that was good'.* (lines 175-178)

Claire described having developed a cognitive ability or "filter" as result of keeping the gratitude diary to view and appraise experiences and encounters through the prism of gratitude more readily.

> *… as you're writing things down in detail, you start er, you know, cognitively - I don't know if that's the right word, but it starts to, erm, filter into, erm, your everyday activities that you're doing* (lines 299-301)

Holly explained this as a function of keeping the gratitude diary. Knowing that she was going to write in her diary encouraged her to be make a conscious effort towards noticing experiences that made her grateful. Her awareness of

these positive experiences seemed to reduce the impact of other experiences that were not as positive thus engendering a greater sense of wellbeing.

> *I think it's because, you know, you're going to be writing this gratitude diary. […] You're kind of making more mental notes, so, 'Oh', like, you know, 'That was good' or, 'Oh, I didn't like that', but then that helped me to, you know, get over that or, you know, so I think yes, knowing that I, I was looking to do this makes me more aware of other things.* (lines 26-30)

As participants became more consciously aware of the gratitude-inspiring experiences in the moment they appeared to spend more time on them thus making them less fleeting and more memorable. This provided the opportunity to connect with a greater sense of wellbeing.

> *… just walking along the lanes there and the ladybird landed on my hand ((mhm)) and just taking the time to actually, 'Oh, wow, look at this!' and watch it and enjoy it.* (Lily, lines 100-102)

As a heightened experience of gratitude and wellbeing was common among participants when writing in the diary this also became also possible in the present moment:

> *I can think at one point when I was eating, erm, Sour Patch Kids, you know, those little sweets, sweet and sour. And I was like 'Oh, I love these: I'm grateful for Sour Pa[-]', it sounds stupid but it was, it was really nice to acknowledge the little things. Like I'm grateful that I've got these and I'm enjoying them. (Anna, lines 90-94)*

In summary, the theme broadened awareness suggests that through keeping a gratitude diary participants' awareness of blessings in their lives expanded, finding benefits in simple, easily accessible things. Their growing awareness of these blessings allowed them to view their own suffering in the context of all human suffering. Their gratitude practice evolved over time to becoming more mindfully aware of blessings in the present moment.

4.2.4 Theme 2 – Empowerment

This second theme captured the idea that participants developed a greater sense of agency in being able to cope with the distressing impact of tinnitus by using a gratitude diary. Adopting a grateful outlook either when writing in the diary or viewing life through the prism of gratitude in the present moment instilled a sense of choice over how participants appraised their experience of bothersome tinnitus.

The importance of having a strategy when living with tinnitus is illustrated by Lily's experience. Compared to the others, Lily had only recently developed tinnitus. She reflected on how she felt her suffering with tinnitus had been minimised and the absence of available support: "my, erm, haematology nurse just said to me, 'Oh, that's annoying, isn't it?' and that was the end of the conversation" (lines 198-199). Qualitative research has shown that this is not an uncommon experience (Marks et al., 2019), however, this exchange gave Lily a sense of helplessness:

> *I didn't have any control over - my medication, erm, gives me control over my Essential Thrombocythemia, but there's no medication for tinnitus. […] they acknowledge that you've got it, er but you then don't get any support in how to go forward with it, how to deal with it* (lines 43-48).

Hence, the gratitude diary had given her a sense of empowerment that she is less helpless in the face of distressing tinnitus:

> *I can now have some control over it, whereas before I didn't know where it was going to go or what I could do with it.* (lines, 222-224)

Having greater awareness of the blessings in their lives appeared to reduce participants' sense of being helpless in the face of tinnitus and provided a sense that a "good" life with tinnitus is possible:

> *I was only thinking the other day, I thought, 'You know what, if this is the way that it's going to be, then I'll be all right', you know, 'I'll be all right'* (Claire, lines 430-432)

Furthermore, believing themselves empowered to cope with the distressing impact of tinnitus seemed to strengthen their sense of positive self and wellbeing.

> *I can cope with it. Okay, some days it's worse than others, but I ha[-], you know, it's not going to go away. So, I'm just going to have to find a strategy to cope with it. And I don't want it to take over and be all consuming. You know, I want to be positive about it and I want to still be able to do the things that I enjoy.* (Sonya, lines 283-287)

As existing models of tinnitus have highlighted, people with distressing tinnitus struggle with switching focus away from tinnitus (McKenna et al., 2014). In contrast, keeping a gratitude diary had the potential to enable participants to switch their attention towards blessings, thus generating a sense of wellbeing.

> *They say when your mental health is poor, that certain parts of your brain, like the logical parts just - not shut down - but don't function as they should. And so I think being reflective, erm, acknowledging the positive forces in your, in your life, erm, or, or even the things that could be, erm, the things that are. It's, I mean, when they're at, when tinnitus sufferers are at their worst, that's the beginning of the upwards, you know, things getting better.* (Anna, lines 196-202)

Hence, all participants agreed that keeping a gratitude diary was an acceptable strategy to generate more helpful thoughts when feeling annoyed by tinnitus as opposed to following the downward spiral of negative automatic thoughts.

> *… I certainly think it helps. I mean, for anything, I suppose, not, not just tinnitus, but it does make you think of all the good things and kind of relive the good things and those feelings make you feel good.* (Holly, lines 131-134)

Having control over tinnitus is a common desire in people with distressing tinnitus, hence strategies to avoid or suppress the noises are commonly used (Watts et al., 2018). While all participants mentioned using music or other sounds to mask their tinnitus, two participants recognised the idea of control did not relate to the noises themselves but rather the emotional response to them. Anna shared this realisation that tinnitus itself cannot be controlled, but the goal is to “control yourself how you react to it” (line 314). Lily also suggested the gratitude diary

> *… made me very much more conscious that I can be in control of my emotions.* (Lily, lines 52-53)

Adopting a grateful outlook when writing in the dairy was seen as a choice that was available to them to re-evaluate the magnitude of bothersome tinnitus by focusing on the blessings alongside tinnitus.

> *I think you, you can get wrapped up on the day-to-day basis, you know, with work stresses and like, say, you know, the tinnitus is always there. So, you know that it's always in the background and I think sometimes you think, 'Oh, you know, you, you're not having a good day', but actually when you sit down and think about some of the things that happened during the day and the good things, it makes you realise that actually the day hasn't been so bad.* (Sonya, lines 39-45)

Hence, participants seemed to believe that becoming distressed by tinnitus is not a forgone conclusion but there is the option of reacting differently towards.

> *I can choose to be annoyed or frustrated by it, or I can choose to think about something that I'm grateful for and it doesn't have to be, erm, a great world (inaudible) thing. But the fact, I've got a comfortable chair to sit on* (Lily, lines 170-173)

Subtheme – Active Coping

Part of feeling empowered to better cope with the emotional impact of tinnitus was participants' active and purposeful use of their ability to appraise life through the prism of gratitude. This idea was common enough that it was identified as a sub-theme.

Sonya explained how actively adopting a grateful outlook had the potential to reduce the distress related to tinnitus compared to other strategies like using background sounds that aim to mask the tinnitus itself.

> *And there are some days when, you know, the tinnitus does annoy me and, you know, I might be sitting, tryin' to concentrate on something and it's a bad day and I can't because I just think, 'Ugh, you know, it's, it's bothering me', erm, and on those days, the normal things that I rely on, like a little bit of background noise, just aren't working, erm, and so actually this is something different, it's a different strategy… (lines 225-231)*

This experience is echoed by Lily who describes a process of actively using positive, gratitude-inspiring experiences to re-evaluate her negative perspective of tinnitus:

> *where I am very isolated, erm, just to think about the input that I am receiving and putting things in some kind of perspective of where I am in the scheme of the day. Does that make sense? ((Yeah)) Just sort of grounding myself, I guess. (lines 261-264)*

Some participants described writing in their gratitude diary during times they when tolerating tinnitus is particularly difficult. Using the gratitude diary purposefully at those times appears to help reduced the annoyance of tinnitus by bringing positive experiences into their awareness.

> *… there's been a couple of times when I've written in my diary at that time of night as well. So, you know, you kinda go off to bed on those positives. ((OK)) Erm, so even, even though you've got the irritation of the noise, it's it, it bothers you less*. (Julia, lines 237-240)

This idea of a gratitude diary as a targeted activity to reduce the impact of tinnitus was understood as a "positive distraction" (Julia, line 27 and Claire line 296). Holly, and Sonya explain further that the distraction lies in the process of thinking about positives

> *… as a distraction and sitting and writing and thinking about good things. Yeah, it is good.* (Holly, 143-144)

> *And it's about just rem[-], yeah, reminding yourself of all those good things*. (Sonya, lines 313-314)

Re-reading their gratitude diaries was another active coping strategy used by the majority of participants. Apart from a greater sense of gratitude, e.g. *"I've got a lot to be grateful for"* (Julia, line 44), Julia also used this strategy to identify those activities that had given her a sense of wellbeing and subsequently sought out more of these activities with the aim of maintaining this sense of wellbeing.

> *I've been the sort of person that would let everybody else organize things in the past. Whereas now I'm thinking, you know 'I, I did that and I planned that and it was really fun. Let's do that again.' So I'm being a bit more, erm, a bit more proactive to, to sort of organise some things with, with family and friends, whereas I've, I've just gone along with everything before*. (lines 180-185)

One of the outcomes of actively viewing life through the prism of gratitude seemed to be an overall improvement in wellbeing:

> *the more you, you plug into being grateful and seeing gratitude in everything that you do and see, and experience and people that you come into contact with. (.) That can have a profound effect on your whole, your whole psyche, your whole physical and mental wellbeing.* (Claire, lines 302-306)

All participants commented on the gratitude diary being not just beneficial for their experience of tinnitus, but it had a broader application to improve their sense of overall wellbeing. Furthermore, the idea that an improved sense of wellbeing impacted positively on their experience of tinnitus was common among all participants.

> *I think doing the gratitude diary, or also makes me a little bit calmer anyway. You know, and I think not being […] quite so on edge and then the tinnitus not spiking by being calmer.* (Holly, lines 216-219)

Participants appeared to describe a virtuous cycle where their improved sense of wellbeing provided them with more resources to cope with tinnitus, thus tinnitus itself appeared less bothersome. In turn, this gave them a greater sense of wellbeing.

> *… if you've got your tinnitus and you've got all your problems and you're trying to fall asleep, erm, or stay asleep, then that can get a bit too much. Whereas if you've, if you're content with how your day has gone and you're more positive, the tinnitus doesn't seem to factor into it as much. It's almost like the tinnitus on top of everything else (.) makes it harder. […] If you haven't got that, erm, the tinnitus isn't as - that's the way I've felt like over the last few weeks it's gotten better because I've been dealing with the rest of my life better because of the positive outlook…* (Claire, lines 397-407)

All participants reported their intention to continue with the gratitude diary to maintain their active coping skills and connect with their sense gratitude and of wellbeing:

> *… got myself a lovely journal. […] And I'll be looking back at this time next year, I'll be looking back (and say) 'Oh, yes, I did that'.* (Julia, lines 285-289)

In summary, the theme of empowerment suggests participants' use of the gratitude diary had given them a greater awareness of the good things in life thereby instilling greater confidence that a good life with tinnitus is possible. Their sense of empowerment was further strengthened as they adopt a grateful outlook purposefully to cope with the distressing impact of tinnitus rather than tinnitus itself.

4.2.5 Theme 3 – Changing Relationship with Tinnitus

This theme identifies participants' changed relationship with tinnitus. This includes accepting tinnitus and feeling less bothered by it. Participants attribute these changes to having a broader awareness of blessings alongside tinnitus and feeling empowered to cope with the distressing impact of tinnitus.

For example, Claire described a shift in her preoccupation with tinnitus describing that her broadened awareness of the blessings in her life had reduced the awareness of tinnitus, thus

> *… it doesn't feel as prominent in me life, not been talking about it as much, I've not been mentioning it*. (Claire, lines 433-434)

Lily described how hearing her tinnitus had become an inspiration to be grateful which reduced its significance.

> *… okay, it's there, but in the scheme of things, where is it? What, you know, where can I put it? If I were to put it on a graph of importance, ((yup)) erm, there are far more important things in my life that bring me gratitude, that make me feel good.* (lines 70-74)

The goal of any psychological treatment for tinnitus is not to suppress the noises but to reach a state where tinnitus is not reacted to in negative terms (e.g. McKenna et al., 2017). Anna links her ability to appraise tinnitus in non-catastrophic terms to her changed perspective on life as a result of nurturing her grateful outlook.

