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Exploring Loving Kindness Meditation; understanding the practice, and its relationship with wellbeing

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Kimberley Sheffield

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May you all be happy, healthy, safe, and live with ease!

Abstract

In this thesis I seek to establish an understanding of Loving Kindness Meditation (LKM), and to identify and evaluate the effects on wellbeing, that are claimed by practitioners and previous research. The context in which the thesis sits is the current focus on finding ways to improve wellbeing in the general public, to which LKM has the potential to contribute, given its unique focus on affect and connectedness, and their associated links with wellbeing. A mixed methods design was developed following a review of the limited current literature base. The review revealed discrepancies in how LKM was being employed. This included whether LKM was studied alone or in conjunction with other practices, the duration of exposure to LKM, and which aspects of the practice that were focused on during the practice. These differences may account for the variation in efficacy and the range of outcomes observed across the literature bases. As such, a programme exploring the impact of LKM on wellbeing, to test and affirm this assumption from theory and previous research findings, that employed a form of LKM that was reflective of realistic, everyday practice, was seen as useful. Two qualitative based studies were therefore used to establish an understanding of the practice, with practitioners who had a range of experience with LKM. The first study looked to clarify what the main aspects of the practice are, by interviewing very experienced LKM practitioners. Three themes emerged which spanned all aspects of the practice. Combined, these indicated that there was variation in how the practice is engaged with across the sample, with key components of the practice such as it being viewed more as a way of being, and elements such as connectedness and wholeness emerging as core underlying factors of the practice. The second study built on this, by expanding the sample to see whether the perception and understanding of the practice established from study one was consistent, or whether it was a viewpoint held by practitioners with extensive practice. To maintain depth of understanding, while identifying patterns of similar views, Q methodology was employed to sample a wide range of LKM practitioners. The resulting analysis indicated that there were consistent views held by the whole sample, evidenced by the placement of a few statements regarding the

importance of the practice as a whole, as well as the self and enemies in the same area of the grid by all participants. This served to confirm, as well as add to, the key factors of the practice that had been observed in study one. The outcomes from the first two studies therefore fed into the design of the second two, which were more quantitative in design, and explored the impact of LKM in settings that were high in ecological validity; one online and one face to face. The third study made use of an existing programme, to explore the effects of the practice, as much of the previous literature focuses on interventions and programmes developed for purpose. The findings showed increases in wellbeing related measures, with exploratory analyses suggesting that self-compassion may be a key variable in linking LKM to improvements in wellbeing. The fourth study built on the findings from each of the previous studies, and explored the effects of an LKM programme developed to be in line with how existing practitioners engage with LKM. Additionally, to explore whether the focus of LKM resulted in different changes to other practices, a Mindfulness group was included as an active control. Findings suggested that LKM could impact positively on wellbeing related measures, with a measure of connectedness differing between the LKM and MM group in terms of magnitude of change. This indicated that connectedness is a core part of the LKM practice, compared to Mindfulness. Combined, the four studies complement one another in presenting a holistic understanding of LKM practice; how it can be understood, how it is practised, as well as what impacts the practice has. The thesis concludes by presenting the core components of the practice, but emphasises that connectedness is key. This was the factor that differentiates it from other practices such as mindfulness, the connection with the self and others may be one of the underlying mechanisms for how LKM results in positive change in the practitioner, and was a concept that was raised in every study in the thesis. In addition to this, the conclusions also suggest that given this core component of the practice, and the positive findings from the two studies that tested the impact of LKM, that the practice could be encouraged as a way of maintaining and improving wellbeing in the general public.

Chapter 1: Introduction to the thesis

The purpose of this chapter is to present the background to the thesis. I will argue in section 1.1 that given a current focus on wellbeing, and the use of meditation to maintain and facilitate this, the research in this thesis is timely and important. This section ends with an overview of the aims of the thesis. Section 1.2 then gives an overview of the remaining chapters, to help the reader to understand the structure and format of the thesis.

1.1. Background to project

Research is increasingly suggesting that higher levels of wellbeing are beneficial for society as well as individuals (Huppert & So, 2013). The Department of Health also suggest that improving wellbeing is important, due to its relationship with outcomes such as physical health and productivity (DoH, 2014a). A focus on wellbeing is of particular current importance in the UK; since the financial year 2011-2012, the Office for National Statistics (ONS, 2016) has been gathering data on wellbeing measures. There has been a gradual increase over the last 5 years on measures of life satisfaction, happiness, feelings of worth and decreases in anxiety. However, in the last year, 2015-2016, while life satisfaction increased, there was no increase in happiness or feelings of worth, which both began to plateau, suggesting that a need to explore ways of improving wellbeing, in the UK, is particularly timely.

Interest and research into wellbeing has resulted in a range of ways to understand, and even spell the term, which remains varied, with no clear definition (Dodge, Daly, Huyton, & Sanders, 2012). One perspective is that wellbeing is a "broad category of phenomena that includes people's emotional responses, domain satisfaction, and global judgements of life satisfaction" (Diener, Suh & Smith, 1999 p. 277), and as such is viewed more as a 'general area of scientific research' as opposed to a single construct or domain. This notion of wellbeing being more a multi-faceted term is supported by Ryan and Deci (2001, p.142) who understand wellbeing as a concept that involves "optimal psychological functioning and experience". In support of this Tov and Diener (2013) put forward that the

concept of subjective wellbeing (SWB) 'involves the various ways that people evaluate and experience their lives' (p. 1), which can be viewed as similar to the more everyday term of happiness. However, Tov and Diener (2013) also point out that while SWB involves elements of happiness, or feeling positive, that Diener's concept of SWB includes frequent positive affect, infrequent negative affect, and a cognitive evaluation of the individuals' life, such as life satisfaction. As such while there may be numerous definitions or ways to understand precisely what wellbeing may be, there seems to be consistency in the multi-faceted nature of the notion of wellbeing.

While the concept of wellbeing may not be clearly defined, this has not stopped a wealth of interest in this area, in how wellbeing can be improved, as well as the wider implications that higher levels of wellbeing may have. For example, the British government has an interest in wellbeing, which has resulted in the recent creation of an all-party parliamentary group to explore how mindfulness could support and improve wellbeing across the nation. This led to the release of the Mindful Nation UK policy document (MAPPG, 2015). This document highlights health, education, the workplace and the criminal justice system as key areas to focus resources and research on. Additionally, there are local government documents that focus on wellbeing such as 'The role of local government in promoting wellbeing' (Aked, Michaelson & Steuer, 2010). This document in particular places emphasis on 'promoting population wellbeing', and the importance of the local governments' role in increasing psycho-social wellbeing, which could lead to all individuals being able to reach their potential and live happy lives.

Documents and policies have also been produced that detail how wellbeing can be improved. For instance, the 'What works to improve wellbeing' document produced by the Department of Health (2014b), firstly supports the notion that wellbeing is not a singular concept, and includes multiple factors, but also details that interventions across domains such as health, learning and work can all contribute to improving wellbeing. The document also highlights that some interventions may lead to improvements in wellbeing, even if that was not the primary aim from the outset. This highlights the complexity in how wellbeing is being explored in research, and

the current focus on understanding which interventions may result in higher levels of wellbeing. The current engagement with improving wellbeing from government departments and local authorities suggests that a move to improve wellbeing is beneficial, and is of importance.

The increase in interest in wellbeing is mirrored in research and psychology, with the substantial growth of Positive Psychology as a field over the last 15-18 years (Rusk & Waters, 2013) speaking to a commitment of time and resources, in understanding and improving wellbeing. Within this field, the research and development of Positive Psychology Interventions (PPIs), looking specifically at how we can increase positive feeling and behaviours (Sin & Lyubomirsky, 2009), again shows the current focus on wellbeing and how we can increase this. Given that wellbeing is suggested to have wider impacts, the slowing of wellbeing related measures in the UK, and the increase in interest in wellbeing both from a government perspective, but also a research focus, suggests that an exploration of a method that may help improve wellbeing is useful at this time.

Exactly how wellbeing can be improved in different scenarios and for different communities is not clear yet, with research ongoing into numerous areas such as those highlighted by the MAPPG document. Some existing interventions and programmes utilise meditation to help improve wellbeing. One of the more formalised meditation based interventions that can be engaged with for reducing stress, is Mindfulness Based Stress Reduction (MBSR; Kabat-Zinn, 1990). This is an eight-week programme that incorporates mindfulness practice with a number of other practices and exercises. A recent meta-analysis of MBSR in non-clinical samples, suggests that the intervention is effective in reducing stress and distress, and improving quality of life (Khoury, Sharma, Rush, & Fournier, 2015). The authors also suggested that given the multiple aspects and practices involved in MBSR, that additional research identifying the most effective aspects of the intervention is needed. This would help support when and where mindfulness, as well as other meditation based interventions would be most appropriately applied or encouraged, as well as helping identify the

mechanisms behind how an intervention like MBSR may result in the positive changes that are observed.

Khoury *et al,* (2015) also commented that even though mindfulness based interventions were increasingly being used with non-clinical samples, that little was known about the effects and impacts with this population. As such, while there has been a flurry of research of mindfulness based interventions in recent years, little is known about the impacts on more general public samples, despite the uptake. The broad consensus around meditation practice is increasingly more widely accepted as a concept, with Pickert (2014, p. 42) recently suggesting the notion of the "Mindful Revolution" as "a time when more professionals in North America are tuning into contemplative, meditative practices". The increase in availability of meditation based apps and websites such as Calm and Headspace, suggests that practices are being increasingly engaged with as ways to cope with the stressors of everyday life. For example, Headspace's app has been downloaded 5 million times (Pierson, 2016), which is just one app available that provides guided meditations. Regardless of our knowledge of the impacts of meditation in general public, based on the popularity of apps and websites, a huge number of people are engaging with meditation practice, which highlights its accessibility as a way of managing stress and improving wellbeing. This, combined with the recent drive on wellbeing from government departments, suggests that research looking at meditation as a way of helping to improve wellbeing, makes use of a method to improve wellbeing that many of the general public are currently engaging with, as well as being of current importance.

Research that explores meditation and wellbeing is typically based on mindfulness meditation with elements of other practices, discussions and retreat days. Loving Kindness Mediation is a form of meditation often incorporated into other programmes such as MBSR, and is beginning to be researched alone in relation to wellbeing. LKM is a form of meditation that originates from Buddhism, with the term 'loving kindness' being a translation of the Pali word 'Metta' (Ratnapani, 2000; Salzburg, 1995). The practice involves developing feelings of kindness and friendliness to the self and

others. This is achieved by directing feelings of kindness firstly towards the self, before extending this out to loved ones, strangers, enemies and the whole world (Thondup 2009). Ultimately, through continuous practice individuals will be able to develop and engage with these feelings naturally outside of the formal meditation practice, and apply them in everyday life (Ratnapani, 2000). The development of positive emotions, particularly in relationships with others, is what identifies LKM as being different from other forms of meditation (Fredrickson, 2012), and it is considered to be more of an emotion-focused practice, whose aim is to cultivate an affective balance in comparison to an attention or cognitive based practice such as Mindfulness (May *et al*., 2011). LKM is therefore a different practice to that which has most commonly been used within meditation based interventions and programmes. The differing focus of LKM practice in comparison to other forms of meditation, may mean that it has the potential to impact on wellbeing, but that this might be done through different mechanisms.

The focus on others and relationships in LKM could improve wellbeing; differences seen across the UK on the most recent ONS survey (2016) were suggested to be due to social capital. This measure refers to willingness to help others in the community, and social cohesion, however research needs to explore this further to examine causality. Elsewhere, the link between connectedness and wellbeing has been seen (Jose, Ryan & Pryor, 2012). Additionally, referring back to Diener's concept of SWB as including frequent positive affect, the focus on positive emotion and well wishes, as well as connectedness in the LKM practice, suggests that this has potential to impact in a positive way on levels of wellbeing, possibly in a different way than other forms of meditation or other practices. This potential relationship raises an opportunity to explore how interventions and programmes that have a social connectedness element to them, as well as improving factors such as positive affect, such as LKM, might impact on wellbeing measures. Existing research on LKM is however lacking, therefore this relationship is not clear.

An additional reason for the interest in looking further into the impact that LKM might have on wellbeing was through personal interest. My engagement with the practice began during my masters in Transpersonal Psychology and

Consciousness Studies, where we learnt various types of meditation across the academic year. As part of this I was introduced to LKM as well as mindfulness practices. My experience of LKM was as something that is different to any practice that I had engaged with previously in terms of its other-focus as well as the self-focus. The focus on myself in particular began to improve my confidence and belief in myself. From this, I developed a personal practice, as well as a research interest; exploration of the literature revealed an overall lack of research conducted on the practice, as well as the potential this practice could have on wellbeing, which led to conducting my masters dissertation on exploring the practice and its impact on unconscious bias, which I built upon in this thesis.

In comparison to other forms of meditation, LKM has not been researched as widely or as in depth (May *et al*. 2011; Wallace & Shapiro, 2006). Corcoran (2007) supports this imbalance by drawing comparison between the early stages of research into mindfulness meditation, now widely studied, that occurred in the early 1980s, as being the stage that LKM research currently is in. As such, there is less available research on LKM, with those studies that have been conducted varying in terms of what the studies measure, with few replications, and as yet no standardised programmes or way of researching LKM having been established. This has resulted in numerous forms of the practice being used across the research base. Existing studies have found that LKM has a positive impact on affective learning and increasing positive emotions (Hunsinger, Livingston, & Isbell, 2012a), as well as increasing empathy (Császár, 2012), positivity towards strangers (Hutcherson, Seppala & Gross, 2008), increases in self-compassion, compassionate love and decrease trait anxiety (Weibel, 2007) and also increasing helping behaviour towards strangers (Leiberg, Klimecki & Singer, 2011). These studies are focused around emotion and particularly how we relate to others, and so suggest that the practice may support improvements in levels of wellbeing.

In addition to the numerous foci of existing research and range of applications as presented in the previous paragraph, other differences in previous research exist which make it difficult to pinpoint what the outcomes of LKM may be. These will be detailed further in the literature review in

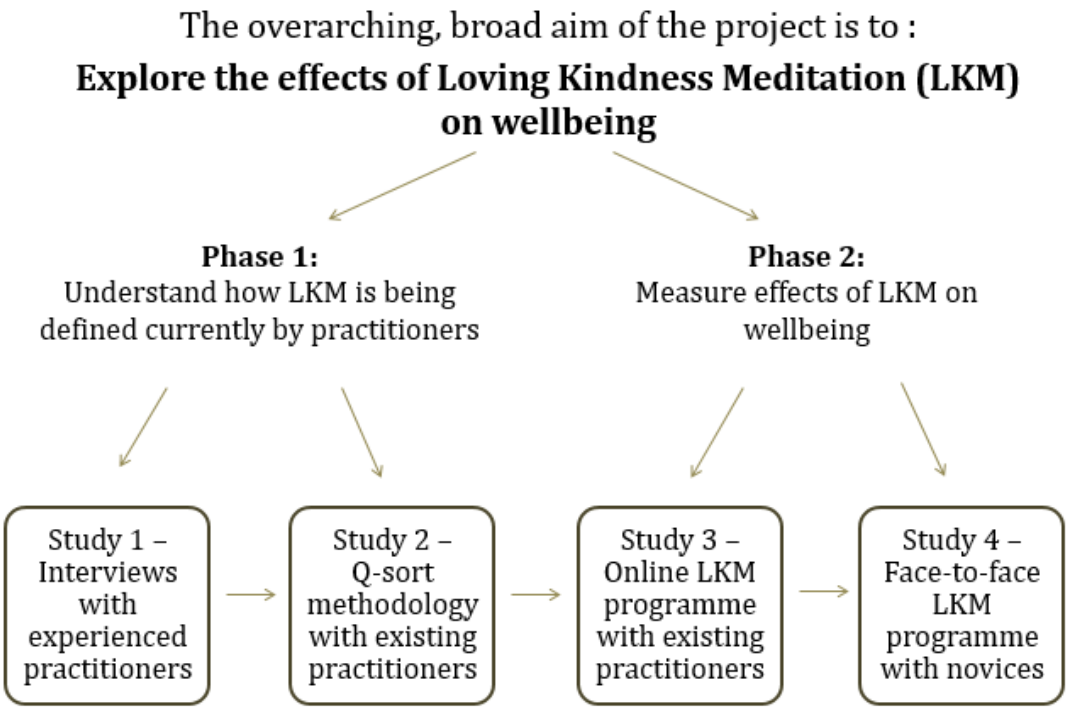
chapter two, but an overview of these issues is given here. There are two main issues; one is the understanding of what exactly loving kindness is. This relates to the translation of the term 'Metta' and some problems with language use and how this feeds into research. The other is how LKM is applied in a methodological sense. This could be linked to an understanding or definition of the practice, but also reflects the nature of research in employing different designs as appropriate for the aims. This also reflects Corcoran's point around the 'stage' at which LKM research currently is, that results in a range of research across numerous areas. The differences in how the practice is employed across research could be resolved if research focused more on what the practice is, and how it is understood, before exploring the impact that the practice may have. The mixed methods design here, therefore makes use of the value in gathering opinion and understanding of the lived experience of the practice from practitioners. This provides a basis for later experimental studies, that will resultantly be testing the impact of a practice that is grounded in experience of those practising it on a day to day basis.

The overview of literature and the differences identified present two research avenues: one that explores the effect of the practice on wellbeing, given the potential that it holds in having a positive impact. This would build on existing literature that is largely focused on specific programmes, samples and interventions, by exploring the practices' impacts with a more general public sample, to see whether it could be useful in improving wellbeing on a wider scale. In order to examine the impact that LKM could have, an understanding of what the practice is, and how it is practised by existing practitioners, would give insight into how the practice could be taught to novices, the impact of which would better our understanding of the potential impact that the practice could have. As such, the other avenue is to explore what the practice is, from an existing practitioner viewpoint. These are the two broad areas that will be covered in this thesis, and as such the main aims of the thesis are to:

(1) Understand more about practitioners' views and experiences of the practice(2) Measure the effects of LKM on wellbeing

This thesis comprises four studies, presented in turn across the analysis chapters; four to seven. Figure 1 details how the studies work together; each of the studies, while having slightly differing aims, all contribute to the overarching aim for the thesis, as well as building on one another.

Figure 1: Overview of thesis aims and studies



Phase one of the research consists of two qualitative studies. These are in depth, and designed to gain an understanding of the practice, its components, and some idea of perceived benefits and challenges. The second phase of research is to explore the effects of the practice over time with two different samples, and also consists of two more quantitative studies. These studies will explore the effects of the practice in settings that are as close to how LKM is practised by existing meditators as possible. This will help establish what the impact of the practice is on a more general public, existing practitioner audience, and will be based on the findings from the first two studies, to ensure the validity of the practice that participants are asked to engage with, where applicable.

All of the studies are linked, with the first two studies providing important insight into the practice and its components, for the second two studies to build on. While they all meet the overall aim of understanding the effects of the practice, they also provide a holistic understanding of the practice. They do this by employing participants who range from novice to very experienced, as well as approaching the understanding and effects of the practice from a mixed methods design. This allows for the practice to be explored from different viewpoints, which combined, provide an in-depth and well-rounded exploration of the practice.

1.2. Overview of remaining chapters

Chapter two is split into four sections, which combined, present an overview of what meditation more broadly is, and how the research is situated within this broad context as well as within the existing research on LKM. Sections 2.0 and 2.2 present what meditation and loving kindness meditation are, before research relating to the impacts of LKM is presented in sections 2.3 and 2.4. The literature in these latter sections shows the links between the practice and many different measures, which highlights the current far ranging applications of the practice. The literature is then looked at in closer detail, where differences across the literature in how LKM is operationalised, mean that the conclusions we can draw from the impacts of LKM may not be as clear as they seem. These main differences include the focus of the practice, the timescales employed across studies, and whether LKM is studied alone, or in conjunction with other practices. These differences provide support for additional research that seeks to better understand the practice, upon which studies that explore the impact of LKM can be based. This review of the literature presents the rationale for the four studies included in the thesis. It argues that while we may have the impression that LKM can have a positive impact on a number of measures including those related to wellbeing, that variations across the literature in how LKM is used in research, means that additional research is needed to clarify what the practice is, before employing it in research and exploring its outcomes.

Chapter three presents the methodological choice for the thesis, with an explanation as to why mixed methods was deemed appropriate in meeting the research aims. The chapter argues that in order to address the overall aim of the project, the integration of qualitative and quantitative analyses, and the collective strength of this combination found in mixed methods designs, was crucial. It is the ability to generalise results as well as understand a phenomenon in depth, that was most desirable when addressing the overall aim of the thesis, and therefore mixed methods was seen as the most appropriate way of attaining this level of understanding about LKM.

Within the mixed methods design, four different methods were used, one for each study. These were a qualitative analysis of interviews with experienced practitioners, a q-methodology study (explained further in section 3.3) with a sample who had a wider range of experience with LKM, a quasi-experimental study evaluating the impact of an existing online LKM programme with a mix of novice and existing meditators and an experimental study that explored the impact of an eight week LKM programme, with novices, and an active control group who practised mindfulness. Each of the study designs was chosen to complement the others, and to culminate in an overall understanding of the impact that LKM may have on wellbeing measures. Importantly, this evaluation would be based on a form of LKM which stems from findings from the first two studies. The combination of the methods used here, therefore creates an understanding of the practice which has both depth as well as having some widespread applicable findings, which could not have been attained from using one method alone. Sections 3.2 - 3.5 detail each of the methods in turn; what each study design entails, why each was chosen, with further detail such as the participants, sampling, materials, ethical considerations and procedure, given in each of the analysis chapters.

The next four chapters; four to seven inclusive, are the analysis chapters. Each follow a similar format, in presenting an overview of the study, and a condensed, specific review of relevant literature to provide the rationale for each study. Details on the method are then presented, followed by an overview of the analysis where relevant, before the analysis, discussion and

conclusions. Each of the chapters also ends with a summary section, which allows for the links between the studies and their findings to be identified.

Chapter four presents study one; a series of interviews conducted with experienced practitioners. This study addresses the need to gain an in depth understanding of the practice, which stemmed from the discrepancies in how LKM is used and applied across the literature. To gain insight, interviews were seen as appropriate. The chapter provides detail on the analytical steps for thematic analysis, which is the analysis that was chosen for the interviews. The analysis itself is split into three main themes, discussed in turn, and argues that the practice is best understood as a combination of all three main themes, due to its complexity.

Chapter five presents study two; a q-methodology study with a sample of LKM practitioners who had varying levels of experience. The rationale behind this study was based on wanting to explore the consistency of the viewpoint gained from study one. Study one gave insight into experienced practitioners viewpoint. However, some of their observations regarding the impact and importance of the practice, as well as its complexity may have been due to the extensive practice that sample had engaged with. To establish whether there were other views of the practice, a wider sample with more variation in level of experience was needed. Q-methodology is a combination of qualitative and quantitative methods, and allows for patterns of understanding about a phenomenon to be identified. This was seen as an appropriate method to therefore use to gain a broader understanding of the practice, and to see whether there was any consistency across a wider sample of practitioners.

The chapter presents an overview of the typical procedure employed by Q, from commencement to analysis, highlighting the processes involved in a methodology that is less well known. Q analysis and the steps that are employed are given, before the analysis and detail of the factors that emerged from the data. The introduction to the analysis in this study demonstrates that there were two viable solutions to the analysis, both presented in turn. The first includes the whole sample, and highlights some

features of LKM that are consistent across the sample. The analysis moves on to the second solution, which presents some of the subtle differences that exist within smaller groups of LKM practitioners. The chapter summary shows where there are similarities in the findings from studies one and two, and highlights some of the core components of the practice which the latter two studies can build on and use in their study designs.

Chapter six presents the first of the studies included in phase two that are more quantitative in focus, and seek to understand more about the impact of LKM practice in different contexts. The first of these studies, study three, measures the change in wellbeing related measures over a 25-day period, in a group of individuals who self-selected to take part in an existing, email-based LKM programme. The overview of the literature given at the start of the chapter argues that we know little about existing programmes, and the impact this has on practitioners, hence the evaluation of an online, existing, programme in this study. Looking at the changes over time in levels of empathy, self-compassion and life satisfaction gives insight into the effectiveness of the practice in real world contexts. As the sample spanned from novices to those who had extensive practice, and also included participants with a range of previous experience with different meditation types, exploratory analyses were also conducted on the data, to explore the relationship between the measured variables as well as to see whether prior experience had an impact on the level of observed outcome. These additional analyses gave insight into how LKM may lead to improved wellbeing that had been observed in previous studies, by exploring the relationships between the measured variables in particular. The chapter concludes with a summary that draws together the understanding of LKM practice from the three studies, and presents findings that can be taken forward to the design of the last study.

Chapter seven presents study four, the last in the thesis, and the second quantitative study exploring the effects of the practice. This study differs from the previous, in that I designed and conducted the programme, so had more control over what participants were asked to do. In addition, the sample comprised of students who are novice to meditation, thus providing a

view of the practice from another group of individuals not covered in the thesis so far. This study looked at what effect LKM could have on student wellbeing, while also allowing for some comparison of LKM and MM, to further understand the effects of LKM. The programme was designed to be similar to ways individuals may practice outside of a research study, to gain an understanding of the impact that the practice is currently, and could potentially have, over longer periods of time with general public practitioners. It was important that the programme was grounded in the findings of the previous studies, to ensure that the practice that was being tested was high in validity, and was something that is as close as possible to how existing practitioners might engage with their practice.