> *'Cause I still hear it, but my brain isn't interpreting it as a dangerous thing because I have perspective* (lines 218-219)

Interpreting tinnitus in less or even non-catastrophic terms, however, does not mean suppressing or avoiding one's noises. On the contrary, for Lily it is important to acknowledge tinnitus' presence while also recognising because she had some agency over her emotional responses she can accept tinnitus as part of her life.

> *… acknowledging that I can hear the sound, however, I'm grateful because (…) ((OK)) so I've not, I've not eradicated it. I know it will probably never go away, erm, but I feel more comfortable about the fact that that's the situation*. (lines 141-144)

Both Anna and Lily describe tinnitus having become a part of their sense of self:

> *it just becomes part of, I guess, who you are, how the senses that, like touch and sight and sounds and smell. It's almost become like another sense it's always going to be there.* (Lily, lines 148-150)

Anna described a similar shift in how she views tinnitus in the broader context of her life. Viewing tinnitus as a part of her life underpins her acceptance tinnitus. Acceptance means to allow tinnitus to be there, making peace rather than battling with it.

> *I think it's changed how I think about life. ((laughs)) That's quite a profound statement, isn't it? Erm, but I think it's something really useful, erm, because you know, tinnitus is part of my life. So, I don't like to separate it from that because then it becomes, I don't know, I don't like to think of it as an adversary or something to be defeated. It's something to be, you know, in, embraced, part of just, it's just the way things are now. […] the gratitude diary is helping me be more grateful about just life, and things in general, that doesn't exclude tinnitus from the equation. It's quite inclusive actually, because it is, I would consider it a part of that*. (lines 266-275)

Related to feeling gratitude seemed to be a sense of contentment as tinnitus had lost its dominance. Hence she can think of tinnitus in less catastrophic terms and contemplate allowing it to be part of her life.

> *… just not being as scared of it or not being as, 'Oh God, you know, erm, have I got this for the rest of my life?' You know, and, 'Awe, I got to put up with this' and 'Oh, woe is me' and, and all that. When you start to think more positive, I suppose, erm, there's a, you reach a point where you're a bit, you're more content with your life.* (Claire, lines 386-391)

Five of the six participants said their awareness of tinnitus had reduced by the end of the three weeks of keeping a gratitude diary. Participants had a range of explanations for this. For Holly it was an improved sense of “calm” that was generated by writing in the diary. For Anna, Claire, Julia, and Lily it seemed to be their greater awareness of the blessings in their lives. They appeared to experience a sense of balance where tinnitus no longer overshadows all the good things in their lives. Hence, tinnitus is less bothersome.

> *… it just feels like more of a balance in life and it's not annoying me as much. It's not, it's not irritating me half as much as what it has done in the past. And that, that feels great, you know, because it actually feels really*

> *manageable […] Some days I've actually forgotten about it. (laughter) which is like, 'Wow!'.* (Claire, lines 427-435)

This final theme emphasised the utility of nurturing a grateful outlook in changing participants' relationship with tinnitus. Having a greater awareness of the good things in live appeared to reduce their preoccupation with tinnitus. With tinnitus being less dominant in their awareness participants seemed to experience tinnitus to be less bothersome.

4.3 Data Integration

To compare the quantitative and qualitative findings, the two datasets were merged and inferences drawn as shown in Appendix Y. The analysis was treated as a parallel design hence each arm was fully analysed prior to synthesising the data (Tashakkori & Teddlie, 2010). In line with my dialectical pragmatist position, data integration focused on identifying convergent and divergent evidence across qualitative and quantitative results. Hence the aim was to gain a better understanding of the feasibility of using a gratitude diary in the treatment of tinnitus-related distress through both datasets.

Data triangulation followed the recommendations by Cresswell and Plano Clark (2011, pp. 203-250), especially regarding the presentation of convergent and divergent data for each emergent inference. The authors highlight the importance of not losing sight of the research questions and to use these as a focal point in the integration of the two datasets.

4.3.1 Inference One: The Gratitude Intervention was Effective in Reducing Tinnitus-Related Distress

Both quantitative and qualitative results converge to suggest the gratitude diary intervention was effective in reducing tinnitus-related distress. While a statistically significant reduction in tinnitus-related distress was found following

the gratitude intervention, the reduction was not clinically significant for all participants. Qualitative results suggest the gratitude diary helped participants become aware of the blessings in their lives which had previously gone unnoticed. They appear to feel empowered to live with tinnitus as they were able to use gratitude to move their focus away from tinnitus onto the good things in their lives. Being able to notice blessings more readily in the present moment seemed to diminish the significance of tinnitus.

4.3.2 Inference Two: Evidence whether Gratitude Intervention was Effective in Increasing Psychological Wellbeing is Mixed

There was no statistically significant difference in participants' psychological wellbeing before and after the gratitude intervention. However, 12 out of 15 participants reported an improvement. Qualitative data suggests participants viewed nurturing a grateful outlook as a active coping strategy which appeared to impact positively on their overall sense of wellbeing. Furthermore, they described a virtuous cycle where participant's awareness of blessings was heightened thus reducing their relative awareness of tinnitus. Being less aware of tinnitus then engendered a sense of wellbeing.

4.3.3 Inference Three: Evidence whether Grateful Outlook Increased Following the Gratitude intervention is mixed

All participants taking part in the qualitative arm of the study described a process of a broadened awareness of the blessings in their lives. This appeared to be key in diminishing the negative significance of tinnitus. However, there was no statistically significant increase in grateful outlook as measured by the Gratitude Questionnaire and the Existential Gratitude Scale which raises the question about the underlying mechanism that influenced the reduction in tinnitus-related distress.

Chapter 5: Discussion

5.1 Introduction

This study adopted a mixed method approach to evaluate the effectiveness of a 3-week gratitude diary intervention on the experience of tinnitus-related distress and psychological wellbeing in a sample of 15 adults. The two research hypotheses were based on prior research of the existing literature on tinnitus and gratitude interventions. The aim of the first hypothesis was to examine whether the gratitude diary intervention is effective in reducing tinnitus-related distress compared to baseline. The second hypothesis aimed to examine whether the gratitude diary intervention is effective in improving psychological wellbeing compared to baseline. The study's aim was to gain as full an understanding as possible about the feasibility and acceptability of applying a gratitude diary intervention in the context of tinnitus, hence the qualitative arm explored participants' experiences of the intervention. Thus, in addition to the two hypotheses the study also addressed the following research questions: First, what are participants' subjective experiences of the gratitude diary intervention? Second, how does the gratitude diary intervention impact on their experience of tinnitus? Third, will participants find this intervention acceptable and helpful?

This chapter presents a discussion of the study's quantitative and qualitative findings in relation to existing research and theoretical literature in this field of tinnitus and gratitude. The primary focus of this chapter is given to how the findings help answer the study's research questions. The findings are also discussed and critiqued with regards to their relevance and implications for clinical practice in counselling psychology. The chapter concludes with an examination of the strengths and limitations of the study, directions for future research, personal reflections, and final conclusions.

5.2 Importance of the Study

The British Tinnitus Association (2018) projected that the number of people living with persistent tinnitus in the UK is set to rise by more than half a million by 2028. While no effective medical treatment exists for tinnitus, NICE (2020) guidelines recommend psychological therapies to provide support for adults with tinnitus-related distress. With the projected numbers of people living with tinnitus by the end of the decade, more are likely to seek psychological support from mental health professionals. Hence, further development of psychological treatment approaches is required for the provision of client-centred care that responds flexibly to clients' needs and preferences (Cooper, et al., 2019). Hence, the study sought to find a new intervention that could offer an additional coping strategy to manage the distressing impact of tinnitus for those who are interested in adopting a positive, strengths-based approach.

5.3 Summary of Findings

The main finding of this research supports the feasibility of applying a gratitude diary intervention to reduce tinnitus-related distress in adults. Further research is, however, required to assess the effectiveness of the intervention more robustly.

To the best of my knowledge, this is the first study to evaluate a gratitude diary intervention in reducing tinnitus-related distress and improve psychological wellbeing. The findings suggest that after three weeks of keeping a gratitude diary, a statistically significant reduction in participants' tinnitus-related distress was observed. However, this reduction was not clinically significant for the whole sample as only seven participants reported a reduction of this magnitude. In addition, participants reported a statistically significant reduction in low mood, however, the sample's level of depressive symptoms at baseline was already below the lower limit for mild depressive symptoms. Of the 15 participants 12 reported improvements in their psychological wellbeing, however, these improvements were not statistically significant. Significantly, there appeared to

be no change in levels of dispositional and existential gratitude and anxiety after the intervention compared to baseline. Furthermore, correlational analysis of the relationship between duration of tinnitus and reductions in tinnitus-related distress suggests that having tinnitus for longer is associated with smaller or no reductions in tinnitus-related distress following the intervention. This finding suggests that this intervention may be more suitable as an early intervention than for those who have lived with tinnitus for many years.

Three main themes were identified in the thematic analysis: broadening awareness, empowerment, and changing relationship with tinnitus. Keeping a gratitude diary appeared to facilitate a broadening of participants' awareness of more experiences in everyday life that engendered gratitude in them. With time, participants described becoming more mindfully aware of such experiences in the present moment. Viewing life through the prism of gratitude was associated with an improved sense of wellbeing and was described as "enjoyable", "calming", and it made them "feel good". Participants further described a sense of empowerment as they felt better able to cope with tinnitus. The gratitude diary and adopting a grateful outlook became an additional active coping strategy to manage negative thoughts and emotions related to tinnitus. Over the course of the intervention, most participants reported a changing relationship with tinnitus as the relative importance of tinnitus had diminished while their awareness of the good things in life had increased.

The following sections will discuss the study's findings in detail. The quantitative and qualitative findings will be discussed concurrently to offer a comprehensive evaluation of the results from both arms of the study.

5.4 The Significance of Broadening Awareness and Grateful Outlook

McKenna et al.'s (2014) cognitive-behavioural model of tinnitus suggests that tinnitus-related distress is maintained by repetitive, negative – typically catastrophic – thoughts which drive the development of unhelpful fear-based strategies of suppression, avoidance, and distraction. Key to maintaining

tinnitus-related distress are unhelpful attentional processes such as selective attention towards the feared noises as well as difficulties in switching and sustaining attentional focus on something other than tinnitus (McKenna et al., 2014). Qualitative data in this study suggest that the observed reduction in tinnitus-related distress found in the quantitative arm maybe related to participants increased ability to attend to positive experiences.

Participants' narratives suggest with the help of the gratitude diary they experienced a broadening of their conscious awareness to notice and appreciate blessings. Broader grateful awareness included appreciating the "little things" in life as well as reflecting on time spent with or having received support from family and friends thus feeling a greater sense of connectedness. With time, participants appeared to develop a "filter" through which they were increasingly able to appraise their daily experiences in terms of gratitude in the present moment. Broader awareness of the good things in life in the present moment allowed participants to notice blessings in everyday experiences such as nature and food which they would have previously overlooked as their focus would have been stuck on the negatives such as how loud or unpleasant their tinnitus was. Hence, becoming aware of blessings in the present moment seemed to facilitate a shift in participants' attention away from tinnitus. Thus, participants did not experience tinnitus as overwhelming as before they started the intervention. Instead, they described that a sense of balance had been achieved and the relative dominance tinnitus had previously occupied in their awareness seemed to have decreased while the significance of positive experiences had received a boost.

A broader awareness of the good things in life appeared to be an important function of the gratitude diary for all interviewed participants irrespective of whether or not their tinnitus had become less bothersome. However, from a quantitative perspective there was no statistically significant increase in grateful outlook, i.e. dispositional gratitude. While this finding might be due to the study being underpowered a similar result was found in Emmons & McCullough's (2003) original gratitude diary study. In a sample of 63 adults with neuromuscular diseases keeping a gratitude diary for three weeks significantly

improved participants' positive affect but grateful outlook itself was not associated with improvements in positive affect. Wood et al. (2010) have suggested that dispositional gratitude may be similarly stable as core beliefs about the self and the world, hence a 3-week intervention may not have been long enough to change participants' dispositional gratitude.