Chapter eight draws all the studies' findings together, to present an overview of what the thesis has achieved in terms of our understanding of LKM, and what effect the practice has on wellbeing. This chapter serves to bring the whole thesis together by linking the findings from the studies back to the rationale that underpins the whole thesis, and argues that LKM practice could contribute to improving wellbeing in the general public

1.3. Summary

This chapter has presented the background and rationale for the thesis. It discussed the current wellbeing agenda that is of interest to researchers as well as UK government departments. Additionally, it highlights that some of the existing programmes for improving wellbeing look at engaging with meditation, particularly mindfulness. Given LKM's focus on well wishes to the self and others culminating in increases in wellbeing related measures, and particularly in improvements in how we relate to others, I suggest that LKM could also help to improve wellbeing. This provides the overall basis for the thesis, in exploring the potential that LKM has for improving wellbeing. This chapter has also presented the studies that were employed to meet the overall aim, as well as an overview of the remaining chapters. This detail helps the reader to understand the overall structure of the four studies, how they fit together to meet the overall aim, and how they are presented in this thesis.

Chapter 2: Background and Literature review

To understand LKM, it is important to consider what meditation in general is, and how it is understood and considered in research. From this, an understanding of how LKM might differ from other practices can be established. Therefore, this chapter begins by presenting background information regarding meditation in section 2.1, before focusing specifically on loving kindness mediation as a practice in section 2.2. Research on LKM is then presented in section 2.3, which provides insight into what we currently know about the effects of LKM. This is built on by exploring the differences and inconsistencies in how LKM was used in research that exist. These sections combined, provide the rationale for the studies in this thesis.

2.1. Meditation

As a broad term, meditation seems to include many different practices, with little consistency across research in what is comes under the heading of meditation (Awasthi, 2013). In support of this, Schmidt (2014) suggests that there are a number of activities such as running or playing guitar that could easily come under some definitions and classifications of meditative practice presented in literature, and yet would not typically be considered to be a meditation practice. Additionally, recent suggestions are still that there is no clear operational definition of meditation (Cardoso, Sales, Centurione, Bazzarella & Nakamura, 2016). This can make meditation as a concept difficult to research and understand the impacts of. However, authors have presented guidelines as to what meditation generally constitutes, from which researchers can base their understating of the practices on. For example, Kristeller and Johnson (2005) suggest that there are underlying similarities across forms of meditation. These include the involvement of an attentional process, will often involve repetition and will often involve being non-judgemental, as opposed to being analytical about thoughts. Meditation can therefore broadly be understood as a practice in which those elements are included.

Most meditation practices have origins within Eastern traditions and religions, e.g. Buddhism, Hinduism and Sufism all use meditation as part of their tradition (Blackmore, 2003). Within Western society, practices are more commonly engaged with without any religious affiliation, with 'secular' versions of practices emerging and becoming popular both for personal practice as well as within research (Salzburg, 2011; Schmidt, 2014). This presents two broadly different ways of engaging with meditation, one as part of a religion or tradition, and one that is not associated with religious or spiritual aspects.

The range of ways meditation is viewed, or what is classified as a meditation practice, can therefore cloud our understanding of what impact meditation practice can have. If our understanding of meditation and the various practices that exist differs, these practices may be being applied to see a certain outcome which may not come to fruition. This may impact negatively on the perception of the benefits that meditation practices can have in a number of settings.

Across the different forms of meditation practice, some receive more attention in terms of research than others. One form that is widely researched is Mindfulness Meditation (MM), which has seen an increase in interest over the past few decades (Vaerio, 2016). It can be defined as a practice that involves purposefully paying attention to the present moment, with a non-judgemental attitude (Miller, Fletcher & Kabat-Zinn, 1995, p193). The increase in popularity in Western contexts in research and personal practice, is likely due to the reported positive impacts of the practice, which has resulted in Mindfulness in particular being incorporated into treatment programmes to work alongside more traditional therapies.

For example, the Mindfulness Based Stress Reduction (MBSR) program helps individuals cope with a range of health issues, both clinical and non-clinical (see meta-analysis by Grossman, Niemann, Schmidt & Walach, 2004). A similar but more clinically based intervention, Mindfulness Based Cognitive Therapy (MBCT), helps prevent relapse in patients with recurrent major depressive disorder (see meta-analysis by Piet & Hougaard, 2011). More

broadly, 'Mindfulness Based Therapies' or MBTs, a term that encompasses therapeutic interventions that are largely based on Mindfulness, were also found to have a positive impact on a number of psychological issues, particularly anxiety, depression and stress (see meta-analysis by Khoury *et al.,* 2013). These interventions, particularly MBSR and MBCT, have specific guidelines on how they are implemented. For example, some of the guidelines on MBSR programmes state that they are comprised of eight weekly classes of 2.5-3.5 hours in length, with a 7.5 hour long silent retreat day in the sixth week, and include mindfulness practice as well as hatha yoga (Santorelli, 2014). The standardisation, in research terms, makes it easier to measure the effectiveness across different samples. However, given the additional practices and the structured nature of the programme, while we know about the effectiveness of these programmes, we cannot draw any firm conclusions about the effects of Mindfulness practice if it were practised on its own, from those programme outcomes in particular.

In addition to MBSR and MBCT interventions, particular aspects of mindfulness practice have also been researched. For example, research suggests that mindful walking helps to reduce perceived stress, when compared to a wait list control group (Teut *et al*., 2013). Additionally, mindful eating has been used in particular settings, and specific interventions have been developed that incorporate mindful eating with specific groups and outcomes in mind. One of these interventions is Mindfulness Based Eating Awareness Training (MB-EAT), developed for binge eating disorders (Kristeller, & Wolever, 2010), and which has also been adapted for diabetes (MB-EAT-D; Miller, Kristeller, Headings, Nagaraja, & Miser, 2012). Research suggests that the MB-EAT-D programme is as effective as a self-management diabetes education programme, which provides options for individuals diagnosed with diabetes in terms of self-care choice (Miller *et al.*, 2012; Miller, Kristeller, Headings, & Nagaraja, 2014).

Other forms of meditation that have been explored in relation to health and wellbeing include Transcendental Meditation (TM), a form of meditation that focuses on attentional stability and introspection, and one which can include silent repetition of a word or mantra (Waters, Barksy, Ridd & Allen, 2015).

Research indicates that TM is effective in reducing blood pressure, particularly in participants who experience high levels of blood pressure and in older participants (see review and met-analysis by Bai *et al.*, 2015), and on levels of anxiety, particularly in those with high levels of anxiety (see meta-analysis by Orme-Johnson, & Barnes, 2014). In addition, the practice has applications in certain settings such as in schools, where research has found that TM improves variables such as working memory and levels of anxiety in school children (see systematic review by Waters *et al.,* 2015), as well as supporting reductions in medication use for PTSD in active military individuals (Barnes, Monto, Williams, & Rigg, 2016).

While the general consensus regarding meditation may be positive, a systematic review conducted by Chiesa and Serretti (2010) exploring the neurobiological and clinical impact of mindfulness practices, found that while some of the findings were positive, such as MBCT being effective in reducing relapse of depression in patients with three or more episodes, that the low quality of some of the designs meant that it was difficult to draw firm conclusions on the impact of the practice. More recently, a similar outcome was found with a meta-analysis conducted by Goyal *et al.* (2014) that looked at the effectiveness of various practices, suggested that there is little difference between meditation and active controls such as exercise and other behavioural therapies. In addition, the meta-analysis suggested that while meditation had a moderate impact on anxiety, depression and pain, there was low to insufficient evidence of other variables such as positive mood, eating habits, sleep and weight. The authors also suggested a need for stronger research designs to explore the effectiveness of meditation further. Additional research is therefore necessary to establish what impact types of meditation may have, and with which populations they are being used, to further explore the impact that meditation could have.

In addition to the variety of practices and variety in where and when they are applied, the ways that individuals might engage with meditation are also widening, with the increase in accessible forms of support and guidance such as online and app based materials. These give individuals access to resources such as guided meditations with varying lengths, and include a variety of

practices. In addition, they increase the accessibility of practices in terms of being able to access resources at any time of day and in any location, as well as in terms of the way meditation is presented. This, teamed with an increase in wishing to focus more on wellbeing may contribute to the rise in engagement with meditation through a number of forms. The ways individuals can engage with meditation includes apps and online resources, email reminders, books with audio CDs that accompany them, as well as face-to-face via interventions and possibly sitting groups. Local sitting groups would tend to involve a weekly group meeting, involving a period of meditation, but also time for questions and discussion with peers and a facilitator. Research is needed to assess the effectiveness of the many different emerging forms of meditation engagement, which reflects the experience of a modern meditator. This is important, as if individuals using an app are expecting the same outcomes as a friend who may have engaged with an eight-week intervention such as MBSR, this may become damaging as they may not see the same outcomes from their own engagement, which has a knock on effect on whether they continue with their engagement with practice. The way we understand meditation and its outcomes has to take into consideration the way in which it is delivered in research.

In summary, meditation is increasing in popularity in both research and personal terms, possibly due to the positive outcomes observed from existing research. The ways in which individuals now come across meditation and engage with this, have become more varied as the accessibility of resources has increased. There are now numerous apps and online resources and programmes, which can support as well as replace the face-to-face sitting group or intervention. In addition, a large proportion of the existing research evaluates programmes and interventions which often involve a number of additional practices, compared with 'just' engaging with meditation, as an individual may do in their day to day life. Research needs to therefore reflect the variation of ways in which meditation can be engaged with, to explore whether the positive outcomes that are seen from more well established programmes and interventions, are affirmed when engaging with other available resources that are being increasingly engaged with by the general

public. This will help us understand more about meditation practice and its effects, and will allow individuals who choose to practice, to be aware of the impact different forms of engagement may have.

2.2. Loving Kindness Meditation

The overall focus of Loving Kindness Meditation (LKM) is to develop feelings of compassion and connectedness to others as well as the self, through directing love and compassion towards the self, and then extending this out to loved ones, strangers, enemies and the whole world (Thondup 2009). This involves a change in our minds from neutral or negative thoughts and feelings into more positive ones by repeating the phrases; 'May I live in safety. May I be happy. May I be healthy. May I live with ease' (Feldman, Greeson & Senville, 2010). This can be practised in a sequential manner; beginning with those people for whom it is easier to develop feelings of Loving Kindness, before moving onto those for whom developing these feelings may be more difficult (Thera, 2011). The initial focus on the self is seen as important, as it is suggested that only when you have developed feelings of clarity, gentleness and honesty towards yourself, can you extend Loving kindness to others (Chodron, 1996), and self-acceptance underpins the resulting LKM practice (Phelan, 2012).

During the meditation, Ratnapani (2000) suggests that we cultivate an emotion that flows from us to the person or people in question; it is not something that remains inside the practitioner. Building on this, Fredrickson Cohn, Coffey, Pek and Finkel (2008) suggest that LKM results in development of positive emotion which leads to a gradual shift in individuals' outlooks, with subsequent change to personality traits. This is one of the ways that LKM may help improve levels of wellbeing; Fredrickson's (2001) Broaden and Build theory of positive emotion would suggest that positive emotions broaden people's attention and thinking, which in turn enables them to engage with higher level connections, and a wider range of perceptions. These broadened outlooks result in the building of personal resources such as being present in the moment, or the ability to give and receive social support. These resources then culminate in more success and

happiness in the following months and years. Fredrickson *et al.,* (2008) looked at applying this theory to LKM, and suggested that LKM can be used to support the exposure to positive emotion, and the broaden and build theory helps those engaging with LKM to culminate in higher levels of wellbeing.

This is in comparison to a practice such as mindfulness, where mechanisms behind how the practice may lead to higher levels of wellbeing include increased attention to stimuli, or through reductions in self-related biases (Lim, Condon & DeSteno, 2015). Additionally, Vago and Silbersweig (2012) suggests the combination of self-awareness, self-regulation and self-transcendence lead to a healthy mind.

While each practice may culminate in improvements to wellbeing, these may be through different mechanisms, due to the different foci of each practice. If working on different mechanisms that lead to improved wellbeing, this may also mean that the different practices might have different outcomes and therefore be beneficial in different settings. For instance, the focus on well wishes to the self and others in the LKM practice, may mean that there are different benefits as a result of practice to that of a mindfulness practice where the focus is more on the present moment and attention. Research is therefore needed, to explore what impact each practice may have, and also to consider how each practice may manifest in different outcomes, and therefore where or with whom each practice may be applied or encouraged.

While the effects of LKM can translate into everyday life, it is not the intention that the equanimity that practitioners look to develop leaves the meditator in a state of neutrality outside of meditation. Instead the practice can deepen concern for others and the practitioners' ability to respond appropriately and in a stable way to others (Aronson, 1980). The practice can therefore impact how practitioners relate to others, which can result in lasting change and some suggest, a difference in the practitioner. Additionally, one of the suggested ways in which LKM might impact wellbeing, is through the exposure to positive emotions as part of the practice.

Loving Kindness Meditation has been attributed to the Buddha, and was developed as a remedy to fear (Salzburg 1995). This is supported by Hanh (1998) who states that "Nagarjuna, a highly influential second century Indian Buddhist scholar, said, 'Practicing the Immeasurable Mind of Love extinguishes anger in the hearts of living beings'" (p. 2). These texts suggest some of the outcomes that would be expected from practising LKM. To add to this, extracts from the Pali Cannon which is the Buddhist text from the Theravadan tradition, list some of the benefits from engaging with LKM. These include improved sleeping, improved concentration, being liked by others, others' wanting to be close to the practitioner which includes children, animals and invisible beings, and feeling at ease with all beings (Hanh, 1998; Salzberg, 1995). The traditional texts therefore suggest a sense of connection with others, and providing a remedy to fear and anger as some of the expected outcomes of the practice.

Loving Kindness is a *paramita*, which in accordance with Theravadan Buddhism is one of a set of ten qualities that are taught and developed in sequence (Dhammapala 1996). Metta (Loving Kindness) and Upekkha (Equanimity), which is also one of the ten *paramita*, are also two of the four *Brahmavihara* (immeasurables) the other two being empathetic joy and compassion, which together help to overcome negative mental states (Thera, 1994). A key teaching within Buddhism is the cultivation of the four *Brahmavihara*, which can be cultivated through meditation practices in order to lead a balanced life (Thathong, 2012). Loving Kindness can take on the forms of the other emotions and help to enhance them; for example, we may feel a sense of Loving Kindness towards someone who is not well, and our feelings towards them will include a hope for alleviation of their suffering which is a form of compassion (Ratnapani, 2000). The consequences of meditating on the *Brahmavihara* are to develop those feelings deep within the individual's heart, so that they should arise spontaneously (Thera, 2011). Thus, the benefits from a traditional viewpoint, are that LKM is an important practice to help individuals overcome negative psychological states, as well as for leading a happy life. If engaged with, this could therefore help to improve levels of wellbeing.

While the practice is highlighted for its beneficial nature, Ratnapani (2000) suggests that there is little guidance as to *how* Loving kindness should be developed. Explanations found within the Theravadan Buddhist tradition describe developing *Metta* through a meditation practice known as the *Metta Bhavana*; 'Bhavana' being the Pali word for cultivation or development, so the practice which involves the five groups of people, is the cultivation of Loving kindness. The *Metta Bhavana* suggests that Loving kindness is something that is able to be developed and can help us to deepen our feelings towards the ones we already love, and cultivate feelings of Loving kindness towards those with whom we don't have a relationship with yet, so ultimately *Metta* is seen as universal (Ratnapani, 2000). Extracts taken from the *Metta Sutta*, the script that can be used in the practice, includes:

> 'may all be happy and feel secure. May all beings become happy in their heart of hearts!' (Ratnaphrabha, 2000, pg. 64).

Similarly, Sujiva (2009) states that the main four messages are 'may I be safe from dangers', 'may I be peaceful and free from mental suffering', 'may I be healthy, free from physical suffering', 'may I take care of myself and live happily'. These phrases have been adapted for use across research and when teaching the practice, with more 'Western' language such as 'May you be happy, may you be safe, may you live with ease'. These phrases encompass the messages behind the traditional lines seen in the *Metta Sutta*, but use more accessible language. While the practice might be useful and help improve wellbeing, if there is little clarity over how it can be practised, this could therefore present a barrier to engaging in the practice.

While *Metta* is the traditional name for the practice, there is no direct translation of this into the English language. Loving Kindness is the term that is commonly used, however this translation often creates an image of love for people. This can be problematic given that our use of 'love' is often self-referential and dependent on positive feedback (Ratnapani, 2000), which is not the form of love that LKM refers to. A different way of understanding *Metta* is as "unconditional 'well wishing'" (Venerable Dhammarakkhita, 2000, p. vi), which includes the well-wishing of safety, health and happiness, which were seen in the phrases stated above. Another alternative is as a type of

friendship, although Salzburg (2011) emphasises that it is not that we 'like' everyone we encounter, instead that we come to the realisation that we are all connected and that we all seek the same aim; to be happy, and that we all struggle to achieve this.

These are just two different ways of understanding what exactly sending *Metta* to someone is actually like, as the term Loving Kindness does not seem to entirely sum up the essence of the feeling or process for some. The differences in understanding of the *Metta* practice and the divergence in understanding our view of the practice could be influencing differences found across research. When it comes to how people define loving kindness, differences also exist, however they do tend to encompass a sense of equality or of an unconditional nature which is reflected by directing LKM to everyone at different points in the practice. This is expressed in different ways in two definitions below:

> 'A down to earth care and concern directed to all living beings equally, individually and without reservation' (Sangharakshita, 2012, pg. 12).
>
> 'Loving-Kindness is a quality of the heart that recognizes how connected we all are' (Salzburg, 2011, p178).

There are potentially a number of ways in which *Metta* and LKM are viewed or understood, which may culminate in different outcomes; if one persons' focus is on manifesting the feeling of love then that may cause a barrier for them wanting to engage with some of the elements of the practice such as the stranger and person they dislike. It may also result in different changes in the person as compared to someone who may be focussing on manifesting a feeling of kindness or friendship, or well wishes. We need to exert caution therefore when looking at previous research as to what the meditation used in the study was, what instructions participants were given etc. before conclusions are made on the effectiveness and applications of LKM. This is particularly relevant if exploring the engagement, or lack of, with the practice, as this may come down to how it is presented to individuals who are novice to the practice.

An understanding of the practice from traditional texts, is that the practice is beneficial to the practitioner in terms of the outcomes this can have on improving relationships with others, and its ability to alleviate negativity such as anger or fear, but that the lack of clear translation, or guidance on how to practice, means that research exploring the effects of LKM, as highlighted in the next section, is varied in design as well as in how LKM is described or taught to participants. The literature and therefore our understanding of the impacts that the practice could have, are therefore mixed and additional research is needed to clarify what the practice is, before research can effectively measure the impact of it.

2.3. Loving kindness meditation research

The next two sections, 2.3 and 2.4 have two aims. The first is to present an overview of the existing literature on LKM, which will be given in this section. This helps gain an impression of the impacts of the practice, and where the gaps may currently lie in what we know regarding the practice. Following this, section 2.4 builds on this by presenting differences that exist across the literature. Section 2.4. is split into three sections that relate to those differences seen across this literature. These are (1) whether LKM is studied alone or in conjunction with other practices in research (2) the focus or direction of the practice, and (3) the timescales of the research. This section argues that while we may get an impression of the impact of the practice from existing literature, the differences observed across the literature base cloud that impression.

The chapter then concludes with a summary in section 2.5, that presents the argument that the differences that exist impact on how we can rely on the outcomes presented in some of the literature. The summary also argues that to overcome this, there is a need for additional study into what the practice is, and what the core components may be, which is best done by interviewing existing practitioners. The outcomes of this in depth view of the practice, will help us understand the validity of existing research. Additionally, the findings will provide a base for experimental studies to use,

to ensure that they are testing LKM, as it is understood by existing practitioners.

2.3.1. Research on affective and relational measures

Given the focus of the practice being on well wishes to the self and others, research has tended to explore affective and relational based outcomes, such as positive affect, empathy and compassion. Typically, these outcomes have been measured using self-report measures. Examples of these studies include Császár (2012) who found increases in empathy, and a positive effect on stress in trainee teachers, following a six-week LKM programme with a wait-list control group. Empathy in this case was measured using the Interpersonal Reactivity Index (IRI; Davis, 1980); this scale has four subscales, covering both the emotive and cognitive aspects of empathy. Similarly, Weibel (2007) found increased levels of compassionate love and self-compassion in college students, following a four-week LKM programme with a control group as a comparison. Self-compassion and compassion were measured using the Self-Compassion Scale (SCS; Neff, 2003) and the Compassionate Love Scale (Sprecher & Fehr, 2005). These studies show improvements as a result of LKM practice, in affective based, self-report measures, across different samples.

Studies looking at the more relational aspect of LKM have tended to employ more unusual ways of measuring outcomes, given the complexity of what is being explored. For example, Hutcherson, Seppala & Gross, (2008) found an increase in both implicit and explicit measures of positivity towards strangers following one 7-minute period of LKM practice, when compared to an active control group who were given a guided imagery. The short exposure to the practice gives rise to the question over whether it was the impact of the practice itself in creating change. In addition, the practice only focused on sending feelings of Loving Kindness to loved ones, which again may impact on how much we can conclude that the outcome was as a result of LKM practice in particular. The sample also had some prior experience of meditation and spiritual practice, (average under 1.7 hours per month) which may also have had an effect on the results, although this amount of

exposure was small. This study highlights that relationships with others may be strengthened as a result of LKM practice, but in this case, it is not clear whether the findings were solely as a result of LKM practice, and what the longevity of these effects might be following the 7 minutes.

Building on this study, Stell and Farsides (2015) used a similar methodology but focused more on the potential LKM has for discrimination, by having Black individuals being the target of the meditation. Following this, participants completed Implicit Associations Tests and found that there was a reduction in bias to Black individuals, considered in this study to be an ethnic minority. When testing a different ethnic minority of Asian populations however, there was no reduction in implicit bias. This has positive impacts for the potential of the practice in improving relationships and reducing discriminatory beliefs, but this may be dependent on who the practice is directed to.

Similarly to the studies above, Hunsinger, Livingston and Isbell (2012a) explored the notion of 'affective learning' which looks at associating positivity or negativity with neutral stimuli, through repetition of pairing, and is linked to how we form attitudes (Cacioppo *et al*. 1992). Hunsinger, Livingston and Isbell (2012a) found that after a relatively short exposure to LKM of an hour across three days (20 minutes per day), there was an increase in the association of positivity with neutral stimuli. This suggests that the practice could have an ability to influence attitude formation in a positive way, which could impact on relationships with the self and others, and how meditators act around, and in response to, others. The authors attributed this to the emphasis that LKM places on cultivating the desire for all beings to experience love and compassion. They also suggested that further research was necessary in the area to explore this further, and questioned whether LKM could have an effect on prejudice through decreasing negative associations. Lastly, Leiberg, Klimecki and Singer (2011) used a prosocial game to explore the effects of meditation on giving behaviour. They found that after around six hours training of LKM in one day, there was an increase in giving behaviour when compared to a control group who took part in a

memory based game. Measures were taken one-two weeks before the day of meditation and two-five days following the practice day.

The above studies suggest that LKM has an impact on levels of empathy and compassion, how we relate to others, which is measured through implicit and explicit positivity to others, affective learning, as well how prosocial the individual is. Should LKM have a long lasting impact on these kinds of outcomes, then the practice would be of benefit in a number of specific scenarios, as well as with general public.

2.3.2. LKM applied in specific settings

Research on LKM has commonly explored the impact of LKM in a specific scenario, where the author believes the application of LKM would be particularly useful. This is due to the focus on self and others, which may be viewed as particularly useful in some settings. Additionally, this could be due to the relatively small evidence base which means the outcomes of LKM are relatively unknown. As such, a number of smaller, pilot studies or feasibility studies have been conducted, to see where the practice may be most useful.

For example, Shahar *et al*. (2014) explored the impact of LKM with individuals who scored highly on self-critical perfectionism. The sample were assigned to an LKM or wait-list control group. LKM was chosen as a possible intervention for these individuals due to its focus on kindness and compassion to the self, as being a way to help reduce levels of self-criticism. Reductions in self-criticism and depressive symptoms were observed, as well as increases in self-compassion and positive emotions. Another application has been with those who suffer from chronic back pain. Those who engaged in an eight-week LKM intervention saw a reduction in reported pain, psychological distress, and anxiety, compared to a control group (Carson *et al*., 2005). LKM was chosen in this case due to the impact that mindfulness has on reducing levels of pain, with the addition that LKM has on reducing negative emotions which can make coping with pain worse.

Loving Kindness Meditation has also been applied in clinical settings, with individuals diagnosed with schizophrenia. Johnson *et al*. (2009) explored the

feasibility of using LKM with people with schizophrenia with positive findings, which led to a follow up study, Johnson *et al*. (2011), who ran LKM classes with a group of individuals with schizophrenia in an uncontrolled design. Participants reported increases in the intensity and frequency of positive emotions and decreases in negative emotions and increases in self-acceptance and satisfaction with life were also reported.

Another clinically based setting is using LKM with Health Care Professionals (HCPs). A review study looking at LKM by Boellinghaus, Jones and Hutton (2014) looked at the impact of Mindfulness Based Interventions (MBIs) as well as LKM on HCPs. There was limited use of LKM with HCPs in particular, and so the review broadened its criteria to include other samples, and were focusing on outcomes around self-compassion and other-focused concern as being relevant to HCPs. The authors suggested that, based on the positive impact of LKM on self-compassion and other-focused concern from non-clinician samples, that there was potential for LKM to be useful with this population. As with the Shonin *et al.* (2013) review, the authors here also highlighted that more rigorous research would be beneficial.