As McCullough et al.'s (2001) GQ-6 does not reflect that people are able to feel gratitude as a result of negative experiences (Emmons, 2013), grateful outlook was also measured using the Existential Gratitude Scale. The concept of existential gratitude reflects that negative experiences are part of the human condition and gratitude can arise from positive as well as negative experiences (Jans-Beken & Wong, 2019; Wong, 2012). This fuller conceptualisation of gratitude appeared to be more relevant when researching gratitude in the context of persistent health conditions. In fact, participants commented that during the gratitude intervention they were able to change their perspective on the significance of tinnitus by considering their own suffering in the wider context of human suffering. Hence, they were able to consider themselves "lucky" that tinnitus was not as bad as more serious health conditions, or their own tinnitus was not as bad compared to people whose tinnitus they considered to be worse. Pryce and Chilvers, 2018 argue that this strategy was a logical cognitive process of making sense of a persistent condition and Marks et al. (2020) recommend such a change in clients' perspective on tinnitus can be achieved through nurturing a grateful outlook. However, no statistically significant difference was observed in participants' existential gratitude score after the intervention. This is again likely to be due to the small sample, but it is also possible that the scale may not be sufficiently sensitive to detect such a change. Hence, no conclusion can be drawn whether existential gratitude is a more accurate measure of gratitude in the context of persistent health conditions.

Finally, findings from this study provide support for Handscomb et al.'s (2017) suggestion that interventions supporting positive appraisals of tinnitus may help individuals cope better by enabling them to switch from negative to positive thinking. The authors further suggested that those with severely bothersome

tinnitus appear to be unable to engage in positive thinking hence interventions that nurture a positive outlook may be more applicable to individuals who are less negatively affected by tinnitus. Correlational evidence from this study appears to suggest that a gratitude diary intervention may be more effective at an early stage of developing symptoms. However, further research is required to confirm this.

5.5 Impact of Feeling Empowered to Cope on Psychological Wellbeing

By the end of the intervention, all participants in the study's qualitative arm reported that they considered maintaining a broader awareness to notice the good things in life as an additional coping strategy, however, most did not consider it as a stand-alone strategy to manage the distressing impact of tinnitus. Participants described feeling empowered that by adopting a broader grateful outlook they were able to manage the emotional impact of tinnitus and that the intervention had highlighted to them that blessings were possible despite living with tinnitus.

For some adopting a grateful outlook was not aimed at reducing the noises but a strategy to deal with the cognitive and emotional impact of tinnitus in a more helpful way. For others, however, adopting a grateful outlook either when writing in the diary or in the present moments represented "a positive distraction" from the noises. Avoidance strategies such as sound enrichment and diverting attention are the most frequently used coping strategies across a range of different situations (Beukes et al., 2017; Cima et al., 2019). Yet research suggests that individuals who frequently use avoidance strategies also tend to be more distress by their tinnitus (Andersson et al., 2004; Henry & Wilson, 1995). This indicates that using a gratitude diary intervention as a stand-alone self-help tool risks becoming another avoidance strategy. Hence, it may be advantageous to integrate a gratitude diary into psychological therapy as this would allow therapists to point out the difference between avoiding and allowing tinnitus.

Previous research suggests that using a gratitude diary is negatively associated with using less helpful coping strategies and positively related to using more adaptive coping behaviour such as being with other people (Sztachańska et al., 2019). Qualitative data from this study suggests that the gratitude diary helped participants identify which of their experiences engendered a sense of well-being. One participant used the information from her diary to engage in activities that further strengthened her sense of wellbeing. However, this study did not collect any data to understand participants coping behaviour more generally. Hence, it is not possible to draw any conclusion whether the intervention reduced their use of avoidant coping strategies and engaged in more helpful strategies such as allowing tinnitus to be part of their experiences.

Participants' narratives suggest they equated writing in their gratitude diary and grateful awareness in the present moment with an increased sense of wellbeing. However, these improvements were not statistically significant. Of the 15 participants 12 reported improvements in psychological wellbeing thus it could be argued that the study's findings are due to the small sample size. Meta-analytic evidence by Davis et al., (2016) suggests that there is only weak evidence that gratitude interventions may improve psychological wellbeing. However, they also recognised that the field was not developed enough to draw firm conclusions on the impact of gratitude interventions.

This study was not designed to examine the mechanisms that may underlie the relationship between gratitude and wellbeing. However, drawing on Frederickson's (2001) broaden-and-build theory it could be argued that the gratitude diary engendered positive emotions. For example, as some participants reported adopting a grateful outlook allowed them greater choice over how to respond to the cognitive and emotional impact of tinnitus. They further believed they dealt with tinnitus in more helpful ways, for example by acknowledging that tinnitus was annoying but not to get annoyed by it. In Sztachańska et al.'s (2019) gratitude diary intervention study in women with breast cancer, the authors called gratitude as the "undoer of distress" (p. 9) as they observed a reduction in negative affect. In the present study, participants described a virtuous cycle whereby the gratitude diary instilled a sense of

wellbeing, which seemed to reduce their tinnitus symptoms and as tinnitus was less noticeable or bothersome their sense of wellbeing was further increased. Consequently, gratitude may be considered the “builder of wellbeing” in adults with tinnitus, however, future research is required to explore this virtuous cycle further.

5.6 Tinnitus-Related Distress and Changing Relationship with Tinnitus

Participants reported statistically significant reductions in tinnitus-related distress with a moderate effect size. These findings were below clinical significance for the whole sample, however, 7 of the 15 participants reported a clinically significant reduction. Furthermore, there was a statistically significant reduction in low mood and a reduction in the mean score for anxiety was also observed, however, this reduction was not statistically significant. Crucially, participants in this study were recruited from a general population sample rather than a clinical sample and did not report clinical levels of low mood or anxiety at baseline. Nevertheless, the results indicate change in the desired direction thus suggesting it may be feasible to apply a gratitude diary intervention in a population that is more severely distressed by tinnitus.

Few studies have explored the relationship between gratitude and physical health, particularly in clinical populations. Cross-sectional studies reported positive associations between grateful outlook and symptoms of disease and coping in adults with arthritis and inflammatory bowel disease (Sirois & Wood, 2017), quality of life in people with fibromyalgia (Toussaint et al., 2017), improved functioning in rheumatic illnesses (Hirsch et al., 2021) as well as tinnitus-related distress (Reeves et al., 2021). However, there have been even fewer intervention studies examining the effects of gratitude interventions generally, and specifically diaries, in populations living with persistent physical health conditions. The results from this study seem to be consistent with the positive findings from studies in populations with neuromuscular diseases (Emmons & McCullough, 2003), breast cancer (Sztachańska et al., 2019), and asthma (Cook et al., 2018). Sztachańska et al. (2019) and Emmons and

McCullough (2003) found improvements in outcomes on daily functioning in adults with breast cancer and neuromuscular disease respectively, while Cook et al. (2018) reported improvements in asthma control following a gratitude diary intervention.

The present study extends existing positive findings of the utility of a gratitude diary intervention in individuals with persistent health conditions. In addition, this study's mixed method design allowed deeper exploration of the experience of the intervention thus allowing further insight into the potential underlying mechanisms that may facilitate the change participants' relationship with their tinnitus. Participants' narratives mirrored the positive quantitative findings of reduced tinnitus-related distress. All participants in the qualitative arm of the study described relating to their tinnitus in a different way which they believed reduced their distress. Five of the six participants described feeling less bothered while four reported a reduction in tinnitus volume which they believed to be secondary to their changing relationship with tinnitus. Previous research suggests that key to habituating to tinnitus is to stop fighting tinnitus (Marks et al., 2020; Pryce & Chilvers, 2018). Pryce and Chilvers (2018) highlight the importance of gaining a sense of internalised control that acknowledges the noises will not go away yet a good life alongside tinnitus is possible. Similarly, in the present study participants describe the reduced prominence of the "annoying" tinnitus by noticing the good things in life has helped some of them view its role differently in the wider context of life and their identity. Some described accepting tinnitus will not go away as tinnitus becoming a part of who they are. This realisation allowed them to see tinnitus not as an "adversary".

In summary, the present study suggests keeping a gratitude diary has the potential to facilitate a change in a person's perspective on tinnitus and reduce its distressing impact. Nurturing grateful awareness appears to precede this change by emphasising the good things in life alongside tinnitus.

5.7 Strengths and Limitations

While there are many studies that have tested the effectiveness of gratitude diary interventions most of these studies have included student samples rather than general population samples and studies with populations with physical or mental health difficulties are rare (Boggiss et al., 2020). Evidence from correlational research suggests a relationship between grateful outlook and positive reduced tinnitus-related distress (Reeves et al., 2021). This study was the first to build on this evidence and examined whether participants' levels of tinnitus-related distress could be experimentally manipulated with the help of a gratitude diary.

The study has provided evidence suggesting it is feasible to further test the effectiveness and acceptability of a gratitude diary intervention in adults with tinnitus. The results further suggest that future implementation of the intervention will likely be accepted by participants. The intervention was implemented as planned and none of the participants struggled to follow the instructions. Participants commented that once they had started the intervention writing in the diary became an "enjoyable and important part of the day". Overall, participants' engagement in the study and the fact this is a cost-effective intervention makes a gratitude diary a practical tool to be implemented in clinical practice.

An important consideration for using a gratitude diary in this population was the recognition of the burden tinnitus presented. Opinion over the application of positive psychology interventions for people experiencing difficult times has differed suggesting them to be insensitive or attempting to minimise the burden of the challenges (Tennen & Affleck, 1999). Hence, the design of the gratitude diary intervention followed McCullough and Emmons (2003) design which recognises that life can be full of struggles and difficulties and a simplistic positive thinking exercise was not going to change the fact that "Life is suffering" (Emmons, 2013). This particular approach has been well researched since McCullough and Emmons' (2003) seminal paper thus ensuring the validity of the design and the results. Crucially, the instructions specifically acknowledged the negative impact of tinnitus can have on people's lives as suggested by Wong (2016). Furthermore, to the best of my knowledge, this was the first study

to use the Existential Gratitude Scale since its development by Jans-Beken and Wong in 2019. Thus, this study contributes towards the development of a more holistic conceptualisation of gratitude in academic research.

Using a mixed method approach for this study provides richness and depth to the research inquiry. Quantitative data allowed an examination of the effectiveness of the intervention while the qualitative data offered insight into participants' experiences of gratitude in the context of tinnitus and how this changed their relationship with tinnitus. Taken together, the two approaches allowed a more comprehensive understanding why a gratitude diary intervention could be an acceptable and effective tool to manage the emotional impact of tinnitus thereby facilitating the habituation process. However, there are several criticisms associated with the use of mixing methods in one study. For example, it assumes that it is possible to compare data from different methods like-for-like (Teddlie & Tashakkori, 2012). However, this study aimed to avoid a like-for-like comparison but viewed each data set separately first and then allowed the two datasets enter a dialogue where they offered answers that sometimes agreed and sometimes disagreed (Greene & Hall, 2010). In this study, the divergences were appreciated and welcomed as these divergences provided a springboard for ideas for future research.

Although this present study furthers our understanding of the experience and application of a gratitude diary intervention in adults with persistent tinnitus, the study is not without limitations. The following section will consider the studies limitations with regards to sample size, design, and analysis.

Sample

The small sample size meant the study was underpowered thus limiting the type of statistical analysis that could be conducted and reducing the likelihood to find statistically significant results. Hence, from these results it is not possible to make inferences about the effectiveness of the intervention to the wider population of adults with tinnitus. Further sample characteristics that limit generalizability of the results include the lack of diversity as the sample

consisted only of women who described themselves as White, British, Irish or Other. This does not reflect the population of the UK in terms of gender and ethnicity. For example, the last census recorded 87.1% identified themselves as White (Office for National Statistics, 2013). Therefore, the data collected in the quantitative and qualitative arms are likely not to be representative of adults with tinnitus.

While four men were originally recruited, none of them completed the intervention. This is perhaps not surprising as in a recent review of 64 studies highlighted the overrepresentation of women in gratitude interventions (Jans-Beken, et al., 2019). More generally, research into gender differences in help-seeking behaviour suggests men are less likely to seek psychological help compared to women (Mansfield, 2003). Furthermore, cross-sectional evidence suggests women are more likely than men to use emotion-focused coping strategies which aim to alter a person's response to a stressor while men are more willing to engage in problem-focused coping which seek to distract from or change the stressor (Liddon et al., 2017). Distraction and masking tinnitus sounds is a common coping strategy in tinnitus in an attempt to get away from the noises (Beukes, et al., 2017; Cima et al., 2019) Hence, such strategies may be more acceptable for men than engaging in a gratitude diary intervention. Holloway et al. (2018) suggest while men appear to favour solution-focused therapy this does not mean they would benefit less than women from emotion-focused therapy. Instead, the authors propose that psychological interventions could be promoted to men by emphasising a solutions-focused approach.

The study used a convenience sample and did not exclude those with no or low levels of anxiety and low mood. Hence, the sample's average levels of anxiety and low mood were well below clinical thresholds (Kroenke et al., 2001; Spitzer et al., 2006). However, all participants indicated during screening that they were bothered by their tinnitus and were looking for help to manage their tinnitus better and most had previously sought treatment. Furthermore, there is likely to be sampling bias as those who expressed interest in participating in the study may have had an affinity with positive psychology interventions and may have already reached a readiness to think more flexibly about tinnitus prior to the

study. However, for any psychological intervention it is important to recognize that individuals have preferences for the type of intervention they wish to engage in (Cooper et al., 2019).

Attrition rate of 20% in this study was high compared to other gratitude diary studies in populations with physical health conditions (e.g. Cook et al., 2018; Szatachańska et al., 2019). Non-completers were not followed up to discover their reasons for not completion. It also raises the question whether the non-completers differed in significant unknown ways from those who completed the study. Due to the small sample no intention-to-treat analysis was conducted. Hence, any conclusions about their reasons for not completing the study are entirely speculative.

Design

The lack of an active control condition meant no firm conclusion can be drawn whether the positive effect on participants' tinnitus-related distress was due to the gratitude intervention. This raises the possibility that participants' tinnitus symptoms could have improved with time rather than as a result of the intervention. As this was not an experiment conducted in a laboratory setting, there may have been other influences such as changes in participants' life-style that coincided with their participation in the study and may have impacted on participants experience of tinnitus. Furthermore, when reviewing the evidence on self-directed interventions promoting wellbeing Lyubomirsky and Layous (2013) found that engaging in any regular activity involving self-discipline such as a gratitude diary which involves a certain amount of planning or organisation of a person's day has the potential to improve psychological wellbeing. In addition, it is also possible that the gratitude intervention may have operated primarily as a placebo because participants expected the intervention to lead to positive outcomes for them (Wampold et al., 2005). To a certain extent, the qualitative interviews provided the opportunity to explore with participants what they believed had influenced their tinnitus experience. However, there is also the possibility that participants' initial motivation to take part in this study, i.e. wanting to support research efforts into alleviating the burden of tinnitus, and

having invested a significant amount of time and effort may have encouraged them to view the intervention in a positive light.

Furthermore, the study does not allow conclusions to be drawn whether the reported improvements are likely to be sustained in the weeks and months afterwards as no follow-up data were collected. It seems, however, reasonable to suggest that such a short intervention is unlikely to have any long-term effect on a person's schema and effect a change in re-orientating towards the positives in life if it is not practiced regularly. While participants in the qualitative arm of the study were all committed to continuing their gratitude practice, further investigation is needed to observe if and how participants maintain their gratitude practice and follow up their levels of tinnitus-related distress, mood, and wellbeing over a longer period of time.

Quantitative data analysis – removal of outlier

One participant reported a tinnitus history of 30 years compared to the rest of the sample, who reported a mean duration of tinnitus of 5.5 years, ranging from 6 months to 15 years. As their data on tinnitus duration violated normality assumptions and appeared to increase variability in the sample, a decision was made to exclude data from this participant. However, when running the paired-samples t-test on the primary outcome measures of tinnitus distress and psychological wellbeing including the outlier this did not change the overall conclusion. On reflection, it would have been preferrable not to have removed the outlier as it did not materially influence the findings for the sample as a whole.

Qualitative data and analysis

It must also be noted that the analysis explore qualitative data of the study is just one individual's attempt to interpret participants' accounts of their experiences. Accepting that multiple realities exist, another researcher or different method or methodology may have yielded different results. It is important to acknowledge that qualitative analyses are typically conducted by

more than one researcher to mitigate against researcher bias. Regular discussion with a tutor about my findings, reflective practice and commitment to clearly and accurately presents participants' perspectives facilitated the inductive analytical approach (Noble & Smith, 2015).

Furthermore, my relative inexperience as qualitative researcher may have impacted on the quality of the interview data. For example, while the interview protocol was designed to answer the research questions, more attention could have been paid on participants' experience of wellbeing. Participants frequently mentioned the term wellbeing, yet its meaning was never fully explored. Hence, the data lack clarity in explaining the multifaceted concept of wellbeing in the context of tinnitus and is limited to a sense of "calm" and "feeling good". Additionally, the questions posed may have at times biased the answers and could be considered suggestive particularly when asking about aspects of changing perspectives and gaining balance.

In addition, it might have been helpful to collect participants' thoughts about their tinnitus before and after the intervention. This may have allowed to improve insight into the process of their changing relationship to tinnitus. In the current study, the researcher asked how participants may have reacted to difficult times with tinnitus before and after the intervention and how this may have differed. This expected participants to make a judgment on past coping processes.

5.8 Implications for Clinical Practice

While the results from this study present only preliminary evidence supporting the application of a gratitude diary as a feasible intervention to reduce tinnitus-related distress in adults, the findings are useful for professionals interested in further developing care for individuals with tinnitus. The following will consider the implications of the findings on clinical practice and the contribution of the values of counselling psychology when working with people with persistent physical symptoms such as tinnitus.

It is unrealistic to imply that a simple gratitude diary intervention is likely to replace existing complex treatment protocols for tinnitus aimed at introducing flexibility of attentional control and emotion regulation, such as MBCT and CBT. These have already shown to be effective in lessening the distressing impact of tinnitus and improving psychosocial wellbeing (Fuller et al., 2020). However, a gratitude diary could present an alternative strategy to supplement these existing therapeutic approaches for individuals who seek interventions that adopt a strengths-based approach. For example, Bono and McCullough (2006) propose the application of gratitude interventions in clinical practice to address specific cognitive processes such as rumination and perspective taking. From a counselling psychology perspective, such an approach would encourage a move away from thinking about the impact of physical health conditions on a person's mental wellbeing only in terms of pathology (Tulip et al., 2020).

Nelson (2009) argues the effectiveness of CBT can likely be improved by adopting an approach that strengthens positive states as opposed focusing on the removal of negative states as is common in CBT. Supporting evidence can be found in research showing that gratitude interventions can produce positive outcomes of the same magnitude as standard CBT tools to manage worries. For example, Geraghty et al. (2010) showed an online daily gratitude diary intervention was as effective as an online daily automatic thought record with cognitive restructuring exercises to reduce worrying in a study about body satisfaction. The authors also found greater adherence to the gratitude diary intervention thus suggesting it may be a more acceptable approach. In fact, participants were more than twice as likely to complete the gratitude than the CBT-intervention.

Considering Geraghty et al's (2010) findings and those in the present study, gratitude diary interventions could be applied to challenge clients' negative automatic thoughts about tinnitus thus encouraging a change in the often catastrophic perspective on tinnitus. Furthermore, participant Julia used her gratitude diary to identify and plan activities that inspired feelings of gratitude with the aim to maintain her sense of wellbeing. This suggests that it may be

possible to use a gratitude diary to promote behavioural activation in people affected by low mood in tinnitus.

Similarly, gratitude diaries can be used to support the development of a client's mindfulness practice. The process described in this study of "making mental notes" of positive experiences during the day so they can be written down in their gratitude diary at the end of the day suggests such an intervention could be used as a stepping-stone in the development of mindfulness skills. A similar approach is already in use in a MBCT programme adapted for tinnitus (Marks et al., 2020; McKenna et al., 2017). Hence, this is an idea to introduce mindfulness in a gradual, roundabout way.

Gratitude exercises have grown in popularity as a self-help tool with smartphone apps and books widely available (Emmons, 2004; Cregg & Cheavens, 2021). However, a recent meta-analysis by Cregg and Cheavens (2021) questions the utility of such self-help gratitude interventions including gratitude diaries as they only found modest effects of these tools on depression and anxiety. Qualitative evidence from this study suggests that the promotion of a gratitude diary as self-help tool for people with tinnitus risks becoming another distraction strategy. Hence, it may be preferable to apply the use of gratitude diaries as part of psychological therapy.

According to the British Psychological Society's (2017) standards for counselling psychology, the aim of our profession is to reduce psychological distress and promote the wellbeing of our clients by focusing on their subjective experience as it unfolds in their interaction with their physical, social, cultural, and spiritual aspects of life (Jones Nielsen & Nicolas, 2016). This view is opposed to the dominant medical model of healthcare within the NHS which was designed to treat acute conditions with a focus on finding a cure but is not a good fit when applied to people with persistent conditions (Mead et al., 2019; Tulip, 2020). The impact of living with persistent conditions goes beyond a purely physical experience and affects a person's mental wellbeing, their relationships, and their ability to engage fully in life. Nelson (2009) suggests including gratitude interventions into our practice as Counselling Psychologists,

allows us to develop our practice around a "'build what's strong' approach [which] may usefully supplement (or eventually replace?) the traditional 'fix what's wrong approach" (p. 46). With this value in mind, we are encouraged to work flexibly drawing on different psychological models to help clients' make sense of the interaction of their mental and physical wellbeing in a way that is not pathologizing but seeks to find strengths and opportunities for growth in difficulty.

5.9 Future Research

As the study suffered a number of methodological limitations, including small sample size, insufficient diversity in the sample, and lack of a control condition, the following will suggest how future research could advance our understanding of the utility of a gratitude diary intervention in adults with tinnitus.

Firstly, further research is required to evaluate the effectiveness of the intervention in this population by comparing it to a control condition. As CBT is the dominant treatment approach for tinnitus-related distress a future study could take a similar form as the study by Geraghty et al., (2010) and compare a gratitude diary intervention with a daily thought monitoring and restructuring exercise. Such a design would help assess the effectiveness of the gratitude intervention against an active control condition as has been called for in meta-analytic studies (e.g. Dickens, 2017; Boggiss et al., 2020). Comparison with a CBT-intervention would also provide better knowledge whether a gratitude diary could be incorporated within a cognitive-behavioural approach to facilitate perspective taking and reduce rumination.

In addition, the intervention needs to be examined within a larger and more ethnically and gender diverse sample to be able to generalise future findings to the wider population of adults with tinnitus. To be able to attract more men into such a study, a gratitude intervention that is reframed as a practical strategy for living (Holloway et al., 2018), thus promoting a solutions-focused angle to the intervention which may be favoured by men.

Furthermore, a future experimental study could assess the effectiveness of the gratitude intervention in a sample with clinical levels of low mood and anxiety. However, such a study should also include a qualitative element to understand how the intervention is experienced in the context of greater distress associated with tinnitus and whether it is found to be an acceptable intervention.

As this study has shown, a gratitude diary may be used as an avoidance strategy. Hence, future research could examine whether nurturing gratitude affects a person's choice of coping strategy. Such research could take a similar approach to that of Sztachańska et al., (2019) who collected daily data on helpful and unhelpful coping in women with breast cancer.

Furthermore, future research on gratitude diary interventions should examine the mechanisms underlying the relationship between gratitude and positive outcomes on psychological wellbeing and tinnitus-related distress. Such research can take the form of examining mediating variables such as dispositional gratitude.

Finally, an unexpected outcome in the current study – both for me and participants – was that participants reported being less aware of tinnitus. Hence, one participant, Anna, suggested future research should collect daily measures of tinnitus volume, particularly after the gratitude practice. Thus, future research could examine the impact of a gratitude diary intervention and tinnitus volume.

5.10 Reflexivity in the Research Process

In line with Counselling Psychology's commitment to leading with self-awareness (Cooper, 2009), I reflected on my own processes, biases, and reactions throughout the research process. Hence the following will provide a summary of my reflections during the different stages of the research process: recruitment, data collection, and analysis. The section will conclude with reflections on the wider impact of this project on my identity as Counselling Psychologist.

5.10.1 Reflections on Recruitment

During the recruitment stage, potential participants told me they wanted to be part of the study as they believed public awareness of the debilitating impact of

tinnitus on a person's wellbeing needed to be raised as they believed this was poorly understood. I became worried how they might view me as I do not have tinnitus and whether because of that I lacked the necessary understanding of the condition.

As I was developing my identity as researcher, I thought carefully about how I wanted to engage with research participants. For me this included applying the values of authentic leadership (Luthans & Avolio, 2003) as I wanted to put openness and congruence at the heart of the project and my identity as researcher. Hence during the screening process, I told prospective participants that I do not have tinnitus and acknowledged that I cannot truly know what living with tinnitus is like. I believe they appreciated my openness.

I also ensured participants understood what the intervention was about as I did not wish to blind them to what was being studied. I also told them that little was known about the applications of a gratitude diary intervention in tinnitus. Hence, I believed it was ethical to acknowledge that I could not promise the intervention would have a beneficial impact on their tinnitus experience and wellbeing. Hence, conducting ethical research became "the essence" of my identity as researcher (Cooper, 2009, p.4).

5.10.2 Reflections on Data Collection

During the screening process participants typically shared their beliefs about tinnitus or questions about their tinnitus. In these instances, I was tempted to do what comes naturally and offer a therapeutic intervention. On reflection, I believe this came from my sense of responsibility regarding the burden my study may place on prospective participants and my wish to provide some benefit in exchange.