Other applications include using loving kindness with incarcerated populations. Shonin, Van Gordon, Slade and Griffiths (2013) conducted a review of studies that used meditation with incarcerated populations to explore the rehabilitative influences that 'Buddhist derived interventions' (BDIs) may have. This included mindfulness and Vipassana based programmes, as well as some compassion and loving kindness based interventions. The review suggested that benefits of the BDIs in those settings included reducing substance use and negative affect, and improving self-esteem and optimism. The authors highlighted however that the studies included in the review primarily focused on mindfulness and Vipassana techniques, but that loving kindness may also be beneficial in those settings. The authors also commented that research would benefit from improved quality before firm conclusions on the benefits could be drawn.

The applications of LKM presented here are examples of instances where LKM was seen as beneficial for a certain group or purpose. The resulting

outcomes of these applications suggest that LKM is useful in situations where improved relationships with the self or others, increases in positive emotion, decreases in negative emotion, and kindness to the self are viewed as beneficial for the target population. This research is valuable in highlighting some of the ways LKM can be applied in specific settings. This adds to our understanding of the practices' outcomes, but only in certain situations with specific groups, for a specific purpose. However, the review papers in particular, highlight the need for more rigorous methods and study design in order to clarify the impact of the practice. Researchers should be careful to highlight the design, intervention where appropriate, as well as the target group in these types of study to make it clear in which circumstances, and with which groups, the learnings from these studies can be applied.

2.3.3. LKM and cognitive based measures

Other impacts of the practice which may be less expected, are cognitive or attention based effects. Due to the emphasis all meditation practices have on attending to *something,* whether the breath, a phrase or mantra, meditation practice often results in increased levels of attention or concentration, and is something that is found as an outcome of Mindfulness Meditation in particular (Chiesa, Calati, & Serretti, 2011; Moore, & Malinowski, 2009). While the expected outcomes of LKM practice may be based around affective outcomes due to its focus, there may also be cognitive effects. Research exploring this appears to present contradictory findings on the effect of LKM, however studies vary in what form of attention or cognitive control they measure which may account for this.

One way of measuring attentional control is through as task called the attentional blink. Shapiro, Arnell and Raymond (1997) explain that this is a test where stimuli are presented in quick succession. When the period between the two stimuli is approximately 500ms, participants are not able to correctly report the second stimuli even if the first was correctly identified. They are able to identify the second if they are asked to ignore the first, or when the time between the two is increased. This has been labelled as the attentional blink and is understood to be as a result of competition for

attention and allocation of the attention to either stimulus. To test LKM's effect on this, Burgard and May (2010) asked participants to listen to an 8-9 minute audio file of either LKM or relaxation before the study trials began. Following this were 2-3 minute repeats of the audio in between trials. Analysis found that LKM did not have a significant effect on the attentional blink.

A different form of cognitive ability, the Stroop task, which measures selective attention and cognitive adaptability (Homack & Riccio, 2004), has also been used to test the effects of LKM with more of an effect being observed. The task presents participants with a series of words such as 'blue', 'red', 'green' which in some cases (congruent) are presented in the same colour text as the word describes e.g. 'blue' written in blue ink. In other cases (incongruent), the word is written in a different colour to the colour that it describes e.g. 'blue' written in green ink. When explored with LKM, Hunsinger, Livingston and Isbell (2012a) found that after three days of teaching Loving Kindness Meditation to novices, which amounted to 60 minutes in total (20 minutes over three sessions), those in the meditation group were significantly quicker in categorising the words on both the congruent and incongruent versions of the task. Findings also suggested that those who were in the meditation group were less 'affected' by the task, indicating improved attentional control, as the difference in times between the congruent and incongruent versions of the trial were significantly less than for those in the control group.

In contrast, Helber, Zook and Immergut (2012) did not find a significant difference between a meditation group and a control group on executive function, measures of which include the Stroop test. Students were taught mindfulness and loving kindness for 10 minutes twice a week as part of a class, for a semester. Results suggested that while the combination of meditation types did improve performance on the stroop task, the control group also improved, and there was no significant difference between the two groups. The authors suggested this could be due to the small sample sizes resulting in low power. Additionally, they suggested it could be due to the variance in the amount of time participants spent meditating outside of

the class based sessions. Further analyses revealed that amount of time practising outside of the sessions predicted change in performance, and therefore the variance in this factor may have impacted on the non-significance between groups. While there may be no difference between the meditation group and the control in this case, it is also not clear what role LKM may have played in these changes, as it was combined with mindfulness practice.

When it comes to LKM's impact on cognitive ability, findings are mixed, and may be dependent on the form of measurement and what type of cognitive ability is being explored.

2.3.4. Biological and neurological measures

Lastly, research has also started looking at the impact LKM is having in terms of changes to the body.

For instance, research suggests that LKM may help slow ageing through exploration of the length of telomeres, a genetic indication of acceleration of ageing. Hoge *et al.* (2013) explored the length of telomeres between a group of 15 LKM practitioners and a group of 22 non-meditators who were matched for gender and education level. DNA sampling found longer telomeres in the meditation group as compared to those in the control group, which was a significant difference for women but not men, in which the telomere length was slightly shorter for males in the LKM group. Reasons for the gender difference were unknown, with one suggestion from the authors being that it could be due to the overall time spent meditating, which although not significantly different, was much more for women (598 hours) than men (368 hours). Authors also suggested that the results could not be attributed solely to LKM, as those in the LKM group engaged with this as part of a wider Vipassana practice.

Other research has looked at blood pressure and heart rate. Kemper, Powell, Helms and Kim-Shapiro (2015) explored the impact that LKM may have on nitric oxide levels, which is involved in mediating decreases in blood pressure. The study compared experienced and novice meditators and found

that experienced meditators had higher nitrate levels, lower heart rate and lower stress levels in comparison to novice meditators. The findings suggested that engaging with LKM practice increases nitric oxide levels, reflected in the lower stress and heart rate levels. However longer term studies were called for to explore the mechanisms involved in the changes further.

Research has also begun looking at neurological changes associated with LKM. For example, research by Lee *et al.* (2012) looked at neural activity of both Focused Attention Meditation (FAM) and LKM, finding that the effects of both practices on brain activity when processing affective stimuli was different. The LKM group showed activation in areas of the brain associated with emotion processing, which could have an impact on emotional regulation and production of positive emotion as a result. This was in comparison to the FAM group, who saw activation in different areas of the brain, which led to the conclusion that while both forms of meditation influence emotion processing, but that they do so using different neural pathways. Additionally, Leung *et al.* (2013) looked at changes in the brain regions with experienced LKM meditators. Compared to novices, the meditation group had more gray matter in areas of the brain; right angular and posterior parahippocampal gyri, which is associated with cognitive empathy. The authors also commented that change in this area of the brain has not previously been seen as a result of meditation, and therefore suggests that this may be as a result of LKM in particular. There was also increases in other areas of the brain that have been seen previously as a result of meditation, but the unique increases indicate that LKM may have particular impact on affective regulation.

Research into the neurological and biological changes that occur as a result of LKM are limited in number, and additional research in this area is needed. However existing research in this area suggests that LKM may have a positive impact on ageing and reducing blood pressure and heart rate. Additionally, the practice may manifest in increased activity in areas of the brain associated with affective regulation, and it may also have impacts that

are unique to that form of meditation, but additional study is needed to expand the area.

2.3.5. Summary of LKM outcomes

The aim of presenting the above overview of research was to highlight the range of research on LKM which exists. What can be surmised is that the research is wide ranging in terms of outcomes that the research focuses on, but that which has been conducted suggests that LKM is beneficial in a number of settings, using a number of different measures. The research is varied in focus in terms of the outcomes that are measured, and the samples in which LKM is being tested, as well as whether LKM is being used alone or in conjunction with other practices which impacts on what we can conclude based on the practice (expanded more in section 2.4.1.). The research presented in this section, 2.3 indicates that the practice impacts on affective and relational measures, may have an impact on cognitive control and biological measures, and is beneficial when used with a specific sample, for a specific purpose.

The variation and overall lack of previous research on LKM shows that the practice is beneficial. However, the range of research, and the overall small number of studies that make up the research base, support the need to conduct research in this area, to continue to learn more about the practice. Additionally, where the practice has been applied in very particular scenarios, it is difficult to ascertain the impact of the practice on more general public samples, who may also benefit from engaging with the practice. Using some of the same measures seen in previous research, in this thesis, with more general public samples, will enable an opportunity to affirm further some of the previous effects and further our knowledge of this seemingly influential practice. As such, the summary of research given in this section, 2.3, supports an overall need for additional research exploring the impacts of LKM, which is one of the aims for the thesis.

The next section, 2.4, explores the research presented in section 2.3 in more detail, as, when looked at in more detail, there were a number of differences identified across the research base, that would influence the summary just

given, on the impacts of LKM. Some of the variation is in research design, which is anticipated across different studies and researchers, however, the differences identified in section 2.4 impact on the validity of the research in its exploration of LKM. The analysis given in section 2.4 therefore helps us to reinterpret the evidence base on LKM, and argues that before further testing is done on the impacts of LKM, that research should establish what the practice is, to ensure that research looking at LKM is reflecting a practice as defined by those who practise it.

2.4. Differences across literature

The following section, 2.4, therefore presents different elements of existing research which impact on our understanding of LKM within a research context, as well as how we understand its effects. This culminates in a need for the other aim of the thesis, which is to understand more about practitioners' views and experiences of the practice. The main differences identified are split into (1) whether LKM is studied alone or in conjunction with other practices. (2) the focus or direction of the practice, and (3), the timescales and amount of exposure to LKM. This section argues that while we may get an impression of the impact of the practice from existing literature, the differences observed across the literature base cloud that impression.

2.4.1. Relation to other practices

In terms of how LKM relates to other forms of meditation, comparison has been drawn between LKM and Mindfulness. The development of the *Brahmavihara*, which includes loving kindness, are attributes that are said to underlie mindful awareness, specifically the non-judgemental aspect; without the development of these four qualities it is suggested that negativity can interfere with mindfulness (Hoffman, Grossman & Hinton, 2011). As such some believe that the two practices of Mindfulness and Loving Kindness are linked (Salzburg, 2011; Hoffmann, Grossman & Hinton, 2011). The practices do however have differing foci, with LKM being more emotion-focused practice, in comparison to an attention or cognitive based practice such as Mindfulness (May *et al*., 2011). Thus, while the practices may be linked and

may result in similar or the same outcomes in some cases, to understand LKM, it is beneficial to see how it relates to other meditation types in terms of the impact it has. This allows us to see what particular impacts the practice has in comparison to other forms of meditation.

In regards to research and how LKM is studied, in some studies, LKM is engaged with as a practice on its own (Hunsinger, Livingston, & Isbell, 2012a; Hutcherson, Seppala, & Gross, 2008) and in other cases it is used alongside other practices such as Mindfulness Meditation (Elwafi, Witkiewitz, Mallik, Thornhill, & Brewer, 2013; Helber, Zook, & Immergut, 2012; Weibel, 2007). In cases where research is done with existing meditators, there are also examples of where the sample practice LKM, but as part of, for example, a wider Vipassana practice (Hoge *et al.,* 2013). Some studies group LKM with other related practices; Buddhist Derived Interventions or BDIs (Shonin, Van Gordon, Slade & Griffiths, 2013), or use LKM as part of a wider intervention such as the 'best-self visualisation method' (Schussel & Miller, 2013).

In addition, a review study looking at LKM by Boellinghaus, Jones & Hutton (2014) included studies if they looked at 'LKM', 'self- compassion', or 'other-focused concern'. This combination could be due to the lack of research in the area exploring the effect of LKM on Health Care Professionals, or the inconsistency in views on what LKM practice is and involves, and consequently the practice can become grouped with compassion based meditations or similar practices. It is not the grouping of practices that presents an issue in wider research, but the possible inconsistency in the actual effects which can be attributed to LKM. This results in the overall picture of effectiveness of LKM as an intervention or practice being unclear.

An example of a study which used existing meditators is one looking at differences in telomere length between individuals who practise LKM and a control group conducted by Hoge *et al*. (2013). The sample consisted of individuals who had over four years of experience with Loving Kindness Meditation, with almost daily practice as part of a wider Vipassana practice. Authors suggested that results, which found longer telomeres in the meditation group compared to the control group, could not be attributed

solely to the LKM practice as it was practised as part of a wider Vipassana practice. Similarly, Hunsinger, Livingston and Isbell (2012b) explored the relationship between meditation and racial prejudice and grouped participants into groups depending on their experience. They were assigned to either the meditation group if they had experience in compassion based meditations which included Loving Kindness practice, or the control group if they reported not having any meditation experience. However, it is not clear what proportion of the meditation group practised LKM as opposed to other compassion based practices. The findings, while encouraging, do not allow us to make any firm conclusions on LKM's role in the relationship between meditation, racial prejudice and empathy, as the sample was not just those who had experience in practising LKM. This study also highlights one of the ways in which LKM is explored in research, in that it is mentioned as one practice that is grouped within 'compassion based' practices. As such, there may be outcomes of LKM that we are not aware of from the title of papers if they talk about compassion practices, but equally, we may attribute outcomes to LKM when they may not be appropriate.

Another practice LKM is often grouped with or studied alongside is Mindfulness, with some highlighting the link explicitly. LKM forms part of the MBSR programme, being the focus of the session for one of the eight-weeks (Weibel, 2007), and Kabat-Zinn (1995) states that loving- kindness is "the ground of mindfulness practice" (p. 5). The use of multiple practices in one programme again clouds our understanding of certain practices and what they may be adding to the programme. An example of where there is overlap is in Weibel (2007), who taught LKM to novices over 4 weeks with self-compassion and compassionate love being measured as DVs. The link between Mindfulness and LKM was presented in the study, which highlighted that some authors consider them to be very similar practices, and as such a mindfulness practice with a little LKM incorporated within it, suffices over a 'formal' LKM practice. While LKM was seen as a separate practice, Mindfulness Meditation (MM) was also taught as part of the intervention with equal amounts of each practice being taught from the outset. There was then a bias towards LKM being taught more in the formal sessions as the four

weeks progressed. However, outside of class time MM was practised on average more (M=37.35 minutes per week) than LKM (M=28.36 minutes per week). Although the intervention found that the LKM group had increased levels of compassion and self-compassion, the findings cannot be solely attributed to LKM as mindfulness was practised on average more than LKM across the sample, and so the improvement could have been seen as a result of either practice, or perhaps a combination of the two as opposed to one alone.

While this does not happen in every study, it is worth highlighting as a potential confound in our understanding of the effects of LKM; if we do not have a consistent understanding of the name or translation of the practice, as well as whether it is a practice to be explored alone, then understanding the effects of this can be confused. The studies presented above show multiple ways in which LKM is viewed in research terms, both when teaching it to novice students (Weibel, 2007), but also when exploring longer term effects in existing meditators (Hoge *et al.* 2013), as well as grouping LKM within broader terms such as compassion based interventions. These groupings don't allow us to understand the intricacies of each practice and what they may add when combined with one another.

Thus, research that explores the impact of the practice, needs to look at LKM alone, without any additional practices, to see what effect it might have to add to our understanding of the practice. It may be that the outcomes found in the above studies are also observed when LKM is engaged with on its own, but it may be that some of the observed outcomes come from other aspects of other practices. We may be attributing outcomes to LKM when these are not realistic, which could become damaging if applied in situations where those outcomes are specifically hoped for.

2.4.2. Focus of LKM practice

The focus of the LKM, presented in section 2.2, typically include the self, a loved one, a stranger or someone neutral, an 'enemy' or someone you find difficult, and the whole world (Thera, 2011; Thondup, 2009). Given the differences in how it may be to engage with each of those target groups, in

that the self could be challenging, as compared to the loved one, the focus or direction of the practice could have an impact on the outcomes of the practice. This focus on different groups of people and the well wishes that are directed to these groups, is what makes LKM different from other meditative practices and is therefore an important aspect of the practice. In research however, when asking participants to engage in LKM practice, all five of the groups are not always included. For example, some studies only focus on some of the groups e.g. the neutral stimuli only (Hunsinger, Livingston & Isbel, 2012a), on loved ones and neutral individuals (Hutcherson, Seppala & Gross 2008) and on the 'self' only (Schussel & Miller, 2013). In comparison, other studies ensure that LKM is directed towards all target groups (Leiberg, Klimecki & Singer, 2011; Carson *et al.* 2005; Weibel, 2008).

Of those studies that cover all of the groups of LKM, Leiberg, Klimecki and Singer (2011) ensured that participants in the LKM group directed LKM to all groups, even though the actual exposure time to the practice was all in one day. Over a six-hour period, participants engaged with 15-30-minute-long meditations, with breaks in between, and used phrases such as ''May you be happy'' and ''May you be safe'' which reflects the traditional phrases. Results showed that helping behaviour had increased in those who had engaged with LKM when compared to an active control group who engaged in a memory training task. Similarly, Carson *et al.* (2005) asked participants to direct LKM to all groups of individuals and also used similar phrases as suggestions for participants to use, over a much longer period of eight-weeks. These two studies show that research can include all groups of LKM practice, regardless of timescale of the study. It may be expected that it is typically the longer studies which include all of the groups, however as Leiberg, Klimecki and Singer (2011) show, this can also be achieved over shorter studies.

In comparison, an example of where the focus has been limited to one or two of the groups is in Hutcherson, Seppala and Gross (2008). Participants were either in an LKM group or an imagery group. Those in the LKM group were asked to imagine two loved ones beside them and then to open their eyes and to direct this to the picture of a neutral person they had in front of them.

The imagery condition was similar, but instead of imagining loves ones, they imagined people they know and focused on the shape and features of the face of the person in the picture they were focusing on. Each of these exercises was only 7 minutes long. The authors concluded that just a 7-minute session of Loving Kindness Meditation had a significant effect on both implicit and explicit measures of positivity towards strangers and questioned whether the practice could have real-life implications and play a part in decision making. The way in which LKM was presented was very brief, and only focused on sending feelings of Loving Kindness to loved ones. As such, the conclusions drawn from the practice in this case, may only be specific to the focus on the loved ones, and does not help us to draw conclusions on the impact that the practice might have in its entirety.

A follow up to Hutcherson, Seppala and Gross (2008) was conducted more recently by Stell and Farsides (2015). They used a similar methodology but focused more on the discrimination impact of the practice, by having black individuals being the target of the meditation. They then conducted Implicit Associations Tests and found that there was a reduction in bias to Black individuals, considered in this study to be an ethnic minority. When testing a different ethnic minority of Asian populations however, there was no reduction in implicit bias. This suggests that when exposed to LKM over a short period of time, discrimination or racial bias can be reduced if they are the direct recipient of the practice. However, this does not extend to other groups of individuals who could be considered to be an outgroup. The expansion of LKM to different groups may therefore only be as a result of exposure to all groups of the practice; the whole world for instance, would include all beings, and as such different ethnic minorities would be included here. This highlights the importance of focus and direction of the practice; if differences are only seen as a result of direct focus, then studies which employ only one or two of the target groups may not manifest in extending kindness to every being. If the whole practice is engaged with, then all beings, including those who we find difficult, would be included, and as such, it is less likely that there would be a reduction in discrimination to some

ethnic minorities, but not to others. Therefore, we should be careful to include all foci of the practice if kindness to everyone is to be attained.

This section shows the variety in focus of the practice across research, in some cases this includes all groups, and has positive outcomes as a result. These studies, we would assume, can be relied on more in terms of drawing conclusions based on LKM as an entire practice. Other studies however engage with differing foci of the LKM practice, which in some cases has led to improvements in outcomes such as discrimination, but this was limited to certain groups. It may therefore be that in order to attain those benefits highlighted in section 2.2 from the traditional texts, the entire practice needs to be engaged with. However, we know very little about the impacts that each focus of the practice might have, and so those studies that use fewer groups in their practices, may be employing a less valid format of the practice, which skews our understanding of the impacts of LKM.

2.4.3. Timescale and intervention

Closely related to the focus of the meditation, is the timescale used in the studies. This refers to how long participants are asked to engage with LKM, when this is included in the research design. The time frames in existing research range from very short exposure to the practice; around 7 minutes (Hutcherson, Seppala & Gross, 2008), 8-9 minutes (Burgard & May, 2010), 6 hours across one day (Leiberg, Klimecki & Singer, 2011), one hour across 3 days (Hunsinger, Livingston & Isbell, 2012a), through to four weeks (Weibel, 2007), and anywhere between six and 12 weeks (Carson *et al.,* 2005; Johnson *et al.* 2011; Kearney *et al.* 2014; May et al., 2011; Shahar *et al*., 2014) which are most in line with the length of mindfulness based interventions e.g. MBSR which is 8 weeks long (Santorelli, 2014).

At the shorter end of the scale, when exploring the effect of LKM on cognitive ability, in this case the Stroop effect, Hunsinger, Livingston, and Isbell (2012a) randomly assigned 97 students to either an LKM group or a control group, all of whom were students novice to meditation. The LKM group were taught LKM for an hour in total. This was split into 20 minute sessions, delivered across three days. During the sessions they covered the self, those

they were familiar with, and the whole world. Results showed that LKM did have an effect on reducing the effect of the Stroop ask and therefore it could be assumed that LKM has an impact on attentional control. While the outcomes are being attributed to LKM in this case, it may be that LKM does have an effect on cognitive ability, but the short time frame in which LKM was taught may have an impact on the longevity of those effects.

Another study that has similar short exposure to LKM is Burgard and May (2010), who asked participants to listen to 8-9 minute audios of either LKM, or a relaxation, before trials measuring the attentional blink began. Participants also listened to 2-3 minute repeats of the audios in between trials. Results showed that LKM did not have a significant effect on the attentional blink, when compared to the relaxation group. Authors suggested that the lack of findings may be due to the control group having relaxation as a practice, but other suggestions included the effect of the practice time being too short and a call for longer time practising prior to the trials. The findings did not support the hypotheses but that's not to say that LKM might have an effect on attention and the attentional blink in particular, as the exposure to LKM was so short that it had little time to have had any effect.

While the Stroop task and the Attentional blink are not the same task, they do both look at attentional control and the ability the individual has to attend to a task or stimuli. The contrasting finding that LKM did have an effect on Stroop but not Attentional Blink could be due to the different type of test used, as suggested in section 2.3. However, it could also be due to the length of time that participants engaged with the practice. The positive finding on the Stroop task was following 60 minutes, compared to just 9 before the attentional blink task. The short amount of time exposed to the practice, as well as the differing methods both studies employed in teaching LKM to participants, suggests that research needs to be conducted over a longer period of time to assess whether the effects found are from the meditation and to assess any enduring benefits of the practice.

In comparison to the above studies, one of the longest studies in terms of length of time that participants are asked to engage with LKM is Carson *et al*.

(2005), who explored the effects of LKM on chronic back pain over eight-weeks. Forty-three participants were assigned to one of two groups, an experimental group who engaged with LKM, and a control group who received standard care. The experimental group engaged with 90 minute sessions once a week with the guided meditation sessions including all targets of the traditional practice; a loved one, the self, a stranger, a difficult person and the whole world. The way this study was designed is very similar to the Mindfulness based interventions in length and also content of sessions; in addition to the guided meditation were discussions around topics such as forgiveness and resentment, participants' experiences of LKM and supplementary practices such as body scans. Those in the meditation group also kept daily treatment diaries and were encouraged to practise on a daily basis with guided audios to support this.

The length of time in which participants in Carson *et al.* (2005) were exposed to LKM is vastly different to shorter studies, which is likely to culminate in differences in terms of observed outcomes, as well as the longevity of these. There may be an impact of LKM over a short time period, but it could be misleading to draw conclusions on the basis of 8-9 minutes of practice, in terms of long lasting change within the practitioner. The longer studies are likely to be resulting in more of a change in the participant, which could then be disseminated to general public audiences as a more realistic outcome of long term practice. However, caution also needs to be taken when drawing assumptions from interventions which have been applied in certain settings such as Carson *et al.* (2005); while this study showed a positive impact, this was with a group of individuals who had chronic back pain, and so a general public audience may not see the same level of being able to cope with pain they may be experiencing. In addition, the additional aspects that participants were engaging with in terms of the treatment diaries and additional practices, may also have had an impact on the outcomes, and therefore we cannot attribute these outcomes solely to LKM.

The longer studies tend to be set up more as an intervention or programme, as opposed to the shorter studies in which less time is spent meditating. These are often developed for a purpose, where LKM is seen as being of

benefit to a specific group or purpose, but in other cases this can be to just explore the effects of the practice have longer periods of time, with populations who could be considered more of a general public group. For example, Császár (2012) developed a 6 week LKM programme for student teachers, specifically for the purpose of reducing levels of stress within this group of individuals with the hope that this would become a preventative measure. The wait list control design meant that those in the control group received their 6-week programme after the other half of the sample had received their programme in weeks 6-12. Participants were provided with CDs that had instructions as well as guided LKM audios, with no face-to-face sitting groups. They did however have a meeting with the researcher every two weeks during the process should they have any questions or make comments. In comparison Weibel (2007) developed a four week LKM programme used with undergraduate students. This consisted of weekly 90 minute face-to-face sitting group sessions, which included guided meditations, psychoeducation and discussions. Examples of the psychoeducation topics included quantum physics, transpersonal psychology and psychoneuroimmunology, for the purposes of highlighting that compassion and kindness are natural and promote happiness and positive affect. Lastly daily practice was also encouraged outside of the weekly sessions.