In preparation for the interviews, I had to think carefully about this therapist-researcher dilemma I had already encountered. Discussing this with my peer group at university helped. I decided to keep this dilemma in my awareness

during interviews and this helped me stay in my role as researcher. Fortunately, there were no instances in which I felt - as therapist or researcher - that failing to provide a therapeutic intervention would have a significant negative impact on any participants. Furthermore, after my first few interviews I came to realise I could fulfil my wish to be helpful in the long run by undertaking research that was ethical and robust.

Furthermore, during data collection there were times when I felt overwhelmed by the trust participants had placed in me. For example, participants Claire and Lily both recognised that this was not “just a paper exercise” and I was “really looking into something that could really help people”. Working in a helping profession, I am not unfamiliar with the sense that I have made a difference in somebody’s life but helping somebody through my research was new. This led to an awareness of the risk that participants had taken in trusting me. However, reflecting that this intervention was founded in sound prior research helped to reassure myself.

5.10.3 Reflections on the Process of Analysis

In reflexive TA, the role of the researcher is to reflect on their contribution on the research process. Hence, I reflected on how my prior knowledge, not having tinnitus, as well as my hopes and expectations for the research may have shaped the lens through which I interpreted the data (Robson & McCartan, 2015). My aim was to adopt an inductive approach during analysis. However, I acknowledge that it was impossible not to make sense of the data in the context of what I already knew about tinnitus from my clinical work, gratitude practice, and reviewing the literature. Hence, my themes seemed to echo what I had encountered elsewhere. Furthermore, my evolving interpretations and hypotheses about the data became a second lens through which I explored the data and made sense of it (Lazard, & McAvoy, 2020). Taking regular breaks away from the data in attempt to “clear my head” as well as discussing my prototype themes with a tutor helped to reflect on these influences. I also followed the approach of reflexive TA thus linked my interpretations firmly to the data.

5.10.4 Final reflections

My epistemological choices were predominantly influenced by current theoretical writing on mixed methods research (Creswell & Plano Clark, 2018; Johnson, & Onwuegbuzie, 2004; Johnson & Schoonenboom, 2016; Tashakkori & Teddlie, 2010). However, these choices were inspired by my personal tendency that stops me from valuing one methodological approach over another. I believe that there are many ways to explore and understand the world and both quantitative and qualitative approaches have the potential to broaden and deepen our understanding of phenomena. Furthermore, my intention for this research was to respond to the need for accessible treatment options for a group of people whose suffering often goes unrecognised (McFerran et al, 2018). Hence, the choice to use a mixed method approach may be understood as a dialogue between my philosophical assumptions, my personal beliefs, and values I hold as a Counselling Psychologist.

During analysis and write up, I reflected how the research had impacted on me (Lazard & McAvoy, 2020). There were times I felt almost too overwhelmed to continue as I came to realise the intervention may have real potential to be applied in a clinical or self-help context. This imposed a deep sense of responsibility towards my research participants and towards those who may try this approach in the future and I was filled with doubt whether I have the capability of producing a “good enough” outcome. Speaking to my contact Nic Wray at the British Tinnitus Association was very helpful as she normalised my experience suggesting that such a crisis of confidence is common among new researchers.

I was humbled by participants’ commitment to this research as they engaged in their gratitude diaries, investing their time and effort. They appeared not to treat it like a “paper exercise” but seemed to care deeply about reducing the suffering of those with tinnitus. There was a real sense of reciprocity where they felt they were helping me, the tinnitus community, and with a bit of luck they would benefit as well. This experience made me reconsider my role as researcher and the power differential between participants and researcher. Participants are

often viewed in research as passive and being “done to” while researchers seem to play an active role in determining what is being researched and how (Robson & McCartan, 2015). In this study, indeed my role as researcher was to propose a compelling research idea but I recognised that participants held all the power as without them and their whole-hearted engagement this research would never have happened. Having adopted a mixed method design will ensure that participants voices are heard when it comes to designing future studies to examine the effectiveness of gratitude diaries in reducing tinnitus related symptoms more widely.

Finally, this experience of conducting research has made me consider how to integrate being a researcher in my future career as Counselling Psychologist. By developing my research practice, I have the opportunity to make a difference to people’s lives. In addition, my commitment to grounding my research practice in the values of Counselling Psychology, I believe can make a unique contribution to the development of our profession and its influence in improving services for those living with persistent physical health conditions.

5.11 Conclusion

The findings in this study indicate that a gratitude diary may be an effective and acceptable strategy to manage the negative psychological impact of persistent tinnitus. The intervention has facilitated a statistically significant reduction in tinnitus-related distress which has been described by participants as secondary to a changing relationship with tinnitus. A gradual broadening in awareness facilitated a switch in participant’s focus away from distressing tinnitus towards the good things that are also present in their lives. This appears to have changed the way they see themselves as somebody who feels empowered to cope with the emotional impact of tinnitus as its dominance in their conscious awareness is reduced. While some used the gratitude diary as a positive distraction, others described a change in their relationship with tinnitus where tinnitus is no longer seen as an adversary.

However due to the limitations of the study, further research is required to test the effectiveness of the intervention in a larger and more diverse sample against an active control condition. If found effective, gratitude diaries have the potential to supplement existing therapies such as CBT and MBCT for tinnitus as they appear to facilitate a person's ability to switch attention away from tinnitus and reappraise negative experiences from a more positive and helpful perspective. Developing our understanding of the usefulness of gratitude-based interventions is an important area for the field of counselling psychology as we continue to champion approaches that nurture what is strong within humans.

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Appendices

Appendix A. Online Advertisement

Pioneering Futures Since 1898

Can gratitude reduce distress in people with tinnitus?

I am looking for people to take part in a doctoral research project. The research project aims to find out if keeping a gratitude diary for three weeks will improve psychological well-being and reduce distress in people living with tinnitus.

The project may be suitable for you if:

- You have had tinnitus for more than 3 months
- Your tinnitus has already been assessed by a doctor or audiologist
- You are happy to try a psychological approach in the form of a gratitude diary
- You are 18 years or older
- You are resident in the UK.

The project will not be suitable for you if:

- You are still undergoing medical investigations for tinnitus
- You are suffering from severe psychiatric conditions.

To take part in this project you will need to have access to the Internet and be willing to complete a gratitude diary for three weeks.

Who is involved with this research project?

Helene Klein, Counselling Psychologist in Training, University of East London, Principal Researcher

Professor Cynthia Fu, psychology professor and supervisor for this research project, School of Psychology, University of East London, Water Lane, London E15 4LZ. Email: c.fu@uel.ac.uk

If you have any concerns related to your participation in this study please direct them to the Chair of the School of Psychology Research Ethics Sub-committee:

Dr. Tim Lomas, School of Psychology, University of East London, Water Lane, London E15 4LZ. Email: t.lomas@uel.ac.uk

Appendix B. Participant Information Sheet

Study Title: A mixed method study of a gratitude diary intervention on tinnitus-related distress and psychological well-being in adults

Invitation to take part in this research

I would like to invite you take part in this study. Before you decide whether to take part it is important you understand why the research is being done and what would be involved for you. Please take time to read the following information carefully. If there is anything that is not clear, or if you would like more information, then please ask me for further details. Please take your time to decide whether you wish to take part.

The researcher

I am a student in the School of Psychology at the University of East London and am studying to be a Counselling Psychologist. As part of my doctoral studies, I am conducting the research you are being invited to participate in.

Brief summary

In this study I want to find out whether keeping a gratitude diary is effective in reducing distress and improving psychological well-being in people with tinnitus. I would also like to find out what it is like for participants to keep a gratitude diary and how this may affect their experience of tinnitus.

What is the purpose of the study?

I wish to study how much people who are distressed by tinnitus benefit from keeping a gratitude diary. I also wish to find out about the experience of gratitude while people are suffering with tinnitus.

As there is currently no treatment available to stop tinnitus, psychological treatment has been found to make it less severe, intrusive and bothersome. Research also suggests that the more people can maintain a positive outlook the less will they be negatively affected by tinnitus. Specifically having a grateful outlook has been identified as playing a relevant role in psychological well-being in people with tinnitus.

In this study, I will evaluate the effectiveness of keeping a gratitude diary. If this is found to be effective it may mean that people with tinnitus can make use of it as a self-management tool.

Why have I been asked to take part?

I am inviting any person aged 18 and older who is distressed by their tinnitus to take part in this study.

You are free to decide whether or not you wish to take part.

What is involved if I take part?

I will assess your suitability for the study and if you are suitable, you will be given this information sheet to keep and you will be asked to sign a consent form. I will ask for your consent to:

1. Assess your suitability to take part in the study.
2. Complete 6 questionnaires online as part of your involvement in this study which should take around c. 15 minutes. You will be asked to complete these questionnaires twice over the course of the study.
3. Keep a gratitude diary for three weeks.

4. Invite you after you have kept the gratitude diary to take part in a brief telephone interview to find out about your tinnitus and your experience of keeping a gratitude diary. You do not have to agree to be interviewed even if you have completed the gratitude intervention.
5. Use your questionnaire and interview responses - after I have made them anonymous - to assess the outcome of the study, write up the findings, and publish the research.

Am I suitable to take part in the study?

Only people can take part in the study if they meet specific criteria:

- You have had tinnitus for at least three months
- Your tinnitus-related distress is at a minimum level
- You can understand enough English to complete questionnaires
- You are 18 years or older
- You are resident in the UK.

There are certain criteria that would make this research study unsuitable for you. Unfortunately, we are unable to include anyone at risk to themselves or to other people. In such cases, you will receive information about appropriate services you can contact.

We are also unable to include people who are still undergoing medical investigation for tinnitus.

What will happen if I decide to take part?

1. Consent form

   If you decide that you would like to take part, you will be asked to formally consent to participating. This will be done online.

2. Filling in questionnaires

   You will be asked to fill in a set of questionnaires online. The questionnaires will ask you about your tinnitus, your feelings and your thoughts and will take

about 15 minutes to fill in. You will be asked to complete the questionnaires twice during the study:

- Before starting the gratitude diary
- After you have finished your gratitude diary.

3. Keeping a gratitude diary

You will be invited to keep a gratitude diary for three weeks. You can do this using pen and paper. The diary is private and what you write in the diary will not be analysed as part of the study. You will receive emails every two days inviting you to write about when and why you felt grateful. **Please do not start the diary until I ask you to do so.**

4. Taking part in an interview

After you completed the gratitude diary intervention, you will be invited to take part in a short interview via video link which lasts about 20-30 minutes. The interview will be recorded using a digital recorder. During the interview I will ask you how you found keeping a gratitude diary and your experience of gratitude and tinnitus. You are free to only take part in the gratitude diary – the interview is optional.

What are the possible disadvantages and risks of taking part?

There is a possibility that keeping a gratitude diary could bring up a range of feelings for you. If this happens you can contact the researcher and counselling services like MIND (www.mind.org.uk, Tel. 0300 123 3393), or the Samaritans (www.samaritans.org, free 24-hour helpline on 116 123), or SANE (www.sane.org.uk/support, SANEline 0300 304 7000 daily, 4.30pm to 10.30pm).

What will happen to the information I provide?

Questionnaire data

- All your answers to the questionnaires will be anonymous.
- Only I will analyse your questionnaire responses. My analyses may be reviewed by my supervisor at UEL, who will also be under an agreement to keep any information confidential.

The gratitude diary

- The content of your diary entries will not be analysed as part of this study.

Interview data

- Only I will listen to recordings and type up your interviews. The typed interview transcripts may be reviewed by my supervisor at UEL, who will also be under an agreement to keep any information confidential.
- Any information you give which might identify you (e.g. names, places etc.) will be changed when I type up the interview.
- The transcript of your interview and any recording will be encrypted and password protected. After my thesis has been examined, the audio file of your interview will be deleted.
- The written transcript of your interview will be kept and destroyed after five years. The anonymised transcripts may be used to write up research in the future for publication. Your anonymity will be maintained.

Will my data and what I say remain confidential?

Your privacy and safety will be respected at all times:

- You will not be identified by data collected, on any written material resulting from the data collected, or in any write-up of the research.
- You do not have to answer all questions asked and can stop taking part at any time.
- If at any point I am worried about your safety or others I will need to tell someone. Whenever possible I will let you know first that this is happening.

Will my data be protected?

The online questionnaires have been designed as an anonymous survey, meaning no emails, IP addresses and/or geolocation data will be identified in the responses. HTTPS survey links (also known as secure survey links) have been used, giving Secure Sockets Layer (SSL) Encryption while a questionnaire is being completed. During the study data collected online will be stored on an EU-based server and will be subject to EU Data Protection acts. All online data will be deleted following completion of data collection.