While these studies are both longer, they are designed differently; Császár (2012) could be considered to be more intervention based given its focus on wanting to be a preventative measure for managing stress with a group of student teachers. However, in terms of contact time with the participants, this was much less than is seen in mindfulness based interventions which are typically 2.5-3.5 hour face-to-face sessions (Santorelli, 2014). Weibel's study was not specifically designed for a purpose or specific group, however, it did include face-to-face longer sessions which include psychoeducation and discussion during the sessions. This creates a more structured programme for participants to engage with, and has a level of control over what participants are practising, as well as regular contact for support and a group to share the experience with. While this may provide more of a structure and

perhaps a more engaging experience for participants, it does have the added elements of psychoeducation and the group meetings which may manifest in change in addition to LKM, which Császár (2012) does not have. There are therefore different ways in which LKM has been researched when it comes to length of time, but also for the longer programme based designs, differences also exist in terms of how much face-to-face interaction there is, whether participants meet as a group, whether other practices or activities are included, all of which may have an effect on some of the observed effects from the practice.

The studies explored here show the diversity in length of time in which participants are introduced to LKM and asked to practice, but also in the aim of the study as being for an application with a specific group of individuals for a specific purpose, or whether this is more for developing programmes for more general wellbeing. Some of the above longer studies were developed for use with a specific group, through identification of a specific issue or problem, which the researchers thought LKM would help overcome. All studies found positive findings as well as some negatives, which are all promising outcomes, but in most cases are very specific uses or applications of LKM. Therefore, while there are a number of positive outcomes, these are with specific groups of individuals, so we have to exert caution when disseminating and drawing conclusions. Additionally, we know little about the impact of exposure to LKM, and the influence this might have on the observed outcomes straight after the practice in the research, as well as the longevity of those outcomes. As such, some of the shorter-length studies may not be testing LKM over a long enough period, for conclusions to be drawn on the observed changes, as these may be fleeting changes, as opposed to anything more substantial.

2.5. Summary

In this chapter I have argued that the existing research on LKM is inconsistent, which could cloud our understanding of what LKM is, and the impacts it has. This presents a gap in the literature, that the four studies in this thesis help to fill. In particular, section 2.3 presented what we currently

know about LKM, and the impact the practice can have. The research base for LKM is small in number, and is also varied in what outcomes the research seeks to explore, as well as the samples that are used. Some of the research looks at very specific applications of LKM, whereas others look at more general public samples. This variation in research, and the small number of studies, combined with the positive outcomes that have been observed, provide support for additional research to be conducted in this area. This provides support for the latter two studies in the thesis. However, when looking at the literature in more detail, differences emerged in how the practice was implemented across the studies, that raised questions over the validity of some of the conclusions that were being drawn as a result of LKM.

Section 2.4 therefore adds depth to the overview of literature, by highlighting where these main differences lay in terms of view and perception of LKM, as well as differences observed in the method and design. The first of these is whether the practice is studied as a practice alone, or in conjunction with others. The way the practice is implemented alongside a practice such as mindfulness is not the issue, it is more that the conclusions may be drawn based on LKM, when the resulting outcomes may not be solely due to that practice. Similarly, conclusions that may be due to LKM can sometimes be missed where terms such as compassion based practices include LKM, but this is not clear from the outset. The range of ways LKM was labelled or implemented may link back to the lack of direct translation as mentioned in section 2.2, and also speaks to some of the confusion that surrounds the practice in terms of research, evident in the range of ways it is talked about and implemented.

The other ways that LKM research differed were in relation to the study designs. These were mainly that there were differences in the focus of the practice used in research, as well as the time scales and exposure that participants had of LKM, before measures were taken. When it comes to the design, differences here may be more influential in how we can conclude the impacts of LKM. For instance, the studies that do not include all five groups that are typically included in the practice, may find different results to those that include all groups. Should conclusions be negative, but from those

studies that only look at part of the practice, this could be damaging for the practice in general, in how it is implemented in the future. Not enough is known about the different foci of the groups individually, to know whether focusing on one or two of these, has different impacts compared to the entire practice, for these designs to be acceptable.

Additionally, and closely related, was the amount of exposure that participants had in practising LKM. This varied across the research, and confuses from which studies we can conclude long term, or short term effects from. This results in a reframing of the literature base, as being less reliable in terms of being able to draw conclusions on the impact of LKM as previously thought. Before conducting further research on the practices' impacts, and given the range of ways the practice is engaged with in research, it was therefore important that research is conducted on discovering more about what the practice is, and its core components, before moving forward exploring the impacts.

To understand more about the practice, the use of existing practitioners would help gain depth and understanding about the practice, how it is practised day to day, as well as the perceived effects of the practice. This not only helps to identify an impression of the practice from a western practitioner viewpoint, but also helps to identify some of the outcomes that could be tested in future research, from existing practitioners' perceived effects. Instead of going ahead into affirming some of the previously observed findings, I decided therefore, to explore what the practice is, and how it is understood by existing, long-term, practitioners. This would allow for an in depth view of the practice, from individuals who have been practising over long periods of time

Chapter 3: Methodology and methods

3.1. Mixed methods

Mixed methods is the combined use of quantitative and qualitative data to explore an aim or aims (Hesse-Biber, 2010). It is an approach to research which takes multiple viewpoints, positions and standpoints into consideration, always including quantitative and qualitative approaches (Johnson, Onwuegbuzie, & Turner, 2007), and it has been called the 'third research paradigm', where quantitative and qualitative research paradigms form the first two (Johnson & Onwuegbuzie, 2004). While mixing of these two broad approaches to research has been done for more than 80 years (Pelto, 2015), there has been an influx of research using mixed methods over the last 20-30 years (Hesse-Biber, 2010; Fetters, 2016). This has resulted in a resurgence of interest into mixed methods, bringing up debates around what mixed methods actually are, and how long researchers have been using mixed methods within research.

Among discussions around mixed methods, Creswell (2015) highlights that it is not simply the use of qualitative and quantitative analyses, but the integration of the analyses in understanding the research question, with emphasis on the collective strength that can be gained from doing so. In addition, the combination of the qualitative and quantitative is said to "allow researchers to simultaneously generalise results from a sample to a population and to gain a deeper understanding of the phenomenon of interest" (Hanson, Creswell, Plano Clark, Petska, & Creswell, 2005, p. 224). The combination of methods should therefore add something to using one method alone. When considering which methods are most appropriate in answering research questions, mixed methods would place emphasis on using the method which works best to answer the research question, and is therefore normally associated with the philosophical orientation of 'pragmatism' which focuses on 'what works' (Teddlie & Tashakkori, 2009).

In response to this, one criticism that is raised regarding mixed methods research relates to the division of research paradigms as a whole. Symonds

and Gorard (2008) suggest that mixed methods' popularity, and resurgence of this, is as a result of the division and categorisation between qualitative and quantitative research. Symonds and Gorard (2008) therefore suggest that mixed methods is not appropriate, but this opinion is based on the thought that methods should not have been separated as much as they have been in the first place.

Given that the aim of this thesis is to conduct a holistic and complete understanding of LKM, I wanted to be able to use methods that were best suited to a range of research questions concerning LKM. This included broad questions exploring an understanding of the practice for which qualitative methods would be more appropriate, but also wanting to explore the effects of the practice over time, for which quantitative methods would be more appropriate. An ability to use the methods which were most appropriate in answering a range of questions, was therefore seen as beneficial in this case.

In terms of how methods can be combined, Creswell (2015) suggests that there are three basic mixed methods designs: (1) convergent design, where quantitative and qualitative data are merged and compared, (2) the explanatory sequential design where quantitative methods are used first, with qualitative methods used to help explain the results in more depth, and (3) the exploratory sequential design, where qualitative methods are used and then extended using a second, quantitative phase to the research. In this thesis, study one employs qualitative analysis of interviews, study two uses Q-methodology which is viewed as a mixture of quantitative and qualitative methods in one methodology (explored further in section 3.3), study three was quantitative, and study four was primarily quantitative with the addition of qualitative comments and reflections adding to the interpretation of the data. These methods were chosen based on what was most appropriate to answer each of the research questions, that created the overall thesis. If taken as an entire project, the overall research employs a mix of methods, which is achieved in some ways by using convergence, but also in some ways by using an exploratory sequential design, as some of the findings from the early qualitative studies feeds into the design of the quantitative studies.

When utilising mixed methods, Hesse-Biber (2010) suggests it is important to be reflexive throughout the research process, from design to write up, and gives guidelines on what to consider as part of this process. These include what the researcher's standpoint and analytic biases are, what experience you have with each method and how you will deal with divergence in findings if that occurs. My experience with each of the methods is detailed in the appropriate sections below, but my analytic biases will be presented here.

While I have used both qualitative and quantitative methods during my undergraduate and postgraduate degrees, and also taught both methods as part of my teaching role within the university, I have a tendency towards quantitative methods, finding it easier to analyse the data from quantitative data as compared to qualitative data. When conducting research however, I value the mix of methods to look at a topic from multiple perspectives, in order to fully understand it. I have experience in using mixing methods during my undergraduate dissertation, which used qualitative reflections and comments to add to the quantitative data that had been gathered, which I found beneficial in understanding the data and answering the research question. As such, when considering how to explore LKM for the current thesis, I was drawn to a mixed methods approach to achieve this.

In addition to the above transparency, Teddlie and Tashakkori (2009) stress that the results or analysis section can be crucial in integrating the methods used, in order to *better* understand the aims of the research. It was important therefore, that the combination of the methods was adding to understanding of using one method alone, and to ensure that the analyses chapters highlighted the integration of analysis that had taken place. To add to this, reflections on my experience and potential biases are highlighted at appropriate stages in the analyses sections, to be as transparent in my analysis as possible.

The sections following this (3.2 - 3.5) give an overview of each of the methodologies that were chosen, with the specific details such as sampling techniques and materials used in each case being detailed at the start of each of the associated analysis chapters (see sections 4.2, 5.2, 6.2, and 7.2)

3.2. Phase 1, Study 1: Interviews

This first phase of research was designed to explore how experienced practitioners understand their practice. A qualitative approach was seen as appropriate as this approach allows for depth and detail of participants experiences (Ashworth, 2008) which was key in gaining insight into what the practice entails. Interviews were chosen, as I wanted to gain an understanding of the lived experience of practitioners and their practice, because their stories are of worth, which interviews help gain (Seidman, 2006). Interviews were therefore chosen to meet the research aim, because of the interest in hearing from the interviewees themselves; their stories and how they understand LKM are valuable in understanding LKM and what the benefits of practice may be.

In keeping with the points made above on being transparent, my experience with interviewing includes research studies conducted during my undergraduate and postgraduate degrees. I also worked for a market research company and therefore conducted different forms of interviews, including one to one, pairs, trios and focus groups, with a range of ages, for a number of different purposes. I was therefore confident that I would be able to build a rapport with the participants. I was also confident in how to design an interview schedule, and in my ability to probe where necessary.

The method used to analyse the data from the interviews was thematic analysis (Braun & Clarke, 2006). The form of analysis is flexible and can take on many forms, such as exploring meaning across a data set, but also look at a phenomenon in depth, which means it is suited to a wide range of research questions and topics (Braun & Clarke, 2012). It is considered to be a foundational method within qualitative analysis, and is independent of theory or epistemology, so again is applicable in a range of approaches (Braun & Clarke, 2006). It can be defined as:

> Thematic analysis is best suited to elucidating the specific nature of a given group's conceptualisation of the phenomenon under study (Joffe, 2012, p. 6)

The aim of the current study was to explore practitioners' understanding of their LKM practice. The definition from Joffe reflects this aim, with thematic analysis being broad enough to allow for depth and variation in understanding to be explored, while not having to ascribe to a specific epistemology or theoretical background. There are few published guidelines on how to actually conduct thematic analysis (Joffe, 2012; Marks & Yardley, 2004). Braun and Clarke's (2006) guidelines are therefore a relied on source. More detail on the use of interviews, and the analytic steps of thematic analysis are presented in chapter four.

3.3. Phase 1, Study 2: Q-methodology

Building on the first study, this second piece of research widens the sample in terms of experience level, and looks to identify patterns of understanding of LKM. The question being explored in this study is whether there is consistency in understanding of LKM across a range of practitioners. In order to address this question, Q-methodology, a method which combines qualitative and quantitative elements, was seen as appropriate.

The previous study was conducted to establish a clearer insight into what the practice may entail. The findings from this, while very insightful, only give an overview of the main points of the practice from experienced practitioners' viewpoints. In order to build on this understanding, I wanted to explore whether different views may exist, and whether these may be due to level of experience with the practice, or possibly in how practitioners had come across the practice, i.e. through more traditional means or not. In order to do so, a wider range of participants was required, in terms of how long they had been practising, how they came across the practice and other demographic details such as age and gender.

A method that I thought would meet this aim of broadening the sample and identifying groups of opinion if they exist, while maintaining depth and understanding about the practice, was Q-methodology. Q-methodology was developed by William Stephenson and first introduced in Nature in 1935 (S. Brown, 1993). Since then it has been adopted by researchers as a way of gathering data on participants 'point of view' about a topic and identifying

where those points of view diverge or converge across the group of individuals. As such, emergent factors, which form the output from Q, give an impression of the 'socially shared viewpoints and bodies of knowledge' (Watts & Stenner 2005a, cited in Watts 2008, p. 37). This was therefore seen as an appropriate methodology to explore opinion and understanding of LKM that exists across a range of practitioners with varying levels of experience, to see where viewpoints may be shared and where they differ.

The only experience I had with this method before using it in this thesis was through being a participant in a Q study. This gave me insight into the procedure from a participant perspective which helped during the design process to ensure that the way it was presented was user friendly. It did mean however that I had no prior experience of how to analyse the data, and as such I attended courses on the method, both at the university of Northampton and externally at the University of East Anglia, detailed further in section 4.2.

In practice, Q-methodology involves participants being given a selection of statements to sort into a forced normal distribution from most strongly agree to least strongly agree/most disagree. The final sorted grid becomes a participants' data set and can be compared, using factor analysis, to other participants' grids to identify patterns within a sample. Factor analysis uses patterns of correlations to explore a sample of individuals' responses to a number of scales to look at the relationship between those measures (Dancey & Reidy, 2004) and so the participant becomes quite passive in the process as the focus is on the measures and how they co-vary. The focus of Q-methodology sees the participants as more active than passive, as the focus is on participants' understanding or perception of a phenomenon; the items they are being asked about, are being moved around by the participant as opposed to the participant being scored by the test and items (Stenner, Watts & Worrell, 2007). Therefore, factor analysis in the case of Q, is used to identify patterns in the sorting of the entire set of statements, to understand what variance in opinion exists about a topic. As Stenner, Watts and Worrell (2007) suggest, Q is "less a measure, than a vehicle for the controlled expression of subjectivity" (p. 218), which sees the participant as central to

the process, with the resulting outcomes being an identification of patterns in understanding.

As a result of the participant being active in the process, and the subjective nature of the sorting, the process can be lengthy. It requires participants to think carefully not only about each statement and whether they agree or disagree with it, but also how each statement relates to the others in the grid; whether they agree or disagree with statements, but also how each of these relates to the others. In this way, the sorting task is more than identifying the strength with which a participant agrees with something, that could be gathered through a likert response to an individual statement; the completed grid represents a well thought out, subjective understanding, opinion or attitude towards a phenomenon. To build on the previous understanding that had been gained from experienced meditators, Q-methodology was seen as appropriate in giving us a better idea of how practitioners understand their practice. This is due to its emphasis not only on measuring the subjective opinion from a range of participants, but also in being able to identify those patterns of understanding The outcomes should therefore allow for a more comprehensive picture of LKM to emerge.

In terms of a theoretical belief that underlies Q, Watts (2008) suggests that while there are indefinite numbers of viewpoints that could exist on a topic, that due to bodies of knowledge that already exist, people will likely form their ideas around one of these. This then creates the distinct factors that emerge with the analyses highlighting the extent to which individuals load onto these. Q sorts; the final sorted grid from each participant, when sorted in a similar way, reflect a shared understanding or opinion about a topic (Stenner, Watts & Worrell, 2007). The outcomes of Q-methodology, in the form of different factors which correspond to shared opinion, reflect a holistic identification of the range of distinct viewpoints on a topic (Stenner, Watts & Worrell, 2007). The identification of these factors, the measuring and discovering of these bodies of knowledge, is how Watts (2008) suggests that Q-methodology can be understood.

The methodology is a combination of qualitative and quantitative analyses (Akhtar-Danesh, Baumann & Cordingly, 2008), and has been labelled as 'quali-quantological' (Stenner & Stainton-Rogers, 2004) due to the employment of aspects of both broad distinctions of research, throughout the design and analysis. The qualitative aspects of the method explore how and why individuals think in a certain way, while the quantitative aspect allows for groupings of like-minded individuals to emerge (M. Brown, 2004). Subjectivity emerges at many points, including selection of the concourse statements (by the researcher) and where each of the statements is placed (by the participant). To some extent there is also subjectivity in the selection of the number of factors and how they are analysed and presented, both of which are done by the researcher. The method also makes use of the objectivity of factor analysis, which analyses the groups of opinion and the forced distribution which participants are asked to sort their statements into. Therefore, the method becomes a way of objectively measuring subjectivity which can split opinion in how it is received.

There has been a recent growth in its use (Cross, 2005; Akhtar-Danesh, Baumann & Cordingly, 2008) within the social sciences, health and education in particular, and for some, Q-methodology's strengths lies in how it "combines the strengths of both qualitative and quantitative research traditions" (Dennis & Goldberg, 1996, p. 104). However, the method has also been subject to criticism since its inception (S. Brown, Danielson & Exel, 2015). Criticisms range from the emphasis on subjectivity, and the reliability and generalisability of the data, given that the statements are opinion and not fact (Thomas & Baas, 1992 cited in Van Exel & Graaf 2005, p. 3). It is however suggested that generalisability in this case is not a main concern for the method, and that Q-methodology will reveal distinct viewpoints about a topic, and the amount of people who adhere to each one is of much less importance.

More recently, Q-methodology has been criticised for reasons such as the inconsistency in guidelines for sampling and sample size, for its use of factor analysis instead of cluster analysis, and for lack of use of interviews in the analysis of the factors, amongst others (Kampen & Tamas, 2014). These

criticisms are refuted by S Brown, Danielson and Exel (2015), suggesting that they are ill-advised and indicate a lack of understanding of the methodology. For the purposes of this study, the concerns regarding generalizability were of less concern given that the depth and identification of differences in understanding were the aim of the study. In order to address the lack of consistency in guidelines and the use of interviews as part of the method, I ensured that I referred to a range of available texts and I included an element of reflection about the process through open text boxes at the end of the Q sorting process, explained further in section 5.2.

On balance, Q method was seen as meeting the aim of the research question, in being able to identify opinion and understanding from a wider group of participants. I also believed that this method would complement and build on the findings from study one, in a way that would help provide clarity on what LKM is, and what its components may be, with a wider group.

3.4. Phase 2, Study 3: A study exploring the effects of an existing, online LKM programme

The third study addresses the second broad aim of the overall project, by exploring the effects of LKM practice on wellbeing. However, I felt it was important to explore the impact of the practice as it is realistically engaged with on a day to day basis. This quasi-experimental study therefore looked at exploring the effectiveness of an email based reminder, as part of a sustained 25-day online LKM programme. Measuring differences over the 25-day period allowed me to meet the aim of exploring the effects of the practice, but as this was an established programme, I did not have any input into how the programme itself was designed. This reduces the level of control I had in terms of building on studies 1 and 2 in how the practice was presented to practitioners, but does have the benefit of very high ecological validity, as it is an existing programme which has run previously, and which attracts a number of existing and novice practitioners.

The study also has the benefit of being able to explore a different mode of delivery. As suggested in chapter two, modern engagement with meditation

is often through apps, websites and the use of audios to support practice, and this is an example of an email based, online format. Looking at the impact of a different format of delivery, particularly one that is increasingly being engaged with gives insight into the impact that the practice might have with more general public samples. Additionally, the programme reflected a way of presenting LKM that was similar to that put forward by practitioners in studies one and two, and as such built on the findings from the previous two studies, to explore the impacts of a practice that was more reflective of how existing practitioners view their practice.

The existing programme also allowed for the effects of LKM to be explored with a range of practitioners, from novices to those more experienced, as the sample was drawn from whoever signed up for the programme. Some individuals had never meditated, some engaged in other forms of meditation. Others were experienced LKM meditators who wanted to commit to 25-days in a row of practice, and to join in with the community who were engaging with the challenge.

3.5. Phase 2, Study 4: A study exploring the effects of an LKM on wellbeing

This study was designed to further explore the effects of LKM on wellbeing. The last study looked at a mix of novices and existing meditators, to explore the impact of an existing LKM programme. I wanted to explore the impact of LKM on a group of novices and their wellbeing, and to include an active control group. This would help further understanding about the practice by exploring the impact over time on measures of wellbeing, but also by comparing the outcomes to other meditative practices, any differences in magnitude of outcome would identify where LKM differs in impact from other practices. Should there be differences in the practice types, this would further our understanding of LKM by identifying key elements of the practice.

It was important that the programme that was developed for novices was a reflection of how practitioners might engage with LKM in their day to day lives. As suggested in chapter two, we know the outcomes of particular

interventions with particular samples. However, we know less about what the impact of 'just' LKM practice might be. As such, I developed the programme to be as close to regular practice as possible, and ensured that it included elements of the previous three studies, as these helped form a basis of understanding about LKM.

Consideration of learnings from previous studies in this thesis, and wanting to explore longer term impacts of LKM than some of the existing literature, led to the development of an eight-week programme where the focus was on the practice in a group meeting once a week, with practice outside of the sessions, to reflect ways that practitioners may reasonably be practising following the programme end. This would help us understand more about the function of the practice as it might be engaged with by a number of general public practitioners. Should the impacts of the practice be positive it provides support for its use as a way of maintaining and improving wellbeing over long periods. As suggested above, the study explores the effects of two types of meditation: Loving Kindness and Mindfulness. The outcomes measured were affective, stress and attention based measures with a group of students.

3.6. Summary of methods

Sections 3.2 to 3.5. present an overview of the methods for each of the phases of the research, which demonstrates the mixed approach to the overall aim of exploring the effects of LKM practice on wellbeing. As a review, the four studies split across the two phases of research build on one another to provide a holistic view and understanding of the practice; using subjective and objective measures as well as exploring the impact of the practice from novices to very experienced practitioners. The use of multiple methods helps to understand the practice more than the use of one method alone, and gives insight into the practice from multiple viewpoints, adding to our knowledge about a practice which is relatively under-researched.

The use of different methods to achieve each aim links back to the suggestion from Teddlie and Tashakkori (2009) and their whatever works approach to choosing the method to meet the aim of the research. The

combination of the methods has helped provide a well-rounded perspective and understanding of the practice, and the way that the learnings from each study contribute to other later studies in the thesis, ensure that the qualitative and quantitative methods are being combined in order to gain deeper understanding of the practice of LKM.

The following chapters, 4.0. to 7.0 present the analyses of the studies. Each chapter begins with an overview of the study and method in each case, before moving on to analytical steps, where appropriate, and then the analysis and discussion for each study.

Chapter 4: A qualitative study of long-term practitioners' understandings of and experiences of LKM

4.1. Overview

In chapter two, I reviewed existing research on LKM, and argued that these study outcomes suggest promise around the impact LKM may have on practitioners. The extent of the impact of the practice is however clouded by the variation in how LKM is implemented across research. One of the reasons behind why there may be such variation, was suggested to be due to a lack of understanding of LKM, and lack of clear translation of the term Metta. In addition, the predominance of quantitative based research on LKM, mainly focused on the effects of the practice, meant there are few qualitative studies that present insight into an understanding of the practice. To date and as far as I am aware, only one unpublished dissertation (Corcoran, 2007), and one unpublished master's thesis (K. Brown, 2016), and a published study looking at the impacts of an LKM programme (Boellinghaus, Jones & Hutton, 2013) give insight into the understanding of the practice. Studies that explore what the practice actually is, how it is practised, and what its main components are, are therefore few in number. The unpublished nature of two of these papers also means they may be less likely to have been referred to by researchers. So while the content of the papers, particularly the older paper Corcoran (2007) may be of interest to those who used the practice in experimental settings after this study was conducted, this study may not have been seen.

Corcoran (2007) used grounded theory to explore practitioner experiences and perceived effects, with nine meditators who had been practising at least twice a week for three months or more, and who used the traditional phrases. The majority of practitioners in the sample had been practicing LKM for up to two and a half years, with the most experienced practitioner having practiced for 18 years. In addition to their LKM practice, all meditators also engaged with MM, and Corcoran therefore acknowledges that some of the

observations practitioners made about their practice may have been due to a combination of practices, as opposed to just LKM. This combination of practices is not unusual, and reflects how many individuals may engage with a combination of practices in daily life.

Themes from Corcoran's (2007) interviews included that the practice had an effect on relational aspects. Explanations were suggested as to why these changes had occurred that included being able to develop new tools for dealing with situations, and a shift away from viewing others as 'good' or 'bad'. This mirrors some of the relationship based changes seen in the quantitative papers presented in chapter two, but with the addition of suggested mechanisms by which the changes occur. In addition, themes emerged around perceived decreases in anger, anxiety, feelings of helplessness, and being less judgemental. Reported increases in well-being, and compassion for self and others also emerged from the analysis.

As well as positive impacts of the practice, themes also emerged around difficulties that practitioners had experienced which included directing LKM to the self, and for some this became an obstacle. Additionally, even though the inclusion criteria included that all practitioners used the traditional phrases during practice, different ways of personalising the practice e.g. using different visualisations or different foci during practice, featured across the sample. This mirrors some of the variation seen in the ways that LKM is implemented across the experimental literature. While the study did identify differences in how the practice was engaged with, as stated earlier, the main focus of the study was to look at the outcomes of the practice, and the differences and ways practitioners engaged with their practice was not referred to in the discussion or expanded on.

Another study that looked a LKM was K. Brown (2016), who explored the experiences of four school teachers who practised LKM over a three-week period. The sample was made up of a mixture of teachers who all had some kind of yoga, meditation or compassion based background prior to the three-week period, but did not seem to have any direct LKM experience. Phenomenological analysis of a mixture of reflective diaries, journals, and

interviews data, resulted in many themes around how the teachers felt the practice impacted positively on their views of their students and the relationships they had. In addition, participants spoke of self-care and forgiveness as being characteristics of the LKM practice, which reportedly felt new to meditators. As with Corcoran (2007), participants also talked about struggles with the practice. In this study these centred around frustration, lack of feeling for certain phrases, and disappointment, that led to teachers reflecting on the intentions they had towards the practice.

An understanding of LKM is also gained from Boellinghaus, Jones & Hutton, (2013), who evaluated an LKM programme implemented with trainee therapists. Prior to taking part in the LKM programme, all individuals in this sample had previously engaged in an MBCT programme. The authors suggested this was to ensure that practitioners had experience with mindfulness practice, which they suggest is a basis for LKM practice. Of the 12 participants, 5 had previous experience with LKM. IPA was used to analyse the interview transcripts. The emphasis of the interviews was more on the experience of the programme and its links to their training as opposed to how they understand their practice, however reflections on how the practice is understood emerged as well. Themes included the impact the practice had on the self and on relationships, compassion within the therapy room and integrating LKM into their lives. One other finding that was highlighted was that the practice was emotionally challenging and as such was suggested as being a useful practice to offer but that it should be taught with care.

The main themes that emerged from the studies above on how LKM is understood, were the impact the practice has on relationships (Boellinghaus, Jones & Hutton, 2013; Corcoran, 2007), and the reported positive outcomes of the practice which included increases in wellbeing, being less judgemental, and decreases in anger and anxiety (Corcoran, 2007). When it came to establishing an understanding of the practice other than the impacts that it has, self-care and forgiveness were seen as characteristics of the LKM practice (K. Brown, 2016), and differences were observed in how practitioners engaged with their practice, indicating a flexibility around the

practice (Corcoran, 2007). Lastly, all studies included themes that spoke to the challenges and difficulties practitioners had with the practice (Boellinghaus, Jones & Hutton, 2013; Corcoran, 2007; K. Brown, 2016). While there is some overlap in outcomes of the practice, particularly for the impact on relationships, there is little detail on how LKM is best understood by practitioners, or what its key features are, which research could then base their implementation of LKM on. Consequently, while these studies highlight some understanding of LKM in terms of its impacts on the practitioner and those around them, and some of the difficulties that exist when engaging in the practice, additional research is needed that focuses on the understanding of the practice in terms of the day to day practice, and how the practice is discussed and the language that is used to describe it.

The qualitative studies detailed above present additional insight into LKM practice that build on the quantitative findings that show differences as a result of practice. However, the samples in the qualitative studies range from those who had some experience of meditation, but who were not all familiar with LKM (Boellinghaus, Jones & Hutton, 2013; K. Brown, 2016), to existing meditators who mostly had less than two and a half years' experience, with the most experienced practising for 18 years (Corcoran, 2007). This range of experience gives us insight into how practitioners understand and experience their practice, but does not give insight into very long term practitioners' understanding of the practice.

Additionally, some of the samples were quite specific and looked at experiences of particular programmes, e.g. trainee teachers (K. Brown, 2016), trainee therapists (Boellinghaus, Jones & Hutton, 2013) and meditators who used traditional phrases as part of their practice (Corcoran, 2007). This may have an impact on how the practice was experienced and understood; those in the Boellinghaus, Jones and Hutton (2013) study in particular, had previously completed an MBCT programme and were reflecting on a six-week LKM programme. This means that the samples' views and experiences are all as a result of engaging first with an MBCT programme, followed by a six-week LKM programme. A wider sample in terms of length of time practising, as well as recruiting a number of existing

practitioners who may have come across LKM as a result of different avenues, would therefore allow for insight into the ways practitioners who have long term practices understand and experience LKM. This wider sample would also acknowledge the different ways western practitioners may have accessed meditation, and therefore variation in how they practice would emerge. If there are commonalities across the ways practitioners talk about and understand their practice, these aspects of the practice will therefore highlight core concepts of the practice that exist even if practitioners employ different methods when actually engaging in their practice.

The aim of the present study is therefore to explore how the practice is understood by practitioners, to identify some of the key features of the practice, and discover the variety of ways this practice is engaged with, in a Western context. This study was designed to overcome the identified gaps in knowledge that exist in how we understand LKM from previous research. Adopting a qualitative approach was seen as an appropriate method of enquiry to do so, as this approach allows for depth and detail of participants experiences (Ashworth, 2008). This analysis complements and adds depth to current understanding that is dominated by quantitative research publications. The research question being explored in this study is: 'How do practitioners understand and experience Loving Kindness Meditation?

4.2. Method

4.2.1. Sampling and participant details

The sample consisted of five individuals who had extensive LKM practice. For thematic analysis, no specific number of participants are suggested for the sample size (Joffe, 2012). Where sample sizes are suggested, these tend to be smaller than would be expected for a quantitative study, with Braun and Clarke (2013) suggesting that samples could be between 15-30, but also put forward research that looks at single participants or texts. They also suggest that sample size is not a simple question, and can be driven by factors such as the purpose of the study, the quality of the data, the information obtained from the participants, and the scope of the study. In addition, other criteria

that can be considered are the homogeneity or heterogeneity of the population and the selection criteria (Dworkin, 2012).

One way to address the size of the sample can be to consider the above, as well as data saturation, which is suggested to be where no new or relevant data or themes are observed from the data (Dworkin 2012; Guest, Bunce & Johnson, 2006). This is supported by Braun and Clarke (2013) who highlight the importance of having rich enough data so that an in-depth story can be told, and by Guest, MacQueen and Namey (2011) who put forward that saturation is common when using a more purposive sampling technique. In terms of saturation, Guest, Bunce, and Johnson (2006) suggest themes begin to emerge at six interviews.

Based on the advice from the texts presented above, I considered the aims and scope of the research. The aim in this study was on depth of understanding from participants with a range of ways in which they came across their practice. In addition, the scope of the study was relatively small, as it was to help provide a basis upon which other studies could add to, and as such was not the only study being conducted in the thesis. Lastly, as will be detailed below, the sampling technique was purposive. As such, the aim for the sample size was small and was focused more on saturation and the point at which I felt the data was rich and in depth enough, as well as when a range of participants had been sampled. Following sampling (detailed below), I attained a range of participants and rich data at five participants.

Sampling was broadly purposive, which involves participants being chosen in relation to a key criterion (Ritchie, Lewis & Elam, 2003), and involves the researcher selecting the most appropriate sample to address the research question (Marshall, 1996). A specific form of purposeful sampling is to employ a maximum variation sampling strategy, which allows the researcher to sample a broad range of subjects (Marshall, 1996). The aim of this study was to sample a wide range of practitioners, in order to gain insight from practitioners who had come across the practice in different ways. For example, I was hoping to talk to someone who ascribed to a more traditional practice, as well as someone who practised in a more secular way. A

maximum variation approach was therefore seen as an appropriate method to employ to allow for that variation to be sought.

A key inclusion criterion was participants' ability to talk at length and in enough depth about LKM practice. There was no limit in terms of amount of year's practice, instead I relied on participants to be able to judge their ability to talk about LKM in depth. Based on Rosenkranz *et al's* (2016) criteria for an expert meditator being at least three years' practice with daily practice of at least 30 minutes and three or more intensive meditation retreats, I believed that at least 3 years' consistent practice would be enough experience for participants to be able to talk about their practice at length. The method of asking participants to judge their own ability to talk about their practice was effective, as some participants who contacted me about taking part, then declined on the basis that they didn't feel able to talk at length, or in depth enough about their practice, once they found out more about the studies' aims. No other criteria were specified. This allowed for an overview of the ways LKM is being practised within a Western context, whether in line with the traditional methods or not, and also allowed for themes that may emerge across these practitioners to be identified in terms of outcomes that may exist, regardless of the methods of practice that they use.

Participants were made aware of the research through a combination of personal contacts made through engaging in meditation groups and networking at conferences, snowballing and a notice through a meditation retreat centre. Participants either made initial contact with the researcher, or were approached by the researcher through being introduced by an existing contact, that was generally done via email. An overview of the participants given in Table 1.

Table 1: Participant details

Pseudonym	Past experience with LKM	Other practices	'Role' of LKM within their lives
Mike	35 years practising Tibetan Buddhism with LKM featuring within this. Mike also spent years teaching the practice to a range of groups of people including health care professionals.	All practices involved in Tibetan Buddhism. Practices mentioned during interview were mindfulness of breathing and LKM, as well as the *Brahmavihara*	Part of his life as a Buddhist
Joy	10 years practising meditation more broadly. LKM features within most of this. Came across meditation following a traumatic time in her life	A course in Miracles, Transcendental Meditation and other Mindfulness based practices within the classes she teaches	Uses LKM within teaching others; both novices and as part of a meditation teaching course
James	15 years practising meditation. Came across meditation through curiosity	Mindfulness of breathing	Personal use; three time weekly/alternates with MM
Alice	Exposed to meditation and spiritual practice as a child	Thai Yoga massage, Yoga, a range of meditation types	Uses a form of LKM as part of her personal practice, personal therapy and within teaching therapy to others
David	Exposed to meditation from an early age, picked up a regular practice in adulthood	Tonglen, or giving and receiving practice. Compassion based practice which has been likened to LKM (e.g. see Trungpa, 1993). Insight meditation and compassion meditation	Uses Tonglen on a regular basis. Teaches MBCT courses; LKM part of this

4.2.2. Interview design and schedule

Semi-structured interviews broadly involve building a rapport with the participant, allow for probing if respondents bring up additional ideas or factors, and tend to be a conversational flow (Smith & Osborn, 2007). Smith and Osborn (2008) suggest that semi-structured interviews have the benefit of flexibility over the topics covered in terms of order of the questions asked, allow for novel areas to arise that the researcher may not have thought of, and result in rich data. The disadvantages are that there is less control over the direction of the interview, and they can be difficult to analyse. Given the broad aim of the study in wanting to explore understanding and experiences of LKM, I felt that the flexibility that came from the semi-structured interview would suit the topic. It would allow for participants to present their view of the practice, without being constrained by the questions being asked.

For a semi-structured interview, the interview schedule consists of a set of questions that the researcher wants to cover, where the interview will be guided by the questions, but the conversation is free to vary (Miles & Gilbert, 2005). The schedule was developed to ensure that the questions would not be too leading or constrictive to practitioners, when attempting to communicate how they understand their practice, and consisted of five main topic areas, with multiple prompts for each, to help guide the interview if necessary. The full schedule can be found in appendix 2.3., and contained mostly very broad open questions, to allow practitioners the space to talk about their practice how they chose to. An example question is 'Can you tell me a bit about your current practice', which was the first question that opened the interview. This question was purposely open-ended to allow the respondent to give as much or as little information as they wished. It allowed respondents to talk about something familiar and non-invasive, with more specific questions and clarification being covered later in the interview.

Later topics were designed around each of the main aims of the research and followed a logical order that I imagined might unfold during a conversation. These started broadly by talking about practitioners' practices, to how they came across meditation generally, and then specifically looking at LKM and

why they chose to engage with it. From there, I wanted to establish how they view their practice and label it, whether this is as LKM, Metta, or as something different. I was interested in what the perceived benefits or outcomes were from engaging with LKM, and finally how they felt the practice compared to other practices, what the differences and similarities might be. The first question was, as stated, purposely broad, and so if the later topics came out of an initial discussion, the flexibility of the semi-structured interview allowed for that.

4.2.3. Procedure

A condensed version of the information sheet was sent to participants (see appendix 0for full version) following contact. The key points in the summary included who I was, my credentials and contact details. Details provided also included that the research was broadly exploring LKM, beginning with interviews with experienced practitioners. As such, participants were informed of what they would be required to engage with, before contacting me directly. The expected length of the interview and that they had a choice as to where this would take place were also included. At this stage I also emphasised the voluntary nature of the interviews, and that getting in contact with me did not mean that they were required to continue on in the process. The full information sheet was always sent to the participants prior to confirming willingness to take part. In addition to the above, it also detailed the interview process and ethical considerations such as withdrawal of data. Once participation was confirmed, an interview was arranged; all interviews were conducted either in office/work space, or quiet cafes upon recommendation from the participant. In every case I travelled to the participants' location as I could not offer any remuneration for participation and as such wanted to reduce their expenses and time.

An important part of the interviewing process is to build a rapport with participants (DiCicco-Bloom, & Crabtree, 2006; Clarke & Braun, 2013; Legan, Keegan & Ward, 2003). Creating this relationship with interviewees requires mutual trust and respect, and the creation of a safe environment for the interviewee (DiCicco-Bloom, & Crabtree, 2006). In keeping with these values,

I began building a rapport from the first contact. My previous and current research experience, as well as the fact that I was lecturing in the Psychology department at the time of the interviews was all detailed in the information sheet. This gave interviewees a basis for my experience with research, as well as the psychological viewpoint I was coming to the research with.

Due to the exchange of contact through email prior to arranging the interviews, participants had typically asked any questions they had, and so a rapport had begun to be established before I met them face-to-face. I found it easy to talk informally to participants when I met them, as I had conversed with them via email beforehand, and found them all to be not only happy to take part, but also very open and friendly. During the pre-interview chat, I tried to put the interviewees at ease, and talked about experience I had with meditation on both a research and personal basis. This helped participants to appreciate the shared understanding about the practice that we may hold. I also made it clear that this was the first stage of a wider project, and that I was keen to find out about the practice from experienced practitioners. This information gave participants a platform to open up about their experience and understanding of the practice, with someone who had an element of shared understanding, but who was keen to understand their point of view. The combination of the participants themselves and the prior contact including the pre-interview conversation meant that the interview itself seemed to me to flow very well, and be more like a conversation as I had hoped. I felt this suited the nature of the questions being quite open and exploratory, and was glad that participants felt that they could engage with the questions and talk as much as they did.

Following the pre-interview discussion, participants were given a paper copy of the interview sheet to read for a final time, before signing the consent form (see appendix 2.2.). The interview was recorded using a digital audio recorder. The length of the interviews varied from 40 minutes to 70 minutes. Once the interview had concluded, participants were thanked and reminded of the researcher's contact details should they wish to withdraw their data or add any information at a later date.

4.2.4. Analytic steps

To ensure quality within this study, one of the suggestions from Mays and Pope (2000) is to be as transparent as possible regarding the processes involved in the analysis. To address this, the analytic steps for the thematic analysis that I conducted are presented here. There are few published guidelines on how to actually conduct thematic analysis (Joffe, 2012; Marks & Yardley, 2004), and so Braun and Clarke's (2006; 2012) guidelines have become a relied on source, with their 2006 paper on thematic analysis having been cited over 18,000 times. They provide a six-step cyclical guide for researchers to follow, a summary of which, in relation to this study, is presented below.

(1) Step 1 is familiarisation with the data. This stage begins during transcription, when the interviews are listened to numerous times while being typed. Once transcribed, the interviews were read and re-read multiple times. I made notes on my impressions of the interviews and also looked back at any notes I had made during the interviews to gain both depth and breadth of the content across the interviews.

(2) This led into the second step; generation of initial codes. This was done by going through one interview transcript at a time and assigning codes to each sentence or section of the transcript. This stage builds on the previous, where codes may have been identified while reading through the transcripts, but are now more formally written down. Codes were manually drawn from the data, and were done by writing notes onto the text directly.

(3) Once coding is done, the next stage is to search for themes. This was done by writing codes down on separate pieces of paper and trying to identify groupings across the codes. This process requires the researcher to take a broader look at the data, and is where analysis of the codes begins to see what patterns begin to emerge.

(4) The fourth stage looks a refining the process again, by reviewing the themes. At this stage, some themes may be combined to form one larger theme and some may be taken out entirely. A review of the themes in relation to the entire data set can also be looked at, to see

whether what has been extracted sums up the data adequately. This was done on a separate piece of paper, with different themes on post it notes, so that they could easily be moved around and combined if necessary.

(5) The fifth stage involves naming and defining the themes. This involves finding a name to sum up that theme, but also involves writing a description of each of the themes and what they represent, in relation to the research question. In terms of identifying the themes, Joffe (2012) and Braun and Clarke (2012) identify two broad approaches. These are inductive, where themes are drawn from the data, and deductive, where the researcher brings theoretical ideas to the theming process. Both Joffe, and Braun and Clarke suggest that data analysis will include a combination of these, but Braun and Clarke suggest that one tends to predominate and that identification of a commitment to one or the other helps to prioritise when analysing. Joffe also puts forward the differences between manifest themes that are more explicitly stated in the transcripts, and latent themes which are more implicit in nature, and that again, there is often a combination of these included in the analysis. The theming process here involved a combination of the forms of themes, but were primarily inductive, with a mixture of manifest and latent themes. To name these, descriptions were written out for each of these, in an attempt to summarise what the themes related to, and then particular terms were drawn out as the names.

(6) Finally, the last stage is to write the analysis as a whole. This includes a description of the theme, extracts from the data to support this, as well as an analysis of what is being presented which goes beyond description of the extract.

An additional consideration regarding transparency and quality in qualitative research, is reflexivity from the researcher (Flick, 2009; Mays & Pope, 2000; Yardley, 2000). This is defined as 'thoughtful, self-aware analysis of the intersubjective dynamics between researcher and the researched' (Finlay & Gough, 2008, p. ix), and which Yardley (2000) suggests might include

reflections around experiences or motivations of the researcher, or who and what the work may have been influenced by.

To be transparent with participants, I ensured that I was clear with my background, and the project as a whole. I informed participants of my personal experience with meditation, the research I had conducted, as well as what the aims of the present study were. While I had some experience of practising LKM, I was clear that I had not been engaging with it for a long time, and so came to the interviews as a relative novice in comparison to their extensive practice, and was keen to hear, from their perspective, what the practice was and entailed. I felt that telling the participants this before commencement of the interviews helped build a connection with them, as we had both been engaging with a practice and had a shared experience.

I also wanted to be as transparent as possible with them as to what I was planning with the research, so that they knew what kind of approach I was taking with the research. For instance, I made it clear that I was not just testing impacts of the practice, but was looking for insight and understanding of the practice before doing so. In doing this, I hoped that they would see that I was interested in the depth of understanding about the practice, which would in turn allow them to gauge how much depth to go into in their interviews.

My experience with the practice may have led participants to make assumptions about what I already knew, and therefore not give me an in depth perspective on the practice. Equally, it may have resulted in them only sharing the positive view of the practice, as we both shared an interest in the practice. However, their honesty in presenting challenges and barriers to practice made me on reflection think this had not been the case. Additionally, I ensured that I had enough additional probing questions, so that I could ask for more specific detail where necessary. These questions helped me clarify some of the answers that they provided, and add depth where is felt it necessary. In addition to asking probing questions to add depth, I also checked back with participants during the interviews, to check interpretations and whether I was understanding the points they were making. This helps to

ensure validity in qualitative research by being able to confirm the credibility of the data with participants (Creswell & Miller, 2000). Generally, I felt that they were very honest and open in their interviews, and while I used some prompts and questions to help guide the interview, they gave extensive answers to most questions I asked.

Lastly, as discussed in chapter three, my previous research experience with larger projects such as dissertations has tended to be mixed methods or quantitative in approach. I do also have extensive experience of working in an environment where interviews and focus groups were used, but the analysis of these was different to the smaller qualitative research projects I have conducted as part of my degrees. As such, I was aware that my background in research may influence the way I analysed the data from the interviews. To counteract this, I took extra care over ensuring that I understood the stages involved in analysing data, particularly for thematic analysis, and spent a long time immersing myself in the data during the transcription and analysis stages. I also made notes during the interviews, and spent time following the interviews adding to these, to ensure that I was recording my immediate impressions of the interviews, to add to the analysis where necessary.

4.2.5. Ethical considerations

This study was granted ethical approval from the University of Northampton postgraduate research ethics board, and adhered to the BPS ethical guidelines (The British Psychological Society, 2009)

Where recruitment involved meditation organisations and groups, consent was obtained from the leader or manager before members were approached to be asked to take part in the research. Written confirmation of the agreement from the organiser or facilitator of the groups was available for participants to view if they wished. In order to gain fully informed consent from each participant, an information sheet was sent to participants before they were asked to complete a consent form. This ensured that participants were aware of what they would be asked to do, their right to withdraw their data and how they could do so, and how their data would be stored, before

consenting to take part. Participants were also shown a copy of the interview schedule before consenting to take part, to make sure they were aware of the questions they would be asked.

There was no anticipated harm to participants taking part in this study. Participants were made aware that they did not need to answer any questions they do not feel comfortable answering, and that they could stop the interview whenever they wished. They were also aware that they could withdraw their data following completion of their interview should they wish to. All information on not having to answer particular question, and how to withdraw data were given in the information sheet.

Participants were informed that the interviews would be audio recorded for the purposes of transcription following the interviews. This information as given in the information sheet and ensured that participants were aware that their responses would be recorded. To ensure anonymity of participants' identities, pseudonyms were used. This was also detailed in the information sheet. Any identifying information from the interview transcripts was removed or given a pseudonym to further protect the identity of the participants. All data was kept securely on the researcher's home and work computers only to ensure confidentiality of the data. Participants were asked to state whether they are happy for their anonymised data to be kept for future analysis and sharing with other researchers in the information sheet. Participants were made aware of data storage and length of time in the information sheet. Lastly, data protection was in accordance with the Data Protection Act (1998); data was stored securely by the researcher, using an encrypted folder on the researcher's work and personal computers. These details were included in the information sheet.

4.3. Analysis

Analysis of the interviews revealed that how practitioners understood their practice was much more complex than just how they might define LKM, practise on a day to day basis, or the perceived outcomes. Instead, the understanding of LKM came from a combination of themes relating to the practice. This ranged from the labels assigned to the practice, how it is talked about, and how the traditional term is translated, through to some of the outcomes the practitioners had observed, as well as broader cultural impacts that provided a context in which an understanding of the practice exists. As such, to answer the research question for this study: 'How do practitioners understand and experience Loving Kindness Meditation?'', three meta-themes each comprising a set of subthemes were identified. The first set of subthemes related to the practice itself; how practitioners talked about the practice, defined it, and practised it on a day to day basis. Next were themes around the process of engaging with the practice; some of the challenges and key underlying concepts of the practice were talked about here. Lastly were themes around the impact the practice has on the person, and how the practice can be understood as being part of the practitioner. The three meta-themes are therefore labelled as (1) The practice, (2) The process, and (3) The practitioner, and it is the combination of these themes that gives us insight into how practitioners understand their practice.

Table 2: Themes and subthemes for LKM practice

Theme	Subtheme
The Practice	Translating Metta
	LKM and other practices
	Practicalities and day to day details
The Process	Western culture and LKM
	The importance of the Self
	Reported challenges
	Process of change
The Practitioner	A more refined version of self
	Importance of the practice
	LKM as a way of life
	LKM as spiritual and secular

4.3.1. Theme one; The practice

The first theme explores how LKM practice is defined and talked about by practitioners. There was inconsistency of use of terminology, daily practice and how the practice was engaged with across the interviewees, however from these inconsistencies emerged some broader commonalities in how the practice could be perceived as more a way of being or an attitude, than a specific emotion or feeling. There was also a notion of engaging with the practice in whichever way works best for the practitioner. This likely stems from the combination of discomfort with current terminology, and the view that the practice is not as simple as it may seem.

Each of the subthemes presented here overlap with the others, all feeding into the overall sense that the practice is complex and is not as clean cut as identifying a certain feeling to manifest during meditation. The resulting ways that individuals therefore engaged with the practice manifested in variation across the sample, with a few underlying commonalities pointing towards some kind of resolution in how the practice could be understood.

Translating Metta

A common term used for the translation of *Metta* is loving-kindness (Ratnapani, 2000; Salzburg, 1995), however, interviewees often used alternatives when describing their practice. Different terms were preferred by different meditators, but all recognised that *Metta* was the traditional term for the practice. The use of multiple terms to describe the practice suggests that the term loving kindness does not fully encompass the meaning or experience of the *Metta* practice.

> … I know there's no direct translation… I think loving kindness can be seen as a secular practice… so I wouldn't ever use the word Metta myself in class (Joy, ll. 362 – 368)

Joy was aware of the traditional term but was clear on not wanting to use it when talking to students learning meditation, due to her belief of a secular approach to LKM. In comparison, James had a more explicit issue with the term loving kindness, particularly with the 'loving' aspect

> I think the thing is that the translation of Metta is so difficult… another translation could be openness or friendliness, I remember going on one retreat where a person in the evening said y'know I don't know why we have to have the word *loving* there, it's just it's hard enough to be friendly to people and I think that to me is… it's how I've come to understand it for myself (James, ll. 142-147).