Can I withdraw?

Yes. You are free to withdraw from the study at any time and without explanation, disadvantage, or consequence.

If you decide to withdraw your questionnaire data after submitting it simply email me providing your participant code (as indicated earlier) requesting to withdraw your data from the study.

However, if you decide to withdraw, I would reserve the right to use material that you provide up until I begin to analyse your data on 1 December 2021 but it would not include any information that identify you.

My research has been approved by the School of Psychology Research Ethics Committee. This means that my research follows the standard of research ethics set by the British Psychological Society.

Contact details

If you would like further information about my research or have any questions or concerns, please do not hesitate to contact me, Ms. Helene Klein, u0534714@uel.ac.uk

If you have any questions or concerns about how the study has been conducted, please contact my supervisor Professor Cynthia Fu: School of Psychology, University of East London, Water Lane, London E15 4LZ. Email: c.fu@uel.ac.uk

or

Chair of the School of Psychology Research Ethics Sub-committee: Dr.Tim Lomas, School of Psychology, University of East London, Water Lane, London E15 4LZ. Email: t.lomas@uel.ac.uk.

Version 2. 31 August 2021

Appendix C. Screening Consent Form for Researcher

Pioneering Futures Since 1898

Title of study: A mixed method study of a gratitude diary intervention on tinnitus-related distress and psychological well-being in adults.

Name of researcher: Helene Klein

Screening consent will be conducted over the telephone. As such the researcher taking consent must initial all boxes and indicate that the participant has agreed to the following:

1. Potential participant confirms they have read and understand the information sheet dated 31 August 2021 (version 2) for the above study. They have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. Potential participant understands that their participation is voluntary and that they are free to withdraw at any time without disadvantage to themselves and without being obliged to give any reason. The potential participant also understands that should they withdraw; the researcher reserves the right to use their anonymous data after analysis of the data has begun. ☐

3. Potential participant understands that information relating to them taking part in this study will be stored on an electronic database within the University of East London for 5 years. ☐

4. Potential participant agrees to take part in the screening process. ☐

_____
Name of Potential Participant

Appendix D. Screening assessment record

Inclusion/exclusion criteria	Responses
Participant date of birth: Participant age is 18 or over?	Y/N
Country of residence is UK?	Y/N
Tinnitus duration minimum of 3 months?	Y/N
Participant confirms that tinnitus has been assessed by doctor or audiologist?	Y/N
PHQ-9	
Is suicidal ideation present? PHQ-9 question 9 several days and greater	
GAD-7 score	
Participant is not currently undergoing psychological treatment for tinnitus.	Y/N
Participant is willing to keep a gratitude diary for three weeks?	Y/N
Participant has access to the internet?	Y/N
Participant has sufficient level of English?	Y/N
Is participant suitable for study?	Y/N

Appendix E. Information for Excluded Participants

Thank you for expressing your interest in taking part in this study. Unfortunately, you do not fit all of the study's requirements for participation. This is because we are recruiting a very specific and narrow group. We apologise for any inconvenience this has caused.

If this research has raised any concerns or questions you can contact the researcher and counselling services like MIND (www.mind.org.uk, Tel. 0300 123 3393, Monday to Friday from 9am to 6pm), the Samaritans (www.samaritans.org, free 24-hour helpline on 116 123), or SANE (www.sane.org.uk/support, SANEline 0300 304 7000 daily, 4.30pm to 10.30pm).

If you have any other questions, please do not hesitate to contact me, Ms. Helene Klein u0534714@uel.ac.uk.

Appendix F. Blank Gratitude Diary with Guidance

GRATITUDE DIARY INSTRUCTIONS

There are many things in our lives, both large and small, that we might be grateful about. Over the next three weeks, please spend two or three times per week writing down up to five things in your life that you are grateful or thankful for.

This can include

- ***be thankful to be alive with all the opportunities life presents***
- ***be thankful for family members, your partner, friends, and all those you have contributed to your life***
- ***be thankful for your home, nature, the world we live in.***

You can use the diary below or you can simply use a diary of your own choosing.

GRATITUDE DIARY – WEEK 1

Today, I'm grateful for …	*Today, I'm grateful for …*
•	•
•	•
•	•
•	•
•	•

Today, I'm grateful for …

-
-
-
-
-

GRATITUDE DIARY – WEEK 2

This week, why not get personal? *Try focusing on people rather than things.*

Today, I'm grateful for …	*Today, I'm grateful for …*
•	•
•	•
•	•
•	•
•	•

Today, I'm grateful for …
•
•
•
•

GRATITUDE DIARY – WEEK 3

This week, ***relish surprises****! Try to record events that you did not expect or surprised you.*

Today, I'm grateful for …	*Today, I'm grateful for …*
• • • • •	• • • • •
Today, I'm grateful for …	
• • • •	

HOW TO MAKE THE MOST OF YOUR GRATITUDE DIARY

There is no right or wrong way to keep a gratitude diary, but this is the idea behind it:

- ✓ **Two or three times a week**, write down **up to five** blessings for which you feel grateful.

- ✓ **Keeping a written record is important** – don't just do this exercise in your head. This helps make you more aware of your thoughts thereby deepening their emotional impact. You can write your reflections down in your own notebook, or in this simple handout. Don't worry about spelling or grammar, the important thing is to establish a habit of paying attention to gratitude-inspiring experiences.

- ✓ **The goal of the diary is to recall** a good event, experience, person, or thing in your life and then enjoy the good emotions that come with it. The things you list can range from "relatively" small things, such as "the yummy sandwich I had for lunch", or for "waking up feeling well this morning", or "I enjoyed sitting in the sunshine – it made me feel warm and happy". You can also include significant events, e.g. "my niece gave birth to a healthy baby girl" or "my presentation at work went really well and my line manager commented on it – I was so proud of myself …"

- ✓ **Go for depth over breadth,** don't hurry through this exercise. Spending a bit of time writing in detail about what you are grateful for carries more benefits than a superficial list of many things. For example, you can write about how it made you feel or how it changed the way you think about yourself or somebody else.

- ✓ **Feeling gratitude for the people in your life.** Gratitude experts suggest that linking your gratitude practice to people makes its positive impact even greater as it makes you feel more connected and less alone. So, writing in your gratitude diary about family or friends, or a kind stranger is believed to buffer against stress and loneliness.

- ✓ **Viewing life through a grateful lens –** it's easy to feel grateful for the good things. No one "feels" grateful for tinnitus or poor health. It is, however, in precisely these moments that **gratitude becomes a critical thought process.**

It becomes a way you think about the world. If you are willing and able to look, gratitude becomes a stance you take to make sense of your life experiences.

Appendix G. Baseline Demographics Questionnaire

How old are you?	
What is your gender?	Female/male/other/prefer not to say
What is your ethnicity?	White – British, Irish, Other Asian/Asian British – Indian, Pakistani, Bangladeshi, Other Black/Black British – Caribbean, African, Other Chinese/Chinese British Middle Eastern Mixed race Other ethnic groups Prefer not to say
What is your relationship status?	Single, never married Single, divorced or widowed In a relationship/married and co-habiting In a relationship/married but living apart Prefer not to say
What is your highest level of educational attainment?	No formal qualifications GCSE/CSE/O-levels or equivalent A-levels or equivalent Undergraduate degree (e.g. BSc, BA, etc.) or professional qualification Postgraduate degree Prefer not to say
Tinnitus duration	Years/months
Have you had previous treatment for tinnitus? If yes, please describe	Y/N
Do you have any other physical health problems? If yes, please describe	Y/N

Appendix H. Tinnitus Questionnaire

Hallam, R. S. (1996). *Manual of the Tinnitus Questionnaire*. Psychological Corporation, Harcourt-Brace.

The purpose of this questionnaire is to find out whether the noises in your ears/head have had any effect on your mood, habits or attitudes.

Item	True	Partly True	Not True
1. I am unable to enjoy listening to music because of the noises			
2. It's unfair that I have to suffer with my noises			
3. I wake up more in the night because of my noises			
4. I am aware of the noises from the moment I get up to the moment I sleep			
5. Most of the noises are fairly quiet			
6. I worry that the noises will give me a nervous breakdown			
7. Because of the noises I have difficulty in telling where sounds are coming from			
8. The way the noises sound is really unpleasant			
9. I feel I can never get away from the noises			
10. Because of the noises I wake up earlier in the morning			
11. I worry whether I will be able to put up with this problem forever			
12. Because of the noises it is more difficult to listen to several people at once			
13. The noises are loud most of the time			
14. Because of the noises I worry that there is something seriously wrong with my body			
15. If the noises continue my life will not be worth living			
16. I have lost some of my confidence because of the noises			
17. I wish someone understood what this problem is like			
18. The noises distract me whatever I am doing			
19. There is very little one can do to cope with the noises			
20. The noises sometimes give me pain in the ear or head			
21. I am more irritable with my family and friends because of the noises			
22. Because of the noises I have tension in the muscles of my head and neck			

23. Because of the noises other people's voices sound distorted to me			
24. It will be dreadful if these noises never go away			
25. I worry that the noises might damage my physical health			
26. The noise seems to go right through my head			
27. Almost all my problems are caused by these noises			
28. Sleep is my main problem			
29. I have more difficulty following a conversation because of the noises			
30. I find it harder to relax because of the noises			
31. My noises are often so bad that I cannot ignore them			
32. It takes me longer to get to sleep because of the noises			
33. I sometimes get very angry when I think about having the noises			
34. I find it harder to use the telephone because of the noises			
35. I am more liable to feel low because of the noises			
36. Because of the noises life seems to be getting on top of me			
37. I often think about whether the noises will ever go away			
38. I can imagine coping with the noises			
39. The noises never "let up"			
40. I am a victim of my noises			
41. Because of the noises I am unable to enjoy the radio or television			

Appendix I. Patient Health Questionnaire (PHQ-9)

Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: a new depression diagnostic and severity measure. *Psychiatric Annals*, *32*(9), 509-515.

Over the **last 2 weeks**, how often have you been bothered by any of the following problems? *Please select the response that best applies to you for **each** question.*

	Not at all	**Several days**	**More than half the days**	**Nearly every day**
1. Little interest or pleasure in doing things				
2. Feeling down, depressed, or hopeless				
3. Trouble falling or staying asleep or sleeping too much				
4. Feeling tired or having little energy				
5. Poor appetite or overeating				
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down				
7. Trouble concentrating on things, such as reading the newspaper or watching television				
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual				
9. Thoughts that you would be better off dead or of hurting yourself in some way				

Appendix J. Generalised Anxiety Disorder scale (GAD-7)

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine*, *166*(10), 1092-1097.

Over the last 2 weeks, how often have you been bothered by the following problems? *Please select the response that best applies to you for* ***each*** *question.*

	Not at all	***Several days***	***More than half the days***	***Nearly every day***
1. Feeling nervous, anxious or on edge				
2. Not being able to stop or control worrying				
3. Worrying too much about different things				
4. Trouble relaxing				
5. Being so restless that it is hard to sit still				
6. Becoming easily annoyed or irritable				
7. Feeling afraid as if something awful might happen				

Appendix K. Warwick-Edinburgh Mental Well-being Scale

Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., ... & Stewart-Brown, S. (2007). The Warwick-Edinburgh mental well-being scale (WEMWBS): development and UK validation. *Health and Quality of life Outcomes*, *5*(1), 63.

Below are some statements about feelings and thoughts. Please select the response that best describes your experience of each over the last 2 weeks:

	None of the time	***Rarely***	***Some of the time***	***Often***	***All of the time***
I've been feeling optimistic about the future					
I've been feeling useful					
I've been feeling relaxed					
I've been feeling interested in other people					
I've had energy to spare					
I've been dealing with problems well					
I've been thinking clearly					
I've been feeling good about myself					
I've been feeling close to other people					
I've been feeling confident					
I've been able to make up my own mind about things					
I've been feeling loved					
I've been interested in new things					
I've been feeling cheerful					

Appendx L. Gratitude Questionnaire

McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, *82*(1), 112.

1 = Strongly disagree

2 = Disagree

3 = Slightly disagree

4 = Neutral

5 = Slightly agree

6 = Agree

7 = Strongly Agree

	1	**2**	**3**	**4**	**5**	**6**	**7**
I have so much in life to be thankful for.							
If I had to list everything that I felt grateful for, it would be a very long list.							
When I look at the world, I don't see much to be grateful for.							
I am grateful to a wide variety of people.							
As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life.							
Long amounts of time can go by before I feel grateful to something or someone.							

Appendix M. Existential Gratitude Questionnaire

Jans-Beken, L., & Wong, P. T. (2019). Development and preliminary validation of the Existential Gratitude Scale (EGS). *Counselling Psychology Quarterly*, 1-15.

This scale is developed to assess the level of existential gratitude. Please read each statement and indicate to what extent each item characterizes your own life. You may respond by clicking the appropriate number according to the following scale:

1 = Completely disagree

2 = Disagree

3 = Somewhat disagree

4 = Neither agree or disagree

5 = Somewhat agree

6 = Agree

7 = Completely Agree

	1	2	3	4	5	6	7
My life is full of hardship and suffering, but I can still count my blessings.							
I am grateful for my life even in times of suffering.							
I am resentful that life has treated me unfairly.							
I am grateful that my inner resources have increased as a result of overcoming adversities.							
I wish I had never been born.							
I am grateful for the people in my life, even for those who have caused me much pain.							
I still feel bitter for all the bad experiences that have happened to me.							
I am thankful that I have something to life for even though life has been very hard for me.							
I am grateful that every crisis represents an opportunity for me to grow.							
I give thanks at the end of each day, even when nothing went my way.							
I have learned the importance of gratitude through suffering.							
I am grateful that suffering has strengthened my faith and character.							
In desperate times, I am grateful for my faith that I will overcome.							

Appendix N. Online Consent Form

Pioneering Futures Since 1898

Consent to participate in a research study

Title of study: A mixed method study of a gratitude diary intervention on tinnitus-related distress and psychological well-being in adults.

Name of researcher: Ms. Helene Klein

I confirm that I have read and understand the information sheet dated 31 August (version 2) for this study. I have had the opportunity to consider the information, discuss the details and ask questions and have had these answered satisfactorily.

I understand that my involvement in this study, and particularly data from this research will remain confidential. It has been explained to me what will happen once the research study has been completed.

By clicking “Agree”, I freely and fully consent to participate in the study which has been fully explained to me. Having given this consent, I understand that I have the right to withdraw from the study at any time without disadvantage to myself and without being obliged to give any reason. I also understand that should I withdraw; the researcher reserves the right to use my anonymous data after analysis of the data has begun.

Appendix O. Debriefing Information

Thank you for taking part in this study. Now that it is finished, I would like to tell you a bit more about it.

The aim of this study was to investigate whether it is possible to encourage a grateful outlook with the help of a gratitude diary and whether this is effective in reducing distress and improving psychological well-being in people with tinnitus. To develop the study, I built on research that showed maintaining a grateful outlook is effective in managing the psychological impact in other chronic health conditions such as arthritis. But this had never been done in a group of people who are distressed by their tinnitus.

It is hoped that this and future studies will help develop more self-help tools that will be easily accessible via the Internet.

If this research has raised any concerns or questions you can contact the researcher and counselling services like MIND (www.mind.org.uk, Tel. 0300 123 3393, Monday to Friday from 9am to 6pm), the Samaritans (www.samaritans.org, free 24-hour helpline on 116 123), or SANE (www.sane.org.uk/support, SANEline 0300 304 7000 daily, 4.30pm to 10.30pm).

I hope you found the study interesting. If you have any other questions, please do not hesitate to contact me, Ms. Helene Klein by email at u0534714@uel.ac.uk.

Appendix P. Interview protocol

Introduction:

Many thanks for taking part in the study, particularly for your time today to speak to me about your gratitude diary. Before we start talking about what it was like for you, I want to say again that you are free to withdraw at any time and if there are any questions which you find difficult to answer just let me know and then we can move on.

1. Could you please tell me about your hopes when you joined this study?
    a. Have these hopes been met?

2. Can you tell me what keeping a gratitude diary was like?
    a. What was good about it?/What was not so good about it?
    b. What kind of things did you write about in your diary?

3. Did tinnitus get in the way of keeping a gratitude diary?
    a. Was there anything else you found hard about keeping a gratitude diary?/What did you find easy about it?

4. Do you think anything has changed for you because of keeping a gratitude diary?
    a. Do you feel like it has benefited you in any way?
    b. What were the most important points about keeping a gratitude diary for you?

5. Can you tell me about a recent instance when you had a particularly difficult time with tinnitus?
    a. How did you deal with the situation?
    b. Was it any different to how would have dealt with it before taking part in the study?

6. I wonder if keeping a gratitude diary has changed the way you think about life with tinnitus?
    a. How is it different?

7. Will you continue keeping a gratitude diary? Why?
    a. Do you think it is an appropriate tool for somebody with tinnitus?

Appendix Q. Interview Consent Form

Pioneering Futures Since 1898

Title of study: A mixed method study of a gratitude diary intervention on tinnitus-related distress and psychological well-being in adults.

Name of researcher: Helene Klein

1. I confirm I have read and understand the information sheet dated 31 August 2021 (version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without disadvantage to myself and without being obliged to give any reason. I also understands that should I withdraw; the researcher reserves the right to use my anonymous data after analysis of the data has begun. ☐

3. I agree to take part in an audio-recorded interview about my experiences of the gratitude diary intervention ☐

4. I understand that information relating to them taking part in this study will be stored on an electronic database within the University of East London for 5 years. ☐

_____

Name of Participant

Appendix R. Debriefing Information (After Interview)

Thank you for taking part in this study. Now that it is finished, I would like to tell you a bit more about it.

The aim of this study was to investigate whether it is possible to encourage a grateful outlook with the help of a gratitude diary and whether this is effective in reducing distress and improving psychological well-being in people with tinnitus. To develop the study, I built on research that showed maintaining a grateful outlook is effective in managing the psychological impact in other chronic health conditions such as arthritis. But this had never been done in a group of people who are distressed by their tinnitus. As this is potentially a new approach to managing tinnitus, I was also interested in hearing your thoughts about gratitude and how this relates to your experience of tinnitus, and how you felt about the intervention.

It is hoped that this and future studies will help develop more self-help tools that will be easily accessible via the Internet.

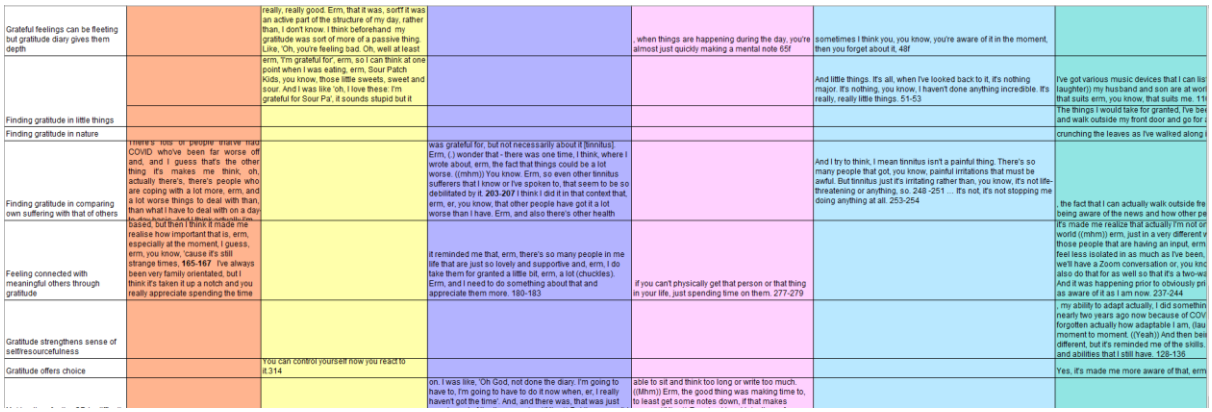
If this research has raised any concerns or questions you can contact the researcher and counselling services like MIND (www.mind.org.uk, Tel. 0300 123 3393, Monday to Friday from 9am to 6pm), the Samaritans (www.samaritans.org, free 24-hour helpline on 116 123), or SANE (www.sane.org.uk/support, SANEline 0300 304 7000 daily, 4.30pm to 10.30pm).

I hope you found the study interesting. If you have any other questions, please do not hesitate to contact me, Ms. Helene Klein by email at u0534714@uel.ac.uk.

Appendix S. Transcription Notation System for Orthographic Transcription (adapted from Braun & Clarke, 2013)

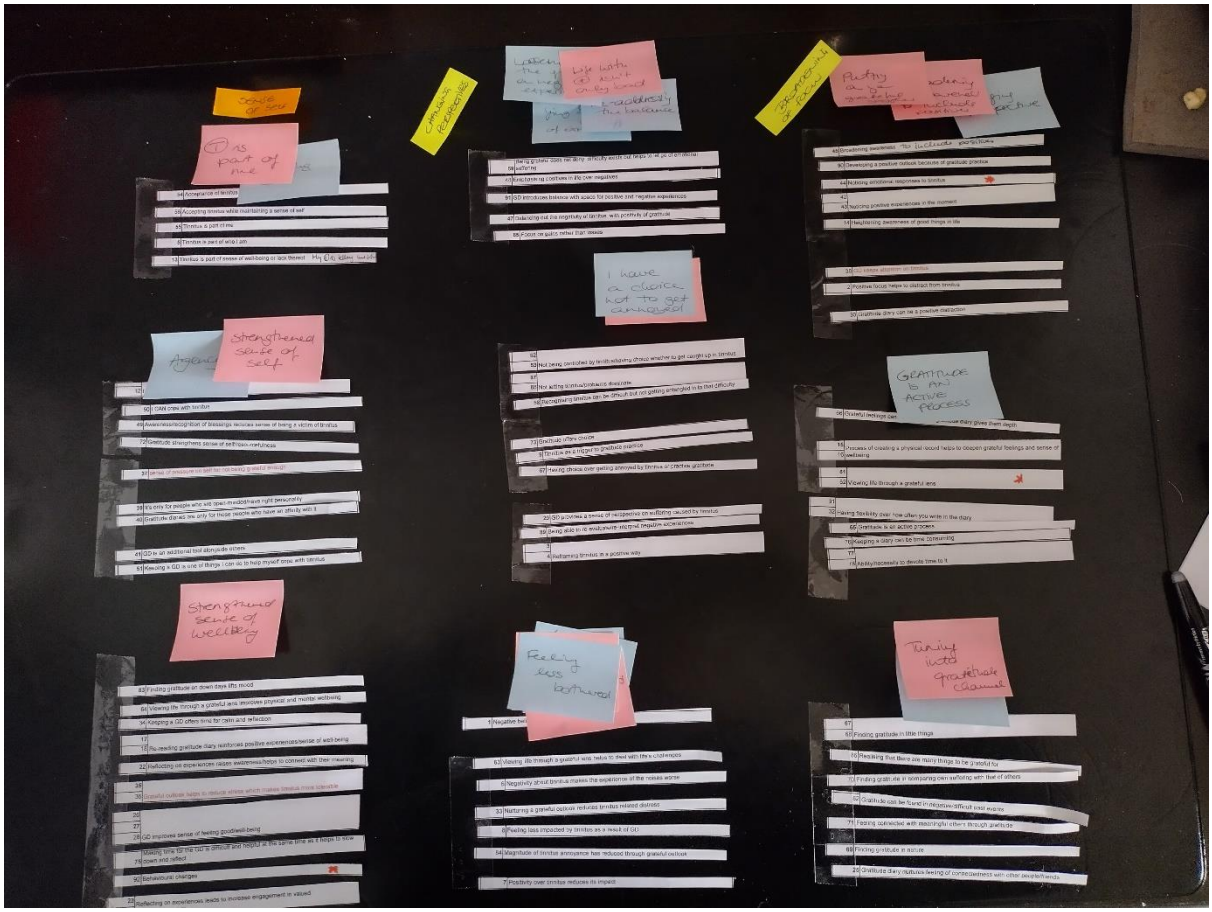
Feature	Notation and explanation of use
Speakers	Interviewer will be marked as INT: Participant will be given a pseudonym e.g. ANNA:
Pauses	(.) short pause, i.e. a couple of seconds or less (…) long pause
Coughing, clearing throat, laughing etc.	Speaker - (coughs) Speaker - (laughter) or (chuckles) Interviewer and interviewee both laughing - ((general laughter))
Overlapping speech	Insertion of ((overlapping)) before overlapping segment starts
Inaudible speech	((inaudible)) Single parentheses indicate researcher's best guess as to what was said
Non-verbal utterances	Include: erm, er, mm, mhm, urgh
Reported speech	Inverted comma around reported speech, e.g. she said 'That was really nice of you'
Cut-off speech	Audible sound is transcribed followed by a dash e.g., whi-
Other speaker's single interjections	Are embedded within the flow of current speaker's speech using double parentheses, e.g. ((yes)) or ((mhm)).