James' discomfort with the word love in this context mirrors Ratnapani's (2000) concerns over the associations that come with a Western understanding of love. The suggestion of friendliness that James raises is also suggested as an alternative by Salzburg (2011), who is one of the most prominent authors on LKM, and thus is another widely used term. The other suggestion James uses is openness, which is more of an attitude or way of being, like friendliness, than a specific emotion or feeling that a meditator would try to manifest.

The way the practice is described provides a basis for how it is understood and therefore engaged with which may result in a barrier to practice. For example, those presented with the practice as a form of love may not wish to extend this to themselves and those they do not get on with. In a western context the term love brings to mind a specific emotion or feeling that we are familiar with, whereas friendliness or openness suggest more of an attitude towards others. The different use of terms may result in meditators manifesting something different during their practice. The use of alternative terms to describe the practice therefore suggests a lack of comfort, and mirrors the different use of terms within literature, highlighted in chapter two. There was little consistency in the terms that were deemed most appropriate, but the terminology used alludes to the practice being more about developing an attitude, than an emotion or feeling. The different use of terms was also dependent on how practitioners viewed the purpose or function of the practice. For example, Joy's view on the secular approach to teaching LKM, meant that she would not use more traditional terminology. Regardless of the terms that were used, none of the practitioners used loving kindness alone to talk about their practice, with issues raised around the term pointing to accessibility and understanding of what LKM really is, or is like to engage with.

Meditators' opinions and views on the *Metta* practice here mirror what is presented in the literature, with an emphasis on a way of being, more than identifying a particular feeling that is manifested during meditation. Ratnapani (2000) suggests LKM is more an emotion that is being manifested, while Fredrickson (2008) suggests LKM results in development of positive emotion that leads to a gradual shift in individuals' outlooks. In addition, the definitions used in section 2.2 from Sangharakshita (2012, p. 12); 'a down to earth care and concern' and Salzburg (2011); 'a quality of the heart that recognizes how connected we all are', suggest much more an attitude or way of being. Practice literature therefore gives the impression that the practice perhaps involves some kind of emotion or feeling that is the 'essence' of what LKM stands for. This translates into something that is more of an attitude or something to live by for meditators.

Closely related to this notion of LKM being more of an attitude, was that there also seemed to be an underlying belief that practitioners held in relation to LKM. This was that everyone has a desire to be happy or to be kind. An appreciation of this can result in a connection with others, as we're all striving for a similar aim and have the same innate abilities. Acceptance of this seemed to facilitate engagement with the practice, and in some senses formed part of the basis for understanding the practice.

> …I think what Metta Bhavana isn't compatible with is a belief in intrinsic evil, in thinking that somebody can be intrinsically evil and incurable and therefore completely outside the moral community… (James, 410 – 413)

> …everyone has the Buddha nature… connecting with erm that loving kindness essence which is in everyone, so that potential, it's quite Rogerian in that sense, there's that potential for love in… and also the potential for enlightenment, so everyone's got that no matter how horrid they are in terms of how they behave so there's the rationale, you're developing a way of relating to others which is actually valuing them irrespective of how they appear on the surface, so again that's a sort of feeling closer (Mike, ll. 181-191).

The extracts from both Mike and James highlight a belief that everyone has the ability to be kind, or wish to seek happiness, and that this is found within anyone without prejudice. This links to Mike's mention of the practice being 'Rogerian'. Here he is making reference to Carl Rogers' belief around the notion that every

human has the ability to reach their own potential, and that they have the potential to be good (Bohart, 2013). This suggests that the practice has underlying beliefs, similar to those of Rogers, that centre around everyone having inner potential, and a wish to reach this potential, and LKM becomes part of the way that practitioners can achieve their potential. It also alludes to this being a core part of the practice, that if not present, can create a barrier to engagement. While happiness and life satisfaction are a highly valued aim across the world (Diener, 2000), this is more in terms of seeking personal happiness. The belief that others have this same goal, and that others have an innate ability to be kind and happy, seems to be what underlies LKM practice. As such, an acceptance of this connection seems important.

There are therefore two main elements regarding how the translation of *Metta* is understood. One is the lack of comfort practitioners had with the term loving kindness, with a number of explanations for this. The associations we have with the word love may confuse how meditators engage with their practice. Other explanations could be due to how the practitioner wished to present the practice as being accessible or not, depending on their audience. Lastly, it could be that the practice is better understood as an attitude, way of life, or way of being, and that this encompasses the practice more so than ascribing an emotion or feeling to it. In support of this last suggestion of LKM being more an attitude, is the second factor in how we understand LKM, being that there seems to be some core concept or belief. This was the belief that everyone has the ability to be kind or strives for happiness, which helps us to connect with others.

LKM and other practices

When describing personal practice, interviewees compared LKM practice to other practices they were currently, or had previously been, engaging with. This was offered without prompt, and was used by practitioners to highlight both similarities and differences regarding feelings, outcomes and practicalities of the practices. One of the comparisons often drawn was between LKM and Mindfulness.

> …I think complementary in that they're both, I think the important thing to both practices is presence, because the quality of being with the experience as it is, they're not about erm… kind of a theory or story, so I think they have in common that it's very experiential and very much grounded in y'know right here right now everyday experience (James, ll. 645-650)

What ties these practices together is being present in the moment. When looking more broadly at meditative practices, Kristeller and Johnson (2005) suggest, among other aspects of non-judgement and repetition, that meditative practices include some kind of focusing of attention. Thus, the sense of presence that James highlights is an element that is viewed as being common to meditation practices more broadly. Those elements that placed LKM as different to other practices, were expressed by both Mike and Joy.

> …in loving kindness meditation you're focusing on compassion for self and others… when you think about most other meditation practices, the focus is on calming the mind and you have, so it's it's dealing with your psychology and your physiology and it's very similar to stress management I would say, but it can lead people to a deeper spirituality and it can also make them more compassionate, definitely, the Vipassana practice definitely makes us more compassionate, but I think the crucial difference with Loving kindness is that you are focusing on your, your, yourself, your identity and on other people as well and it's that whole, it makes us less selfish… (Joy, ll. 409-418)

> …the experience of it for me is a kind of yellow light, a kind of golden light which kind of basks and is incredibly healing and also there's no separation, very different to the mindfulness practice for example, which is more inward I think, is more inward, the Loving kindness practice is very extravert, expansive and extravert and it's like connecting you with an energy that is always there in your heart, but as I say, you kick start it and then you just kind of, it envelopes you (Mike, ll. 65-72)

Within literature, mindfulness and LKM can be viewed as complementary and very closely linked (Salzburg, 2011; Hoffmann, Grossman & Hinton, 2011). As can be seen from the extracts from Joy and Mike, connectedness and wholeness, found in both extracts, were elements that placed LKM and other practices apart. While commonalities may exist between LKM and other practices, those highlighted here were factors found across many meditative practices. This suggests that if we are to understand LKM as a practice, it needs to be considered as a practice that has different elements and aspects to it, compared

to other practices. This understanding of LK may be lost when combined with other practices in research.

The aspects highlighted in the extracts above also allude to some of the core parts of the practice which were discussed in the previous subtheme; wholeness and connectedness could be added to our understanding of what the practice may be like to engage with and what the 'core' components of the practice are. This again links back to the notion of connecting with others, and perhaps LKM practice is a way of tapping into and increasing this.

Practicalities and day to day details

The third subtheme addresses how LKM is actually practised day to day, which varied across the practitioners in this study. Different methods were employed, with an overarching sense of a 'whatever works' view towards LKM practice. Some practitioners engaged with the practice using more traditional phrases such as 'may you be happy, may you be healthy', that formed a basis for adaptation. For example, Joy uses phrases, but also gives some explanation or advice to help her students understand more about each 'stage' of the meditation focus, and James uses the addition of visualisations within his practice.

> …I may do some guidance with that, erm seeing yourself as your best friend rather than your worst enemy, being kind to yourself, so that's the first thing, and then it's to think about either one person that you dearly love or a group of people that you dearly love and send to them thoughts of Loving kindness (Joy, ll. 230 -238)

> I always use the same phrases, I sometimes just imagine an image of the person I'm thinking of, or sometimes just their name (James, ll. 586-587)

Joy's adaptation of the traditional phrases could be due to a perception that LKM is adaptable and accessible, or that there is a need to use less traditional or formal language when she is teaching others the practice. As mentioned previously, Joy has the view that LKM can be a secular practice, and she does not use the term *Metta* for this reason. As such, she may adapt the practice to suit the need of those who come to her meditation sessions with a more secular intention and accessible language in mind.

Both Joy and James have tailored the method to suit their needs and preferences; whether adapting the phrases that are used or by using visualisations in addition to these depending on the person. This suggests a sense of personalisation and a comfort or familiarity with the practice. Similarly, Mike's practice is also an adaptation of what is traditionally taught, but he relates his practice more to differences seen across Buddhist traditions. He also refers more broadly to using adaptations of the traditional format to enable the practitioner to access Loving kindness in whichever way works for them

> …I think that they (Theravadan tradition) have those phrases don't they, so they are helpful, they are useful and I can understand, again it's finding ways in for people, it's whatever the key is, y'know whether it's visualising someone who you feel, or say your cat or, something you feel very warm towards, or erm… or you use the phrases 'may I be', and one way I would, did that in a more open ended way was y'know think of something that was, or what does this person need is another way of doing that, so then you've got specific, and then if you include yourself once you've got the process going, erm, then you could also think of what you need, but yes I do recall now those sorts of phrases which are a good idea but the way I normally do it y'know, kind of instantly do it, I don't need to refer to them, but I do personalise it. (Mike, ll. 113-124)

Mike suggests that the practice can be engaged with in whichever way is suited to the practitioner. He also mentions that he personalises his practice, and that he can now 'instantly do it'. The ease and personalisation suggest that through extensive practice, and possibly due to his Buddhist view of the practice, that he almost no longer needs to use a 'formal' sitting meditation. Although he follows Buddhist tradition his view on how the practice can be engaged with seems flexible, more so perhaps than Joy and James, and focuses more on practitioners' preferences than adhering to any specific guidelines. This is likely due to his level of experience and devotion to following Buddhism for 35 years, far more than anyone else in the sample.

While it may seem plausible that there are therefore no set 'rules' regarding how they engage with LKM, it is perhaps more important for novices to have a more specific guide to follow, e.g. that all of the groups are included, and the use of phrases as a basis for the practice. As can be seen in the below extract, Alice suggests that the way she practises is different from the way she would teach others

> …it's all sort of what works you know, for me, I guess, erm, I guess if I'm teaching it I'd be slightly more specific erm but I, in my practice it's probably more erm just a sort of refined quality of hopefully being aware of how I'm being erm you know which obviously might shift sometimes, and so I might apply it in that way yeah… (Alice, ll. 460 -464)

As well as suggesting she would be more specific in how she teaches others compared to her own practice, she also refers to the notion of 'whatever works' as well as suggesting that there is also an element of a way of being that comes from extended practice.

The apparent flexibility may be related to the difficulties in translating and understanding exactly what the practice is. This manifests in finding ways for novices and experienced meditators alike to engage with the practice. It is therefore important to clarify the underlying components of the practice, and to present these to meditators along with how this can be manifested e.g. visualisations, energies, warmth, phrases, etc., to encourage engagement.

For the meditators in this study, an adaptation of the traditional format was used to increase comfort with the method. This could be due to the perceived adaptability of the practice, the need to adapt the practice due to a lack of appropriate term to describe the practice, or as Ratnapani (2000) suggests, could be due to confusion or lack of clear definable traits or guidance to the practice. Given that the practice seems to be difficult to engage with in terms of the language used to describe it, it is likely that the adaptability is more to do with focusing on the intention behind the words, visualisations or other methods, in order to engage with the practice. The sense of personalisation of the practice was alluded to in some of the themes from Corcoran (2007). Even though the inclusion criteria in the Corcoran study was that all participants used the traditional phrases, one of the themes that emerged was personalisation, which included adaptation of the phrases, as well as the focus of the practice, and the use of visualisation or not. The personalisation was addressed as being to do with the practice being flexible and creative. In this study, the personalisation was framed more as finding ways of practice that were comfortable and accessible for each person.

Summary of theme one; The Practice

The translation of the Pali term *Metta*, presented an issue in how practitioners discussed and understood the practice itself. Two issues around the translation emerged; one was that practitioners did not feel that loving kindness really summed up the practice. The other was that the term loving kindness had associations with the word love, that in a western context, raised associations with the practice that could create a barrier in engagement for some.

The lack of appropriate term to describe the practice meant there was little consistency when describing the practice across the interviewees. As a result, practitioners put forward more of a 'whatever works' approach to the practice, linking to the idea that the practice is more about developing ways of being. This approach placed emphasis on underlying beliefs and intention behind the practice, more so than trying to focus on a particular word or term that sums the practice up. Some of the core concepts of the practice raised by practitioners included a belief that everyone has the ability to be kind and seeks happiness, and elements of openness and connectedness regarding the practice. It was these same elements that also set the practice apart from practices.

4.3.2. Theme two; The process

This second meta-theme relates to the sense that engaging with LKM was process. Any changes that were observed, were as a result of a long term engagement with the practice, but it seemed it was not as simple as just practising and seeing change. Instead, there were factors that facilitated and hindered change, as well as contextual factors such as the lens this groups of meditators saw their practice through, and how the practice fit in with cultural norms.

As with the above theme, there is overlap in the subthemes presented here. These two themes combined, present not only what the core concepts of the practice seem to be, but also factors that have an impact on daily as well as long term practice. Lastly how this practice fits in with a culture that was viewed to be in opposition to the core concepts of the practice, will also be presented.

Western culture and LKM

The first subtheme in this section is the apparent contradiction that emerged between LKM and Western culture and perceived ways of living. This was something that was sometimes explicitly stated but was also often an underlying theme that spanned across interviews.

Practitioners viewed Western culture and ways of living as negative. As a remedy to this, adopting a more Eastern view on the Self and relationships, and using LKM as a vehicle for this, was seen as a benefit to the individual and their wellbeing.

> that quality of support and gentleness, that loving kindness quality which, we don't, that is quite contra to the world we live in, it's quite harsh, we're quite harsh with ourselves, we're quite harsh with other people, we're not often very soothing and strokey with ourselves… (Alice, 213 – 216)

The main issue highlighted across the interviews was that there seemed to be cultural views on life and wellbeing, that were in opposition to the essence of LK. Engaging with the practice may therefore shift individuals' perspectives on life and ways of living if they ascribe to practising LKM, which alludes to the impact on the practitioner that LKM can have over time. This is supported by Fredrickson *et al's* (2008) suggestion that the practice could lead to changes in personality, and also links back to the earlier suggestion that LKM can be more a way of being or an attitude by practitioners in this study.

The importance of the Self in LKM practice

One of the other factors that impacted on engagement with the practice, and became part of the process, was the emphasis on including the Self in the practice. Practitioners suggested the ability to send loving kindness to the self, forms a basis for extending the practice to others.

> I think you will find with some people that sometimes loving kindness meditation can make people feel that they have to be compassionate to everybody else and yet might forget about themselves, whereas the way I teach it to people, and my view of it, is that it starts with you, you send Loving kindness to yourself… because if you don't love yourself how can you love other people and how can they love you… (Joy, ll. 145-166)

> …it's also kind of equalising yourself, that you yourself deserve happiness as much as anyone and you yourself deserve and you can send yourself what you think you need, so there's that aspect as well. So that would be one kind of modified traditional training is to include images of yourself in there, just to y'know, be kind to yourself (Mike, ll. 86-90)

> … you kind of accept that you're far from perfect and erm you can sort of be at home with yourself, so I think that's so so important and I've heard it said many times that this is a peculiar problem for people in the West, that in the East when they practice loving kindness meditation it's almost like practicing it towards yourself is just a, almost a formality, it's assumed that people, if anything they have too much towards themselves (James, ll. 218-225)

The emphasis that each practitioner placed on the inclusion of the Self was unprompted, but raised across the interviews, alluding to the importance of this aspect of the practice. This is reflected in the content of the extracts, with practitioners presenting the self as a part of the practice that may be forgotten or neglected, but one that is important. Joy and Mike talk about its importance in the practice, and how it forms a basis for extending LKM to others. The interviewees' perception of the Self mirrors practice literature that suggests that LKM directed to the self, and self-acceptance, underpin the ability to extend this to others (Chodron, 1996; Phelan, 2012).

James' extract picks up on the difficulty that Western meditators may have with this aspect of the practice, making it of particular importance for Western meditators and their practice. As Mike suggests, the inclusion of the self is more about equalising feelings with the self and others, as opposed to a 'self-love' or being selfish. This is probably a common misconception when combined with a perception of the practice as being centred around a western version of love, and as such could present a barrier for meditators. This links back to the previous subtheme; the influence of being a Western meditator may mediate the strength of the self-barrier. The context of being a Western meditator is particularly relevant here, as well as with some of the other challenges reported in the next subtheme.

Reported challenges

Although the practice was seen as beneficial by most practitioners, some aspects of the practice were highlighted as presenting a challenge. These were challenges that had been experienced by the participants themselves, as well as those that they had observed in others. In particular, aspects such as the Self- and 'enemy'-foci of the practice seemed to be the most challenging to engage with.

> … in the West in the modern world many people seem to have difficulty loving themselves, which is a curious phenomenon which baffled the Eastern teachers when they came over to the West … there was this curious self-hatred … (Mike, ll. 73-77)

> …and I've seen that in a lot of people…a lot of people will say that they have issues with colleagues and we talk about doing Loving kindness meditation and they say 'nooo I can't possibly send Loving kindness to that horrible person!' but then they start doing it and the relationship changes (Joy, ll. 297 – 301)

Linking to the points raised in the above subtheme regarding the self, and the additional impact that western beliefs may add to this, the challenge of directing loving kindness to the self is found within literature on LKM such as Sujiva (2009, p. 18), as well as being found in the interviews in Corcoran (2007), and so is not an isolated finding. As Mike suggests, this difference may be due to cultural perceptions and acceptance of being kind to the self. As an alternative explanation, Sujiva (2009) suggests the difficulty is to do with a misunderstanding of the mental state involved in LKM, reinforcing the importance of presenting a clear idea of the practice and what it entails. Given the above subtheme highlights the importance of the self, if this aspect of the practice presents a challenge, this could add additional issues around whether the practice is being engaged with 'effectively' or in the 'right' way, or not. A culture perspective may account for challenges regarding the self, and a problem with perhaps acceptance of this.

The other aspect that was highlighted as presenting a challenge was the focus on enemies, which Joy raised as being an issue for some.

> I don't always do the more challenging ones, thinking of someone you don't like, I wait til people are quite experienced and I usually warn them beforehand that it's coming up… (Joy, ll. 239 – 241)

The fact that Joy takes her time presenting this aspect of the practice, and warns practitioners about it suggests that time and exposure to the practice are necessary before trying to direct feelings of loving kindness towards a difficult person. Again, the view held on this aspect of the practice is likely mediated by how practitioners understand what loving kindness is, and therefore how comfortable they are in directing this to individuals they do not get on with.

Different individuals may find the directed stages more difficult than others, drawing on a wider sense that this is quite a personal journey, and is not necessarily the same experience for everyone. This journey may also be influenced by how the practitioner has been introduced to the practice; Joy takes her students through in a fairly sequential manner, so for them the barrier of a difficult person may not arise until later on in their personal practice when they may be better prepared to engage with this. If practitioners have had this presented earlier on in their practice then this may impact on their engagement, personal journey and possibly their continuity with the practice. These challenges also suggest that the practice may not be appropriate for all; a certain level of openness may be required to engage with these specific aspects of the practice. This links to earlier discussions around having an underlying belief that everyone can be happy and kind. If this belief is not in place, then the prospect of directing LKM to people you dislike provides quite a challenge. In addition, if the belief is that it is love that is being sent to that person, it adds to the discomfort. Understanding of the practice, and how it is presented to novices, can have an impact on subsequent engagement with the different aspects of the practice, possibly resulting in a barrier to continuation.

Lastly, challenges also existed regarding the concept of the practice.

> … loving kindness meditation is interesting to me because for a long time I only very reluctantly practiced it and really felt like I couldn't, I found it quite difficult… there was something rather nebulous about the focus, imagining these different people and saying these phrases, but I went through a very difficult time two or three years ago and I just kind of decided to just really give it a go… I had to let go as I say of this idea that I ought to be feeling something… (James, ll. 121-130)

James suggests here that he struggled with the practice for some time, and it was only when he decided to routinely practice loving kindness and work through some of the issues he was having with the practice, that he was better able to engage with it. This raises motivation, but also a desire to engage with meditation and form a new habit as important features of the practice and subsequent level of engagement. The way he talks about the shift features a 'letting go' element, as if his focus on trying to manifest a specific emotion was perhaps creating a barrier to letting the feelings of loving kindness develop naturally. This supports his view of the practice presented earlier, regarding LKM being more of a way of being or an attitude in comparison to a specific emotion. Another individual who raised an issue more with the concept of the practice was David, who did not find LKM, as he presents it, as interesting or beneficial to him.

> Well I mean classically there's Metta practice erm I don't do it because it seems rather dull to me and rather lacking force (David, ll. 405-407)

In David's case he prefers an alternative but related practice, Tonglen or 'Giving and Receiving' is engaged with to develop compassion and the ability to be present for the suffering of the self and others (Halifax n.d.). The wish to engage with an alternative practice highlights that LKM does not suit everyone's preferences. Some Buddhist authors liken the Tonglen practice to the *Maitri Bhavana* (Sanskrit version of the Pali '*Metta Bhavana'*) which has been translated as loving kindness, friendliness or warmth (Trungpa, 1993). Although the format of the meditation seems to differ in terms of use of phrases given in LKM as compared to a focus on breathing out goodness and breathing in negativity in Tonglen, a close comparison is drawn; 'The idea of

warmth is a basic principle of Tonglen practice…In Tonglen, or Maitri Bhavana…' (Trungpa, 1993, p. 30). As such, although David sees LKM practice as not suiting him, this is perhaps the method of cultivating the emotions as opposed to the end result itself that he does not see as being of value. This further supports the question of whether the practice itself is necessary for the emotions to be cultivated or whether, if the practitioner fully engages with their practice and has the intent to develop feelings of kindness, warmth, friendliness, all of which are associated with LKM, then in fact the method(s) are a vehicle for this. This links back to the emphasis placed on using whatever means worked for the individual, in developing LKM.

Although practitioners did not necessarily identify issues with their own practice, often drawing on their students' struggles, it is important to note that these struggles do exist and may be more likely to manifest in practice with novices where understanding of the practice is more varied and perhaps less well established than for a long term meditator. If due to a lack of clarity in what the aims of the practice are, or a misunderstanding around the language use, then it suggests a need for background and contextual information to be given to novice practitioners. This however may be too much for some practitioners who may wish to engage with the practice in as secular a way as possible. This could create issues with level of engagement and highlights the differences in practices; the focus of LKM may raise more questions and concerns than a practice like MM for novices, and as such may have more of a barrier in being incorporated into more mainstream Western uses. Care needs to therefore be taken when considering implementation of LKM, as it is perhaps not a practice that would be able accessible to all; a certain level of openness seems to be a requirement. Care also needs to be taken to provide additional support and information to those who request or need it when teaching novices as part of an intervention.

Existing research on barriers or challenges experienced in meditation is limited, with few studies explicitly exploring challenges with, or barriers to, meditation practice. Some of the issues raised from the studies featuring barriers or challenges, include cognitive and physical challenges, lack of

motivation to prioritise meditation and a questions around the efficacy of the practice (Sears, Kraus, Carlough, & Treat, 2011), and difficulty around learning and practising meditation, how to deal with troubling thoughts and feelings, some exacerbation of mental health issues, and in a few cases, association with psychotic episodes (Lomas, Cartwright, Edginton, & Ridge, 2014). In addition, a scale measuring barriers to meditation, the Determinants of Meditation Practice Inventory (DMPI; Williams, Dixon, McCorkle & Van Ness, 2011) has recently been developed to explore issues in more depth. The scale contains three main areas covering perceptions and misconceptions, pragmatic concerns and sociocultural beliefs, drawn from the literature and interviews with meditation teachers. Studies using the DMPI suggest that the most common barrier related to misconceptions about meditation (Williams, Van Ness, Dixon & McCorkle, 2012). However, the studies above look at meditation in general, not specifically LKM. Some of the barriers and challenges raised in those papers mirror those raised in this study, such as the sociocultural beliefs and preconceptions and misconceptions.

When looking more specifically at experiences of LKM, reported challenges include a lack of feeling towards some of the phrases, frustration and disappointment (K. Brown, 2016). In clinical settings, individuals diagnosed with schizophrenia, some participants found it difficult to send loving kindness to the whole world (Johnson *et al.,* 2011), and others found it difficult to attend to the focus of LKM on emotion and affect finding that it raised negative thoughts, instead preferring a mindfulness based practice (Johnson *et al.,* 2009). Lastly, some meditators found the practice emotionally challenging (Boellinghaus, Jones & Hutton, 2013). Some of the reported difficulties in this study mirror those found in those previously discussed, such as difficulty with the direction of the practice, and to some extent a difficulty in engaging with the practice itself.

The current study adds to these previous findings on challenges, by raising the overarching cultural context the practice is situated in. This context frames how the practice is engaged with, and therefore the comfort the meditators have with directing LKM to the target groups. In addition, the

emphasis that was placed on the self and enemy-foci in particular in this study don't seem to have been emphasised in previous studies as being particularly difficult to engage with.

Process of change

This subtheme explores the notion that the change that occurred for the meditators, was part of a much larger journey. With the ability to reflect on the practice over the last 10+ years, engaging in LKM practice resulted in quite significant changes to practitioners themselves, as well as having impacted their relationships. This process seemed much more of a process or journey over time, than a quick change.

> …it sounds like it's, it becomes part of how you interact with people in your daily life … I think if it doesn't then there's no point in doing it at all… I've really moved away from the idea of meditation for meditations sake y'know to develop y'know so called higher levels of awareness. To me it's kind of a training of mind and behaviour and it's a way of erm sometime is think about it on the analogy of a drill, so when you would do a fire drill, you would practice getting out and the reason you do that drill is that when there's a real fire you do these things kind of automatically… and in the same way erm y'know when I'm dealing with people on a day to day basis, it's like that attitude becomes much more my default attitude… (James, ll. 512-522)

James' focus on the change in the automatic way he reacts to others has become more positive than it used to be, suggesting that the practice has an effect on behaviour over time. While this change is likely due to the length of time James has been practising, in allowing the space and time for this change to happen, it does suggest that the practice could have an impact on behaviour and attitude.

Changes within the meditator were most clearly seen when reflecting on how they responded in difficult situations, and to difficult people. For James, the practice allows him to respond to his wife, and the difficult situation he finds himself in, in a different way than he may have reacted in the past.

> …often I feel very angry, but I'm able to deal with that anger and for example in that case I think, possibly as a result of Loving kindness meditation I've come to realise that a lot of the anger I've felt was less

> about her doing things that upset me but more about just in general a feeling of being rejected (James, ll. 362-366)

The practice seems beneficial to James' relationships, particularly those he finds difficult, through a shift in perception and observation of some of his reactions, and an evaluation of this as being beneficial or not to the situation. This awareness may then lead to a shift in the relationship. He also highlights how his view of emotions such as anger has changed over time; his perception of how he is feeling is different. Similarly, Joy and Alice highlight changes in perception of emotion, situations and prior actions in more 'daily life' situations, resulting in perceived changes in thought processes and perhaps behaviour.

> … I was erm a very critical judgmental person and I think it's, it's… both the course in miracles and the Loving kindness meditation have both helped me to see that when I'm judging someone I'm judging myself …
>
> ...it's made me, made me much more compassionate, much kinder, much more tolerant than I used to be... (Joy, ll. 281 – 290)
>
> I think erm I think the benefits… accepting ones you know, faults - the pros and cons of how we are, developing awareness erm becoming mindful to ones issues and hopefully being able to kind of accept and move on and perhaps change ones behaviour due to that erm… and ability to you know think of another person, to come out of that selfish narcissistic realm that we have a tendency of as human beings…a more refined quality of being (Alice, ll. 411-420)

Both Joy and Alice highlight changes in themselves; Joy more so in identifying how she may have reacted to others previously, and how this has changed as a result of practice. Alice identifies changes in being more mindful and attentive in daily life, and has a better ability to identify with the self and how she feels, and therefore how she relates to others. James highlights how some of the actions and emotions have become more of the automatic response now, indicating that time has an influence on the observed changes. The reflections here are over a long period of time, and these are not changes that happened overnight. The way practitioners talked about the changes that occurred included a change in perception of situations as well as emotions, particularly negative ones, and almost a

chance to stop and think about whether this is actually what they are feeling or whether there are underlying reasons for this. A change within the self was identified as impacting on relationships directly and importantly, that this was over a long period of time; it was a process of change, not an immediate one.

The reported effects of the practice centred around relationships with themselves, but in particular with others. This emphasis is different from the previous theme, where the self-focus seemed a more important part of the practice than the focus on others; when it comes to outcomes however, how practitioners' related to others seemed to be the largest change.

Summary of theme two; The Process

Meta-theme two explores the notion that engaging with LKM becomes a process of change in the individual, which is facilitated and hindered by the factors presented above. The main underlying contextual factor that could hinder engagement and therefore change within the person was being part of Western culture. On its own, this element could present a barrier for engagement, as practitioners reported that the views on living were in opposition to the core essence of the LKM practice. Building on this, the western cultural views also meant that a focus on the self could be seen as uncomfortable. Engagement with the practice is further hindered by the emphasis that was placed on the self as an important part of the practice in the last theme, and how this can provide a basis for extending loving kindness to others. The focus on enemies, combined with a view of love in a western sense, means that this element could also be seen as uncomfortable. While an understanding of what LKM is, is therefore important to encourage engagement, and to reduce the potential challenges that emerge from seeing the practice through a western cultural lens, the factor that may help facilitate long term practice is motivation and a desire to want to engage with LKM.

The other main underlying element that created a potential challenge was the lack of clear definition and understanding of the practice. For some, this meant that the practice was not seen as appealing to engage with. There was a suggestion though that once the focus on trying to find a specific emotion or feeling to focus on, and the essence of the practice, and this being more an attitude or way of being was accepted, then this could reduce the barrier.

4.3.3. Theme three; The practitioner

This last theme builds on the previous two by presenting some of the perceived outcomes of the practice, and the impact that the practice has on the person. This completes the holistic view of how practitioners understand their practice, as being not only about how they talk about and label their practice, the processes involved in daily and long term practice, as well as how they perceived change as a result of practice. One of the strongest themes across the interviews was the sense that the practice helped facilitate a positive change in the meditators, communicated as becoming a 'better' person. This theme also includes some of the longer term changes and perceptions of the practice, that could be unique to this group of practitioners having had long term exposure. However, it gives insight into the practice over time, and how its function or perception may change as a result.

A more refined version of self

Practitioners placed emphasis on the changes that occurred as being positive, with the underlying impression that the practice culminated in making practitioners 'better' people.

Firstly, when considering longer term changes and the influence the practice had over a longer period, practitioners saw the practice as helping them to become a 'better' version of themselves. This links back to the differences identified between western culture and the essence of LKM presented in the previous theme. There were many references to innate qualities that we have either as humans, or as people living in western culture as being negative across the interviews, and how LKM could help practitioners

overcome some of these negative traits and become better versions of themselves.

> you know the whole thing about erm self-belief that so many people are thinking negative beliefs about themselves and one of the lovely things that Loving kindness does is that it can start to dissolve those, that judgemental voice. One of the lines I use in the meditation I teach is the erm 'we can be our own worst enemy' but we're critical, we're judgemental, y'know, we beat ourselves up internally, we erm are our own worst critic, but that we can change and the idea of Loving kindness is to become your own best friend… (Joy, ll. 153 – 160)

> I mean I've heard I think I've heard that the translation of meditation as the… that it's like reminding us of what we already know, as a human being we have a right to be happy (James, ll 236-239)

> …it's like connecting you with an energy that is always there in your heart (Mike, ll. 69-70)

> and ability to you know think of another person, to come out of that selfish narcissistic realm that we have a tendency of as human beings, so it's kind of, I guess, the complete opposing quality to narcissism in a way, that's what I'd say…, quality of being, y'know and being a more refined quality of being and maybe more in tune with what one needs. (Alice, ll. 416 – 422)

For Mike this may be more of an East vs. West context, in that he would refer to Eastern practices as being the way to overcome the problems we have created for ourselves in the West. Others such as Joy, saw it as a problem with humanity as a whole. The practice creating change in the person therefore can be seen in two ways; one view is perhaps a return to who we really are as more compassionate or kind human beings, and the other is more a focus on transcending this way of being and becoming a better person. Both viewpoints indicate that the practice has the potential to change us as people for the better and as such is impactful, beneficial but also in some sense a natural process of change.

Regardless of the perception of the practice or the background of the practitioner, the practice was conveyed almost as righting the wrongs that we had created for ourselves as human beings. The influence of the practice was contextualised by identification of the way that we live now to be judgemental and negative about ourselves and that this is almost an innate

quality and an expected one for us to have, and that we live in a harsh world.

This links directly back to the subtheme on western cultural context, and how this is viewed as negative by practitioners, with LKM being almost in opposition to this. As a result of long term practice, this negativity seemed to be overcome by the underlying concepts of LKM, resulting in the practitioner becoming 'better' than they used to be. They no longer ascribe to a Western cultural expectation of being 'narcissistic', 'our own worst critic', and become someone who is more 'refined' and is able to become your 'own best friend'.

Importance of the practice

This subtheme is closely linked to both the previous, and next subthemes. The way the practice had such an impact on the meditator as a result of long term practice, meant that the practice was seen as an important part of some of the meditators' lives. James in particular was quite explicit in the importance of the practice for him in his daily life as well as long term.

> … it's like brushing your teeth, you know if you don't do it of course your teeth rot and y'know it's something you have to do every day and I've certainly discovered it's much more beneficial to practice even if it's just for a few minutes every day than saying y'know I'll sit for a few hours once a week (James, ll. 37-42)

> I think it's really important to make the time… I don't have the time *not* to meditate, even a single day when I don't practice some form of meditation, I feel like the day gets off on the wrong foot and I waste time and I make mistakes and I leave things at home and I don't know, maybe I'm just imaging it… (James, ll. 436-441)

The extracts suggest that for James, LKM practice is a fundamental part of his day. He compares it to brushing his teeth, hinting at the habitual nature of the practice. The way he uses this metaphor and the mention of rotting teeth as a similar consequence of not meditating, suggests just how important he views the practice for his wellbeing on a daily basis, and the negative consequences of not doing so. Just as with teeth brushing, there is an emphasis on carrying out an action for ongoing wellbeing instead of having to go to the dentists or engage with an intervention following some

kind of traumatic event. This is more in line with a 'preventative' approach to meditation; engaging with it to increase or maintain levels of wellbeing on a long term basis. In addition, the regularity of the practice seems to be an important factor for James; he suggests that the daily practice is more beneficial than sitting for a longer period of time, once a week. The dedication he has to incorporating the practice into his life on a regular basis over many years, especially given the apparent contradiction the practice presents with western culture and ways of living, suggests that he sees real value and importance of continued engagement. This links to the next subtheme, as the apparent importance that the practice has for the individual means that this practice becomes part of the individual and their lives.

LKM as a way of life

This subtheme looks at the difference between a 'formal' and 'informal' practice to provide context for how the practice then became incorporated into practitioners lives. Firstly, a distinction emerged between a 'formal' and 'informal' way of practising, with references being made to a formal practice generally including a period of sitting, actively meditating. This was generally contrasted with an informal practice, typically referred to when participants felt themselves using the elements of LKM within their day to day life, or 'on the go' when the opportunity arose. For example, James talks about two different ways he engaged with LKM.

> I practice sitting meditation every day usually in the morning for anything between 6 and sort of 30 minutes, (James, ll. 2 – 4)
>
> loving kindness meditation is actually a good one to practice on the tube or on the bus because you've got all these people around you who you could practice with, (James, ll. 16 -1 8)

The 'on the mat' practice relates to how practitioners engage with the practice on a day to day basis, and may have a 'formal' sitting practice. They may also see opportunities in daily life where they could practice LKM. James gives an example of a time when he would do nothing else but sitting on the bus, so chooses to meditate, but this could also extend to using LKM when in a stressful or heated situation. This sense of 'formal' and 'informal'

meditation is something that is often referred to in the literature, with the 'formal' practice being a sitting practice, and informal practice being an attempt to incorporate the practice into everyday activities, sometimes at particular times, for example during times of stress (Proulx, 2003).

While the practitioners in this study were very experienced, some still had more formal sitting practice, that over time manifested in these underlying elements of the LKM practice becoming more normalised behaviour in everyday life. Over time, this becomes more of a lived experience, with some reflecting on how they felt they 'lived' the practice at times, or how they observed this in others. This hints at a kind of essence that sums up what LKM entails, that may be those elements of openness, and connectedness mentioned by interviewees.

> I would say sometimes over the last 20 odd years of practice there are times where I've experienced that living of it, I wouldn't claim to be living it all the time, no… I see it as embodying it, but I don't erm I guess I sort of feel the day I stop learning is the day I die and so for, my attitude is more like, of being reminded of it as much as possible cos I don't erm I can't imagine ever not having to be reminded of it but yeah that's me maybe. I think in a cosmic ultimate state, that's the truth for us all but we don't believe it so we have to go through those levels of faith and I suppose that some people have a deeper level of faith than others, (Alice, ll. 263 – 271)

> I think that there's that lovely thing the Dalai Lama said that if every child of 8 learnt to meditate then we would eradicate violence within a generation and he is the epitome of Loving kindness isn't he, he just embodies Loving kindness (Joy, ll. 449 – 451)

> …the Metta attitude… its counter cultural but … you know the word Bhavana means cultivation… its just something that we can allow to happen, we can't make crops grow, but we can water them we can fertilise them, we can make sure they get enough sunshine, (James, 697 – 703)

Views on the practice as being something that is developed over time and 'lived' is seen across practice literature as well as above from the practitioners; Sujiva (2009) describes Loving Kindness, as a 'state of mind' (p. 17) when describing the *Metta Bhavana.* Similarly, Thera (2011) and Ratnapani (2000) both emphasise that the consequences of meditating on

the *Brahmavihara,* that includes loving kindness, are to develop those feelings deep within the individual's heart, resulting in the feelings of loving kindness extending into everyday life. This is in line with this view that loving kindness can be something that is lived and not just a practice. This is supported by some of the themes that emerged from Corcoran (2007), where participant reportedly described the feeling of the practice as making them more 'open'. This related to having an attitude of friendliness and receptiveness towards others which reflect some of the findings here.

LKM as spiritual *and* secular

Lastly, and again closely linked to the above subthemes in this overall theme of 'the practitioner', this subtheme explores *how* meditators have incorporated LKM into their lives, given the perception that it contrasts with western cultural expectations. One of the ways meditators seemed able to have a long term practice was through the ability to see the practice as having a number of functions and roles. This meant for some having a both secular and spiritual view of the practice, and seeing its applications in numerous contexts.

For example, accessibility and wanting to ensure that as many individuals as possible would feel able to engage with LKM, was important to some practitioners who taught meditation classes. This meant having a view of the practice as being a secular practice as well as something that could be engaged with on a more spiritual basis.

> I'm quite a firm believer in it being accessible rather than like… I don't wanna make people feel like they're sort of intimidated or like something isn't possible to reach cos that's not helpful, (Alice, 368 – 370)

> …you may find that, that the vast majority of people come to meditation through a crisis, they don't come to it when they're sitting there feeling happy, which is a very interesting you know, and one of my aims in life is to help people realise that they don't have to have a crisis, that they can prevent the crisis by learning to meditate - preventative meditation rather than sticking plaster meditation (Joy, ll. 96-101)

Joy has an appreciation that if one is to teach LKM in a western setting, that a lot of people will come across it as result of a crisis. Therefore, it is important as a western meditation teacher, to be able to teach it to individuals to use as a secular skill as well as being able to support them in engaging with LKM on a longer term basis, as more of way of life if they wish to do so. There was an underlying feeling that while they may have adopted LKM more as a way of life, that on a short term basis, engaging with LKM may help to alleviate pain or suffering, and so they could appreciate how some may want to use meditation practice on a more reactive as opposed to proactive basis, and that they would support this.

Out of all of the practitioners, Joy's view of the practice was the most flexible; as a traditional practice, as being associated with religion and used for ongoing wellbeing and also as a secular practice. This flexibility is perhaps due to how she engaged with it both on a personal level but also in teaching others:

> …I think what has happened is that we in the West have taken a lot of these ancient meditations and we have adapted them… I think the thing people are still quite scared of, erm, labels, eh, and also of the religious connotations that I think Loving kindness can be seen as a secular practice erm and although I do believe in God, I don't ever talk about that in my classes, I teach meditation as a secular practice basically for well-being and deepening spirituality… (Joy, ll. 362-369)

> … it's about finding your audience and not alienating your audience, respecting that we are living in an in increasing secularist society and that people are looking for the benefits for them, they're not, they might not necessarily be interested in thousands of years of tradition. (Joy, ll. 377-381)

Views on LKM practice were not just traditional, and an appreciation of the traditional viewpoint did not mean that a secular view of the practice was not also held. This is perhaps due to being a Western practitioner and 'fitting' the practice into their everyday lives, but could also be due to the flexibility and personalisation that the practice seems to have. Joy also makes reference to knowing your audience; she appreciates that there is a want in Western society for increasingly secular practices to increase wellbeing, and living and teaching within this society thus frames her view of the practice and what it

can 'do'. This was found with other practitioners who had interaction with the general public; there was a sense that it was important to understand the needs of those around you, and there was an appreciation from those who taught classes to others that there was an expectation from some consumers of a secular practice that could be taught as more of a 'skill' that could help reduce stress for instance. As such, their delivery of LKM may be less traditional with more emphasis on learning a skill than perhaps their own practice or how they have engaged with it in the past.

Summary of theme three; The practitioner

This last theme focuses on how the practice might impact on the practitioner, and becomes a part of them and their lives. The subthemes here encompass the experience of the practice over a long period of time, and how the practice moves from a more formal sitting practice, to one which is more embodied and lived as a result of long term engagement, or perhaps just as a function of the practice itself being more focused on being a way of living. Interviewees observed changes in themselves, which seemed to be communicated in a way that suggested they became better people. This linked back to the belief that western culture was viewed as negative, and that the practice helps the individual to become a more refined version of themselves. For the more traditional participants such as Mike, there was a difference in the person but this was more a belief that the practice allows the meditator to tap into an innate pure quality that is always there, and as such, this change is more framed in terms of coming back to more an original version of themselves.

Closely related to this were the rest of the subthemes, which highlighted the importance of the practice to interviewees, and how it became a part of them and how they lived their lives. There was another influence of being a western meditator however, in that the practitioners seemed able to view the practice both as something that could be embodied and lived, and also as a secular skills based practice. The reasons for this stemmed from wanting to help others learn something that may be of benefit to them, and also for wanting to use the practice as almost a top up in stressful situations. This flexibility in how they viewed the practice seemed to be as a result of

integrating this positive, beneficial practice, into a culture that was viewed by interviewees as being negative. As such, a compromise in being able to live the practice as a western practitioner, meant viewing the practice as flexible and applicable in numerous settings.

4.4. Discussion

The process of analysis and interpretation of the data was much more complex than I imagined it would be when I was conducting the interviews. The richness of the data from each of the interviews meant that there was a lot to reflect on in terms of what was most important in addressing the research question. For instance, some of the themes such as Western culture and LKM spanned across many of the other themes, and it took a long time to think about how best to present the themes, which resulted in the practice, process and practitioner. To help with this, I referred back to notes and interpretations I had made during or directly after the interviews in case there was anything that struck me as important at the time that needed to be included. I am happy that the final presentation of the themes reflects the complexity of the understanding of the practice, while still being accessible and clear.

The willingness of the participants in taking the time to talk to me, and the passion with which they spoke, even when reflecting on challenges or barriers stayed with me throughout the analysis. The overarching impression I came away from the interviews and analysis with, was that this practice, while being complex and challenging at times, can be so powerful and can become so much a part of the individual practitioner. This left me excited to continue on exploring the practice, and the impacts that it might have.

Reflecting on the complexity of the practice, part of the analysis from the interviews here, was that there were multiple ways that the practice is presented in terms of language used to describe the practice, as well as how practitioners engaged with the practice which spoke to the whatever works approach to the practice. The variation seen in the literature is therefore less surprising than it may have been before these interviews were conducted. This means that the emphasis, when teaching others, is more on the core

concepts behind the practice, less so than the actual methods used during the practice. This sense of a way of being and how novices should practice is difficult to ascertain when reading others papers. One aspect of the practice that emerged from these interviews that can be identified within previous studies is the emphasis on the self that provides a basis for extending this to others. Studies which do not include this in their way of teaching this to others as part of research, are therefore drawing conclusions on a practice which from experienced practitioners' accounts, may not agree fully encompasses the LKM practice. Looking back at studies from the literature review, studies such as Hunsinger, Livingston and Isbel, (2012a) that only looked at neutral stimuli, and Hutcherson, Seppala and Gross (2008) that looked at loved ones and neutral individuals, are therefore less reliable in terms of concluding what impacts LKM has on practitioners. In contrast, studies that looked at directing LKM to all target groups (Leiberg, Klimecki & Singer, 2011; Carson *et al.* 2005; Weibel, 2008) can be relied on more, when summarising the effects that LKM can have, as they include all target groups, including the self.

Findings from this analysis therefore deepen our understanding of the practice, and while it highlights the complexity of the practice which could account for the variation seen in the wider literature, some core concepts and important parts of the practice have emerged, which refocus the way we might evaluate the conclusions drawn from some previous studies.

One way in which this study's findings need to be taken with caution is that, as with the sample in Corcoran's (2007) study, who all practised MM as well as LKM, the sample in this case all had additional practices which they engaged with. Some of the conclusions presented by practitioners in this case, regarding the impact that the practice had, may also be influenced by the other practices. While we can draw conclusions about the changes that LKM practice might impact on from the themes above, some of this could also be influenced by the combination of practices, or from practising anything that focuses on the self, reflection and wanting to work on personal wellbeing, for an extended period of time.

As a counter to this, some practitioners' comments did include comparisons with other practices, as seen in the first theme, so practitioners did feel able to identify differences between practices. In addition, there was no consistent other practice in addition to the LKM practice seen in this sample, as there was in Corcoran, and so if all practitioners in this sample felt that the practice had made them more compassionate, open, connected with others etc., as there was no consistent other practice that could be influencing this as well, it is more likely to be the longevity of practising anything that could be influencing the perceived outcomes over and above the LKM practice. In addition, the sample in Corcoran (2007) had a maximum experience of 18 years, with most practising for 2.5 years or less. The sample in this study generally had longer exposure to the practice, with between 10 and 35 years' practice. The longevity of the experience in this sample may therefore be beneficial in the participants' ability to identify what impacts the LKM practice has had, in comparison to other influences.

While the longevity of the experience in this study was beneficial in gaining depth, some of the reflections may have been as a result of long term practice. For example, the emphasis placed on the impact that the practice had on the individual, in making them a better version of themselves, may have been as a result of long term engagement, and the ability to reflect back on the individuals' journey with the practice. Additionally, the personalisation of the practice, as well as the emphasis on the self as providing a basis for extending the practice to others, may also have been to hindsight, reflection and long term practice. In order to clarify whether these key features, e.g. personalisation and the importance of the self, which would impact on how the practice is taught to novices, are only observed after extensive practice, views on the practice from individuals with shorter term practice would add to the current understanding of the practice.

4.5. Conclusions

From analysis of the interviews, understanding what LKM is seems to involve much more than just thinking about how the practice is defined. Themes covered all aspects of the practice, from how it is talked about, to how it creates change within the practitioner, and how this process happens. The themes reveal the complexity of not only the practice, but also of the additional context around being a western meditator who practises LKM. There was overlap within and across the themes, and as such, none of these themes alone paint a full picture of how we understand LKM practice. A combination of these elements is therefore needed to provide a holistic understanding.

Terminology to describe the practice was not consistently used, with suggestions that loving kindness does not really sum the essence of the practice up, with no clear alternative suggested. This resulted in there being a predominant idea that the practice is best understood as an attitude or way of being, a part of the practitioner, and is not an emotion that is simple to pinpoint. Additionally, this attitude seemed to encompass elements of wholeness and connectedness, which was perceived to be in opposition to how western culture is viewed by practitioners. Building on this sense of LKM being about manifesting an attitude, is that we all have this innate ability to live in a '*metta'* way, within us. This was expressed in a few ways, one of which was through the belief that practitioners had to accept and buy into this concept that everyone wants to be happy, and is striving to fulfil this. This hope for attainment of a happy life, while acknowledged on a personal level, if accepted for others, was something that could create a connection between all humanity.

As well as the wholeness and connectedness elements of the practice, emphasis was also placed on the importance of the self and enemy foci, both presenting possible challenges to engage with, but also both core parts of the practice. For enemies this was more in terms of the connectedness that the practice resulted in, and for the self, this provided a basis for

practitioners to come back to, and from which LK could be extended to others.

Lastly, there was an overarching Western context that resulted in potential barriers to engagement and challenges with the practice. This was the one theme that had influence or presented a contextual challenge throughout the process of engaging with the practice. It influences how LKM is translated and understood, due to the western associations with love, and how comfortable practitioners felt sending LKM to particularly the self and enemies. This context makes it more important that the core concepts of the practice is conveyed to novices as, the cultural impact has potential to create barriers at multiple points. This perspective also resulted in a multi-use view of the practice; as both something that can be used on a long-term basis, preventative basis, but also as something that can be used as a reactive, stress reduction measure. This linked to a more whatever works approach to the practice, where the emphasis was more on the underlying components of the practice, as opposed to a specified way of practice.

4.6. Summary

This chapter has presented the rationale, details on the method, analysis and discussion for study one. This was conducted so that an understanding of LKM could be established, upon which studies exploring the effects of the practice could be based, to ensure that the practice used in research reflected that of existing practitioners. This study did not provide as much clarity as hoped, but the main aspects of the practice that were identified included the overall value and impact of the practice, that the self is important and provides a basis for building on, and that both the self and enemy foci in particular can present challenges during practice. Additionally, aspects such as the seeming multi-view of the practice, as well as the perceived flexibility of the practice in terms of a whatever works approach, with a focus on the underlying intention behind the practice.

As mentioned at the end of the discussion section, to establish what the core concepts of the practice are, a wider sample in terms of experience and exposure to LKM would be useful. Therefore, the main findings, and full

range of opinion on the practice, including challenges and barriers, from the interviews will be used as a basis to widen the sample, to explore any consistency in understanding.