Appendix T. Screenshot of Coding Spreadsheet



Grateful feelings can be fleeting but gratitude diary gives them depth		really, really good. Erm, that it was, sortf it was an active part of the structure of my day, rather than, I don't know, I think beforehand my gratitude was sort of more of a passive thing. Like, 'Oh, you're feeling bad. Oh, well at least		. when things are happening during the day, you're almost just quickly making a mental note 65f	sometimes I think you, you know, you're aware of it in the moment, then you forget about it, 48f	
Finding gratitude in little things		erm, 'I'm grateful for', erm, so I can think at one point when I was eating, erm, Sour Patch Kids, you know, those little sweets, sweet and sour. And I was like 'oh, I love these. I'm grateful for Sour Pa', it sounds stupid but it			And little things. It's all, when I've looked back to it, it's nothing major. It's nothing, you know, I haven't done anything incredible. It's really, really little things. 51-53	I've got various music devices that I can lis laughter)) my husband and son are at wor that suits erm, you know, that suits me. 11
						The things I would take for granted, I've ba and walk outside my front door and go for
Finding gratitude in nature						crunching the leaves as I've walked along
Finding gratitude in comparing own suffering with that of others	There's lots of people that've had COVID who've been far worse off, and, and I guess that's the other thing it's makes me think, oh, actually there's, there's people who are coping with a lot more, erm, and a lot worse things to deal with than, than what I have to deal with on a day		was grateful for, but not necessarily about it [tinnitus]. Erm, (.) wonder that - there was one time, I think, where I wrote about, erm, the fact that things could be a lot worse. ((mhm)) You know. Erm, so even other tinnitus sufferers that I know or I've spoken to, that seem to be so debilitated by it, 203-207 I think I did it in that context that, erm, er, you know, that other people have got it a lot worse than I have. Erm, and also there's other health		And I try to think, I mean tinnitus isn't a painful thing. There's so many people that got, you know, painful irritations that must be awful. But tinnitus just it's irritating rather than, you know, it's not life-threatening or anything, so. 248 -251 ... It's not, it's not stopping me doing anything at all. 253-254	. the fact that I can actually walk outside fre being aware of the news and how other pe
Feeling connected with meaningful others through gratitude	based, but then I think it made me realise how important that is, erm, especially at the moment, I guess, erm, you know, 'cause it's still strange times, 165-167 I've always been very family orientated, but I think it's taken it up a notch and you really appreciate spending the time		it reminded me that, erm, there's so many people in me life that are just so lovely and supportive and, erm, I do take them for granted a little bit, erm, a lot (chuckles). Erm, and I need to do something about that and appreciate them more. 180-183	if you can't physically get that person or that thing in your life, just spending time on them. 277-279		it's made me realize that actually I'm not or world ((mhm)) erm, just in a very different v those people that are having an input, erm feel less isolated in as much as I've been, we'll have a Zoom conversation or, you inc also do that for as well so that it's a two-wa And it was happening prior to obviously pri as aware of it as I am now. 237-244
Gratitude strengthens sense of self/resourcefulness						, my ability to adapt actually. I did somethin nearly two years ago now because of COV forgotten actually how adaptable I am, ((lau moment to moment. ((Yeah)) And then bei different, but it's reminded me of the skills and abilities that I still have. 128-136
Gratitude offers choice		You can control yourself now you react to it.314				Yes, it's made me more aware of that, erm
			on. I was like, 'Oh God, not done the diary. I'm going to have to, I'm going to have to do it now when, er, I really haven't got the time'. And, and there was, that was just	able to sit and think too long or write too much. ((Mhm)) Erm, the good thing was making time to, to least get some notes down, if that makes		

Appendix. Photo of Clustering Codes around Central Organising Concepts



Appendix V. Ethical Approval Documents

School of Psychology Research Ethics Committee

NOTICE OF ETHICS REVIEW DECISION

For research involving human participants

BSc/MSc/MA/Professional Doctorates in Clinical, Counselling and Educational Psychology

REVIEWER: Anna Stone

SUPERVISOR: **Cynthia Fu**

STUDENT: Helene Klein

Course: Professional Doctorate in Counselling Psychology

Title of proposed study: A mixed method study of an online gratitude diary intervention on tinnitus related distress in adults

DECISION OPTIONS:

1. **APPROVED:** Ethics approval for the above named research study has been granted from the date of approval (see end of this notice) to the date it is submitted for assessment/examination.

2. **APPROVED, BUT MINOR AMENDMENTS ARE REQUIRED BEFORE THE RESEARCH COMMENCES** (see Minor Amendments box below)**:** In this circumstance, re-submission of an ethics application is not required but the student must confirm with their supervisor that all minor amendments have been made before the research commences. Students are to do this by filling in the confirmation box below when all amendments have been attended to and emailing a copy of this decision notice to her/his supervisor for their records. The supervisor will then forward the student's confirmation to the School for its records.

3. **NOT APPROVED, MAJOR AMENDMENTS AND RE-SUBMISSION REQUIRED** (see Major Amendments box below)**:** In this circumstance, a revised ethics application must be submitted and approved before any research takes place. The revised application will be reviewed by the same reviewer. If in doubt, students should ask their supervisor for support in revising their ethics application.

DECISION ON THE ABOVE-NAMED PROPOSED RESEARCH STUDY

(Please indicate the decision according to one of the 3 options above)

Minor amendments

Minor amendments required *(for reviewer)*:

The control group would appear to have no intervention at all. So you will not know whether any differences between the gratitude diary condition and the waiting list condition are due to the gratitude diary specifically or any other effect of being in an experimental condition. It would be better to have another experimental condition, representing another intervention against which you can compare the effectiveness of the gratitude diary.

There are aspects of the description of the design that aren't clear, and while I think you know what the design is, I would like you to be sure you have clear understanding before you start to recruit participants.

- The definition of the "repeated measures within group design" is confused – you are comparing a condition (waitlist control) with a timepoint (baseline), which doesn't make sense.

- The IV cannot be as single intervention – it must have at least two levels.

- 3.4 participants – is this 24 participants in total or 24 in each group?

4.4 - Who else will have access to the personal computer?

9.3 – you didn't tick the box

Confirmation of making the above minor amendments *(for students)*:

I have noted and made all the required minor amendments, as stated above, before starting my research and collecting data.

Student's name *(Typed name to act as signature):* Helene Klein

Student number: 0534714

Date: 5 July 2020

(Please submit a copy of this decision letter to your supervisor with this box completed, if minor amendments to your ethics application are required)

ASSESSMENT OF RISK TO RESEACHER *(for reviewer)*

Has an adequate risk assessment been offered in the application form?

YES

Please request resubmission with an adequate risk assessment

If the proposed research could expose the researcher to any of kind of emotional, physical or health and safety hazard? Please rate the degree of risk:

☐ HIGH

Please do not approve a high risk application and refer to the Chair of Ethics. Travel to countries/provinces/areas deemed to be high risk should not be permitted and an application not approved on this basis. If unsure please refer to the Chair of Ethics.

☐ MEDIUM (Please approve but with appropriate recommendations)

☒ LOW

Reviewer *(Typed name to act as signature)*: Anna Stone

Date: 30th June 2020

This reviewer has assessed the ethics application for the named research study on behalf of the School of Psychology Research Ethics Committee

RESEARCHER PLEASE NOTE:

For the researcher and participants involved in the above named study to be covered by UEL's Insurance, prior ethics approval from the School of Psychology (acting on behalf of the UEL Research Ethics Committee), and confirmation from students where minor amendments were required, must be obtained before any research takes place.

For a copy of UELs Personal Accident & Travel Insurance Policy, please see the Ethics Folder in the Psychology Noticeboard

UNIVERSITY OF EAST LONDON

School of Psychology

REQUEST FOR AMENDMENT TO AN ETHICS APPLICATION

FOR BSc, MSc/MA & TAUGHT PROFESSIONAL DOCTORATE STUDENTS

Please complete this form if you are requesting approval for proposed amendment(s) to an ethics application that has been approved by the School of Psychology.

Note that approval must be given for significant change to research procedure that impacts on ethical protocol. If you are not sure about whether your proposed amendment warrants approval consult your supervisor or contact Dr Trishna Patel (Chair of the School Research Ethics Committee).

HOW TO COMPLETE & SUBMIT THE REQUEST

2 Complete the request form electronically and accurately.
3 Type your name in the 'student's signature' section (page 2).
4 When submitting this request form, ensure that all necessary documents are attached (see below).
5 Using your UEL email address, email the completed request form along with associated documents to: T.Patel@uel.ac.uk
6 Your request form will be returned to you via your UEL email address with reviewer's response box completed. This will normally be within five days. Keep a copy of the approval to submit with your project/dissertation/thesis.
7 Recruitment and data collection are **not** to commence until your proposed amendment has been approved.

8 REQUIRED DOCUMENTS

9 A copy of your previously approved ethics application with proposed amendments(s) added as tracked changes.
10 Copies of updated documents that may relate to your proposed amendment(s). For example an updated recruitment notice, updated participant information letter, updated consent form etc.
11 A copy of the approval of your initial ethics application.
12

Name of applicant: Helene Klein

Programme of study: Professional Doctorate in Counselling Psychology

Title of research: **A mixed method study of a gratitude diary intervention on tinnitus related distress in adults**

Name of supervisor: Profession Cynthia Fu

Briefly outline the nature of your proposed amendment(s) and associated rationale(s) in the boxes below

Proposed amendment	**Rationale**
Change from online diary to paper diary	The website for the online diary has changed and now requires users to complete a number of questionnaires. This would be in addition to the questionnaires participants already completed for my study and represents a significant additional burden on participants' time.
Drop control condition	Recruitment has been difficult for this study and there is concern that participants will drop out during waitlist period

Add a question in online questionnaires (T2): How many times a week have you written in your diary?	It will be interesting to see if there is an association between frequency of of diary entries and tinnitus distress

Please tick	**YES**	**NO**
Is your supervisor aware of your proposed amendment(s) and agree to them?	Yes	

Student's signature (please type your name): Helene Klein

Date: 25 October 2021

TO BE COMPLETED BY REVIEWER		
Amendment(s) approved	YES	
Comments: Researcher to check and remove all references to 'online' from study materials. A request to change the title will also need to be made.		

Reviewer: Trishna Patel

Date: 26/10/2021

Appendix X. Definition of Themes

Theme 1 - Broadening Awareness	**Theme 2 – Empowerment**	**Theme 3 – Changing Relationship with Tinnitus**
Participants described a process that over the three weeks of the intervention they noticed an increase in awareness of the blessings in their lives. They further described that simple, everyday experiences could be viewed as a source of gratitude.	This theme identifies participants' sense of agency over their response towards the emotional impact of tinnitus. This engendered a belief that they have the skills to live with tinnitus.	This theme identifies that participants changed the way they view and experience tinnitus. They describe tinnitus' reduced importance made it appear less dominant.
Subtheme: Present Moment Awareness This sub-theme identifies that over the course of the intervention, participants' awareness of blessings moved beyond writing about them in their diary to noticing and appraising experiences through the prism of gratitude in the present moment.	***Subtheme: Active coping*** This subtheme identifies how participants started to use gratitude to manage move their focus away from tinnitus onto blessings. Furthermore, the diary provided a record of experiences that encouraged a sense of wellbeing. These experiences could then be repeated.	

Appendix Y. Summary Table of Triangulated Results

Inference	Convergent Evidence	Divergent Evidence
1. Gratitude intervention was effective in reducing participants' tinnitus-related distress	***Quantitative results:*** Statistically significant reduction in tinnitus-related distress after the intervention. ***Qualitative results:*** Participants reported a change in their relationship with tinnitus where they felt the impact of tinnitus was diminished, e.g. *"it definitely bothers me even less"*	***Quantitative results:*** No clinically significant reduction for the sample overall
2. Evidence whether participants' psychological wellbeing improved following the gratitude intervention is inconclusive	***Quantitative results:*** 12 out of 15 participants reported an improvement in psychological wellbeing. ***Qualitative results:*** Some participants related their increased grateful outlook with an improvement in their general wellbeing, e.g.	***Quantitative results:*** No statistically significant increase in psychological wellbeing was found.

	"That can have a profound effect on your whole, your whole psyche, your whole physical and mental wellbeing"	
3. Evidence whether grateful outlook increased following the gratitude intervention is mixed		***Quantitative results:*** No statistically significant increase grateful outlook ***Qualitative results:*** All participants described a broadening awareness of gratitude, e.g. *"seeing gratitude in everything that you do and see, and experience and people that you come into contact with"*