Chapter 5: A Q-methodology study exploring practitioners' understanding and experience of LKM

5.1. Overview of study

The first study, presented in chapter 4, was designed to meet the aim of understanding more about what LKM is, and how it is understood. The rationale for this came from discrepancies found across the literature base, which presented multiple ways of teaching the practice to novices. The analysis in study one gained insight into the practice, from the viewpoint of those who have extensive experience, as a way to understand what the practice might entail, or what its key features may be. This was conducted to ensure that when testing the effects of LKM, I could ensure that the practice being engaged with by participants reflected a practice as understood by experienced practitioners, as opposed to what had been used across the variety of previous research.

The use of interviews in the previous study allowed for an in-depth understanding (Ashworth, 2008) of the experiences of practising LKM. This gave insight into how the practice is viewed and understood by experienced practitioners, however some of the reflections could have been due to their extensive engagement with the practice. For instance, the emphasis placed on the importance of the practice to practitioners, it becoming part of their lives and themselves, and being more of a way of living, could have been due to the longevity of their practice. To build on the depth gathered from the interviews, I wanted to explore how these findings may or may not differ across a wider sample, with a range of experience levels. To explore whether the perception of the practice, and the range of ways it was presented was consistent across a range of viewpoints, additional study was deemed necessary.

Gathering this range of opinion, while exploring the consistency of potential viewpoints, would have been difficult to do using additional interviews as they are not designed for generalising the outcomes, being more centred on depth and understanding of a few participants (Winter, 2000). In addition, because the interviews presented in study one resulted in some underlying key features of the practice, but different ways in which the practice was engaged with, I thought further interviews might add unnecessary complexity in the range of ways in which LKM was practised, without adding to the core underlying concepts that emerged from the interviews. Additional interviews could have resulted insight from less experienced practitioners, but the relative lack of experience may mean that they felt less able to talk at length about a practice they had been engaging with over potentially a short period of time. Some individuals who responded to adverts for the interviews, self-selected themselves out of the interviews on the basis of not feeling able to talk at length about their practice, and so this could raise a problem in gaining insight from this part of the sample.

In addition to seeing how the understanding of LKM may differ according to experience level, I was also interested to see whether opinions might differ according to other variables such as how practitioners came across LKM, and demographics such as age or gender. Q-methodology is a way of gathering data on participants' point of view about a topic, with analyses identifying shared viewpoints where these exist (Watts & Stenner 2005a, cited in Watts 2008, p. 37). It was therefore seen as an appropriate methodology to meet the aim of maintaining depth of understanding about LKM practice, while allowing for any variation in opinion to be identified.

Q-methodology has not been widely used in research, but some examples of more recent use in education and health contexts explore students' approaches to studying (Godor, 2016), parental views on immunisation (Harvey, Good, Mason & Reissland, 2015) and most relevant to this study, the views regarding the use of mindfulness for voice hearing (Morera, Bucci, Randal, Barrett & Pratt, 2015). Morera *et al.,* (2015) used Q-methodology with 14 staff and 17 service users with psychosis, to explore the use of mindfulness in voice hearing. The sample size used is larger than would be

expected in a typical qualitative study, highlighting the ability to use wider samples. Findings suggested that there were differing views across the overall sample; the staff generally had one distinct positive view of the use of mindfulness, whereas the service users split into four groups of opinion. These included that mindfulness helps calm the mind, manage stress, improves wellbeing but does not alter the brain, and lastly, that it helps manage thoughts. These four groups of opinion represent an in-depth understanding of how mindfulness can be used in this context, but also how these opinions might diverge across a sample. The combination of depth as well as divergence of opinion adds additional depth and understanding on a topic, while sampling a range of participants in order to unearth these potentially differing views. The growing use of Q highlights the value of using this methodology to gain insight into those phenomena that it is harder to verbalise opinions about, which suits the complex nature of LKM that emerged from reviewing the literature, and the analysis from the last study.

This study therefore builds on the findings presented in the first study by attempting to synthesise some of the variety that was seen across the interviews. In addition, it allows for an exploration of whether some of the themes such as the dual perspective of the practice being both spiritual and secular, and the importance of the self, span across a wider range of practitioners. The research question for this study is therefore: 'Is there consistency in an understanding of LKM across a range of practitioners?'

5.2. Method

5.2.1. Q-methodology

In practice, Q-methodology involves participants being given a selection of statements on a certain topic, to sort into a forced normal distribution from most strongly agree to least strongly agree/most disagree. The final sorted grid becomes a participants' data set and can be compared, using factor analysis, to other participants' grids to identify patterns within a sample. There are a number of stages involved in setting up and administering a Q study. The stages of the method presented below are a combination of advice taken from Addams and Proops (2000), Du Plessis, Angelopulo, and Du Plessis (2006), Watts and Stenner (2012), and Zuger (2005), and can be broadly split into the following stages:

1. Collecting the concourse and statement construction
2. Setting up the grid
3. Pilot testing
4. The sorting task and sampling
5. Analysis of data (please note, analysis details are detailed in more depth in section 5.3.)

The first stage of the process is to gather a set of statements or materials called the concourse, which should cover a broad and comprehensive description of the topic (Zuger, 2005). The concourse can consist of pictures, music and other forms (Akhtar-Danesh, Baumann & Cordingly, 2008; Cross, 2005), but text based statements are most commonly used. Statements can be drawn from sources such as journal publications or newspaper articles, but typically are drawn from interviews or focus groups, with the emphasis being on representing the entire range of perception regarding a topic (M. Brown, 2004). The use of in-depth interviews to form the basis for drawing statements for a Q study has been recommended as good practice, as it ensures that statements have emerged from the practitioners themselves as opposed to the researcher's beliefs about a topic (Barry & Proops, 1999).

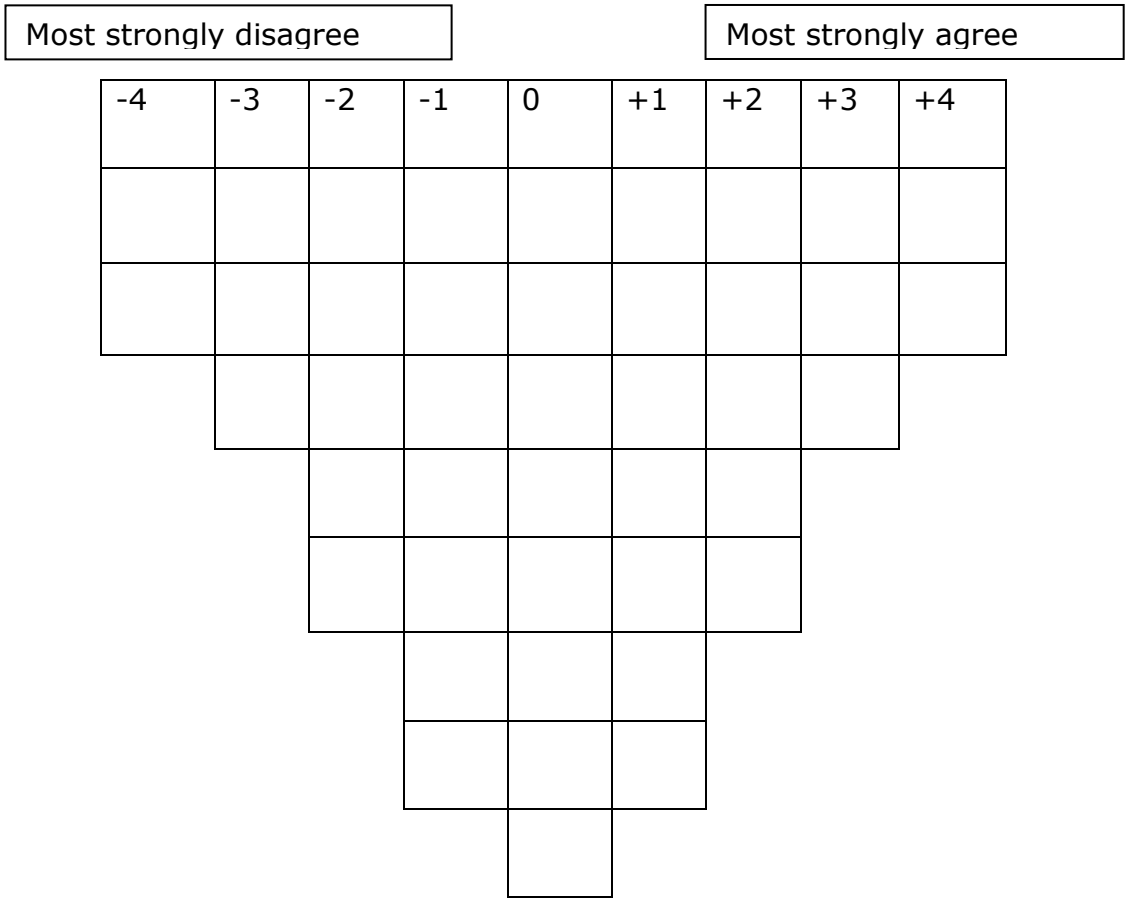
The collection of statements that is gathered is much larger than the number that ends up being included in the sorting process. The next stage of the

process is therefore to reduce the concourse to create the final set. Akhtar – Danesh, Baumann, and Cordingly (2008) suggest deleting any replications and selecting those statements which were most clear and unambiguous, to help reduce the set of statements. In addition to this, Du Plessis, Angelopulo, and Du Plessis (2006), state that it is important that the statements are representative of the concourse from which they are drawn, and so the process requires the researcher to check the final set, for its' representativeness.

Once the set of statements is finalised, the grid is then prepared. The grid can be any size or shape, but a quasi-normal distribution is the most typical shape for the grid, as it ensures participants are carefully considering the placement of each statement in relation to the others (Barry & Proops, 1999). A 'free' distribution can also be used which allows participants to sort as many statements as they like along the -4 to +4 values (see Steelman & Maguire, 1999), but this can reduce consideration of statement placement.

The grid is altered to accommodate the final amount of statements; an example of which is given in Figure 2. This shows the normal distribution shape, which has fewer spaces for statements at either end. These ends have the labels 'most strongly agree' and 'most strongly disagree' to help participants to place the statements. The middle of the grid has more space for statement placement. Analysis explores the content of those statements placed at the extreme ends of the spectrum of agreement, but also looks at how each statement is sorted in relation to the others.

Figure 2: An example Q sort grid in a normal distribution shape



There are two main ways in which the sorting process can take place; face-to-face and online. Face-to-face sorting can be done using large pieces of paper and a stack of statements, printed on separate small cards that can then be physically sorted by the participant (see Bang & Montgomery, 2013; Eccleston, Williams & Stainton Rogers, 1997; Godor, 2016; Morera *et al.*, 2015; Perz, Ussher & Gilbert, 2013). This method is time consuming and involves the researcher being present, however this method does allow for qualitative data to be gathered from the sorters. The addition of interviews or the opportunity to talk about the placement of statements after the sorting process is sometimes used (e.g. see Perz, Ussher & Gilbert, 2013; Watts & Stenner, 2005), to add to interpretation of the emerging factors (Van Exel & Graaf, 2005).

However, should face-to-face methods be difficult to employ, there are ways of collecting reflections when using electronic versions of the sorting process, such as open ended comment boxes (Eccleston, Williams & Stainton Rogers, 1997). In addition, there is little difference in the reliability and validity between online and face-to-face sorting (Reber, Kaufman & Crop, 2000). Similarly, although Van Exel and Graaf (2005) suggest that while interview-based sorting procedures that involve face-to-face contact allow the researcher to interpret the results better, online versions can be preferable if there are geographical issues for sampling. Once the grid, statements, and format of the sorting task are prepared, pilot testing is suggested, to assess content validity of the statements (Akhtar-Danesh, Baumann & Cordingly, 2008; M. Brown, 2004).

Once the sorting method, grid and statements are finalised, the statements are then sorted by participants. The whole set is often subject to an initial sorting that helps participants identify which statements they generally agree or disagree with, before sorting them all in relation to one another. The initial sorting is common practice for Q studies (e.g. see Barr, Ormrod & Dudley, 2015; Godor, 2016; Morera *et al*., 2015; Perz, Ussher & Gilbert, 2013). In order to establish how much participants agree or disagree with the set of statements, they are often asked to sort these into three piles; agree, neutral and disagree, before placing these statements into a grid.

The next stage is to place statements into the grid in relation to one another. Participants are encouraged to start at either end; to place the most agreed and disagreed with statements and then to start working inwards towards the neutral section. Once statements have been placed into each space they can be moved again, so that each can be considered carefully in comparison to the others. Lastly, reflections can be left, or interviews can be conducted following the sorting process.

5.2.2. Recruitment

In terms of sampling, Q methodology is concerned with establishing a range of opinions on a particular phenomenon, which the sampling methods therefore have to reflect in order to sample a specific group. In a similar way to study one, recruitment was broadly purposive to ensure that all respondents met the inclusion criteria of having an existing Loving Kindness practice. The criteria for this was broader than the previous study, in that their practice experience could be of any length. I wanted a range of overall length of time practising, regularity of when they practice, average length of practice when practitioners sit, and a range of views on the practice extending from traditional to the secular.

A mixture of sampling methods were employed to meet sample requirements. This included purposive communication with practitioners or groups, based on characteristics such as being a Buddhist retreat centre and wishing to represent this opinion within the sample. In addition, snowballing was used, as I asked participants who had taken part to send the advert to others if they felt they might be interested. Lastly, adverts were posted in relatively public areas, such as on special interest Facebook groups, which could be considered to be more opportunistic. The sampling method therefore reflects what Collins, Onwuegbuzie and Jiao (2006) would call 'multistage purposeful random' sampling, given the mixture of techniques in a staged approach, starting with the more purposive techniques, before reviewing which groups to target from there. This was to ensure that certain groups of participants could be targeted if necessary after the first one or two stages of sampling.

The first stage of recruitment was to approach participants who had volunteered to be interviewed in study one, but who did not fit the criteria of being able to talk about their practise at length. Some participants self-selected themselves out of the interviews and agreed to be re-contacted for this study. They met the criteria for this study, as I was interested in a range of experience levels. Once these contacts had been used, contact was made with moderators for online groups such as Facebook groups that were

dedicated to the practice. A short advert was used on the Facebook groups, which requested that individuals should email me for further information. An extract from the advert is given below and was purposely open to encourage individuals to contact me.

> I'm looking for people who have practiced LKM to take part in a short online sorting as part of my PhD. You don't have to have been practicing for years to take part, I'm interested in responses from a range of people with a range of experience. If you'd like to know more or to take part, please email me and I will send over an information sheet; kimberley.sheffield@northampton.ac.uk.

A personalised version of this advert was posted on meditation interest groups on Facebook, on my own page which would have been seen by contacts I had made through joining meditation based discussion groups and through my training as a meditation teacher, and this was also shared by colleagues on Facebook and Twitter. The advert was placed on distribution lists; one for psychology postgraduates and another that was for mindfulness teachers, as LKM is included in some mindfulness based programmes. Lastly, the advert was also placed on websites or Facebook pages by meditation groups who had LKM/Metta classes on their website. Where adverts were placed on sites or sent out via email, the content and details were reviewed by me, and the moderator or main contact was always involved in the process with their permission being sought before anything was posted.

The range of advert placement ensured a wide reach, and resulted in a range of experience types and levels. For example, Facebook groups had a wide range of members, and so it is likely that secular meditators as well as those who practise in a more traditional way would be attracted to join, in order to have discussions and gain support. Additionally, Facebook groups may attract individuals who have just started meditating, seeking support from more experienced meditators. On the assumption that this would result in more secular or inexperienced meditators taking part, I balanced this by contacting face-to-face meditation groups and centres which run retreats to obtain a different sort of meditator. Those in contact with retreat centres and face-to-face sitting groups may be practising in a different way, or seeking

different outcomes from their practice, to those who seek online based practice and support.

While I could see the experience level and demographic details of the participants as they completed the study, I wasn't necessarily aware of how they found the advert or my contact details. The sampling approach was more that I actively thought about a wide reach for participants, as opposed to reviewing the data and then targeting specific groups on that basis. I was prepared to employ this strategy on review of the sorts at certain points e.g. once I had 10, and then when I had 20. However, I found that due to a wide range of advert placement, there was a range of participants with a range of experience levels and types completing the Q study, so I felt this was not necessary.

The size of the sample in Q studies can be small, with some studies using just one single case study (Eden, Donaldson & Walker, 2005). Samples range in size from 25 (Barry and Proops 1999), to 31 (Morera *et al*., 2015) up to 62 (Godor, 2016) and 68 (Steelman and Maguire 1999), highlighting the differences seen across studies. Additionally, Zuger (2005) puts forward that around 20 sorters who are of a diverse viewpoint will uncover the same amount of viewpoints on a topic as a group of 70 will in Q. The sample size can therefore be a range of sizes, with Watts and Stenner (2012) suggesting that very large samples can be problematic in resulting in many of the subtleties in the sample being missed, which is one of the strengths of the methodology and so is counterproductive. Sample size can therefore span a large range, as long as this is not too large, so that the nuances within the data do not get lost, with the emphasis being more on quality than quantity in this case. Taking those suggestions into consideration, the final sample was 22, and stopped when I felt like I had sampled a number of participants from a range of sources, in order to get the variety needed from the sample.

5.2.3. Sample

Participants were asked a number of demographic questions such as age, which ranged from 29-66, as well as gender, of which there were 10 males and 12 females. They were also asked to state how they had been engaging with LKM, the regularity of this, how long they sit for, and what other practices they engage with. These were included to add depth to the understanding of the emergent groups once analysis had taken place. In order to highlight the range of experience across the sample, these details are presented here.

The range of number of years practising LKM ranged from 10 months to 35 years, which reflects a wide range of experience with the practice. Across that range, just over half of the sample had between 0-10 years' experience. In regards to how often participants reported sitting per week, this ranged from 'whenever feels appropriate' to 'all the time'. Around half of the participants had a daily practice. When participants did sit, this ranged from 10 seconds to 'all the time'. There were equal amounts of participants who practised for up to 10 minutes as there were for between 11-20 and 21-30 minutes, with almost as many participants practising for between 41-60 minutes. Lastly, in addition to their LKM practice, there were a range of other practises that participants engaged with. The most common was Mindfulness, and while Samatha and Vipassana are related practices, the fact that participants reported these practices using those names suggests that they may engage with their practice in a more traditional Buddhist way, as opposed to a more secular practice which the term Mindfulness has become associated with.

The aim of Q is to identify different viewpoints that exist on a topic. It was therefore important to include a range of experience levels, i.e. how many years' participants had been engaging with the practice, as well as a range of how participants engage with their practice, whether this is on a more spiritual or secular level, to see whether this also has an impact on understanding and view of LKM. The range of demographic details given

here shows the variety which suggests that should different viewpoints exist the sample should be heterogeneous enough for these to emerge.

5.2.4. Procedure

To collect the concourse, statements were drawn from the interviews in study one. Given their extensive experience with LKM, the participants in study one could be considered experts, and it was therefore seen as appropriate to draw the statements from their transcripts. This process of drawing statements from experts without them being included in the Q sorting process meant that it was quasi-naturalistic (Du Plessis, Angelopulo, and Du Plessis, 2006). Statements were drawn from all themes that emerged from the data, including those which were more negative around the challenges that had been experienced, to ensure a range of viewpoints about the practice were represented. Statements were drawn from specific quotes, and in some cases the language of these was adapted to suit the format of the Q, to ensure that the statement could be agreed or disagreed with.

The initial set of statements was 80. This set was initially reduced by eliminating statements where there was an overlap. For example, 'During the practice, I send feelings directly from my heart' and 'Loving Kindness is like connecting with an energy that it always there in your heart' were deemed to be similar, as they referred to LKM to be related to the heart area. The latter statement was chosen as it was more broadly about how practitioners viewed the practice. In addition, some statements had language changes to make them clearer; 'it's made me, made me much more compassionate, much kinder, much more tolerant than I used to be' became 'Loving Kindness has made me more compassionate', which helped focus the content of the statement and what participants had to consider. If it had been left as it was, participants may have felt that the practice made them tolerant but not kinder, and then would have had difficulty placing the statement along the continuum.

Once replications and ambiguous statements were taken out or re-worded, the set of statements was reviewed again to check whether there were a range of statements regarding all aspects of the practice. As I was interested in practitioners' understanding of the practice, I wanted to ensure that a number of aspects about the practice were included, and so I grouped the statements to check what had been covered. These groupings included the process during meditation, the regularity of engagement with the practice, the outcomes of the practice, reasons why individuals practice, what the 'essence' of loving kindness is, and the negatives of the practice. Once this was done, I could see the overlap better. After referring back to the themes that emerged from the interviews, I decided that the final set of statements was representative of the range of understanding about loving kindness. The final set of statements contained 42 items. Example statements include 'Loving Kindness can be used as a secular practice' (statement 1), and 'When doing Loving Kindness Meditation, I often bring images of people or their name to mind' (statement 6). A full list of the statements can be found in Table 3, and in appendix 3.4.

Having already sampled this group of existing LKM practitioners in study one, I was aware that there was a wide geographical spread of those who practice LKM. Given that the reliability and validity of the face-to-face and online methods were similar (Reber, Kaufman & Crop, 2000), and Van Exel and Graaf (2005) suggested that online methods were best used when samples are difficult to locate, an online sorting programme was chosen. In order to gather qualitative reflections on the process, and acknowledging the usefulness of this, participants were able to reflect on the placement of the statements at the extremes of both ends of the grid. They were also able to reflect on the process more generally if they wished, using an open text box. An online programme; flashQ, a freely available and adaptable programme from the Q-methodology website (https://qmethod.org/resources/software/), was used for the online programme.

Pilot testing was used to assess content validity of the statements, and to explore the length of time it took to complete and the usability of the site. The online Q programme was sent out to three contacts who had experience

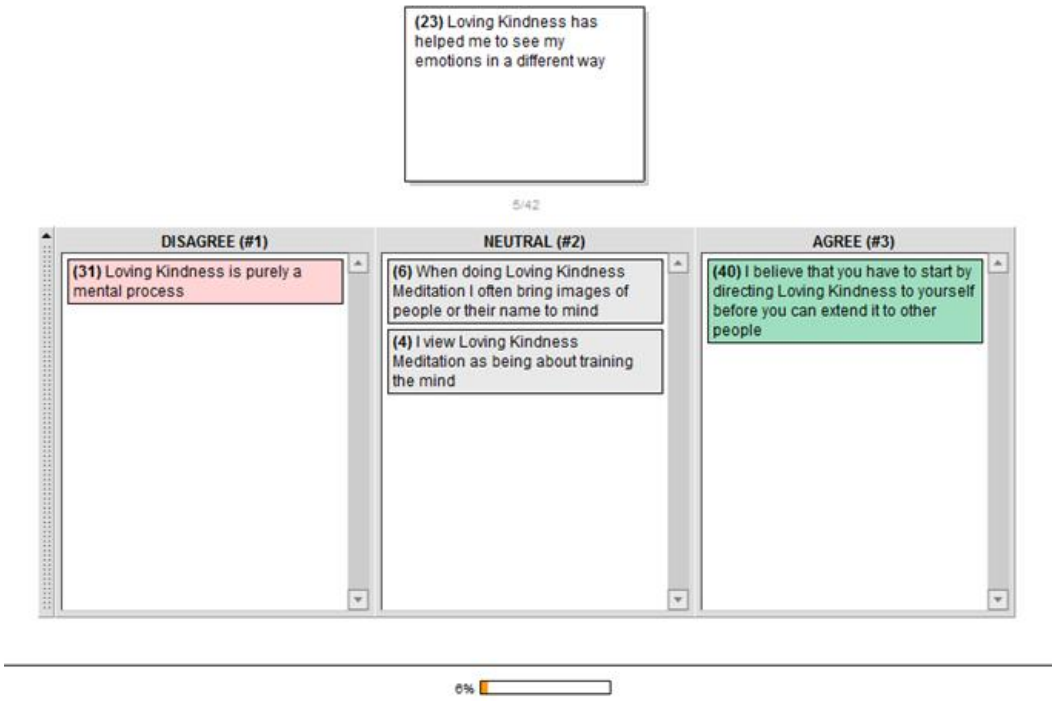
in practising LKM. They gave me an idea of how long the process takes in practice so I was able to let prospective participants know. The only changes that were made were to some of the language around explaining the process, to improve clarity. No comments were made about the statement content, and participants were happy that there were no gaps in their understanding of the practice. In terms of face validity, this is positive and supports the usefulness of drawing the concourse from interviews with experts, to gain valid statements about a topic. This ensures that the statements were drawn from participants' understanding and not my own understanding or assumptions about the practice. It also suggests that the statements were reflective of others' understanding of the practice, and not just those who have an extensive practice. No changes were made to the statements as a result.

Once participants had been contacted, or responded to an email or advert, they were sent an information sheet (see appendix 3.1.) to ensure that they were fully informed before consenting. This included some background information as to who I was, the aims of my overall project, who I was looking to recruit, and an overview of what Q was and what taking part would entail. It also detailed anonymity of participants, security of data, and how participants could withdraw should they wish to do so. Participants were asked to contact me if they were happy to go ahead with the study. Once they had replied affirmatively to me, I sent a consent form that required a digital signature. The consent form (see appendix 3.2.) had six yes/no questions covering withdrawal, an understanding about how their data would be used, whether they had been given the opportunity to answer any questions, and that they consented to taking part in the study. Once this had been received, participants were sent a link to a webpage which hosted an online version of the Q sorting process.

Participants were given as long as they wanted to fill in the Q-sort, but were encouraged to do this in one sitting and were advised that it would take around 20-30 minutes to complete. The first page of the online programme asked the demographic based questions. Following the demographic questions, participants were asked to do an initial sorting of the entire set of

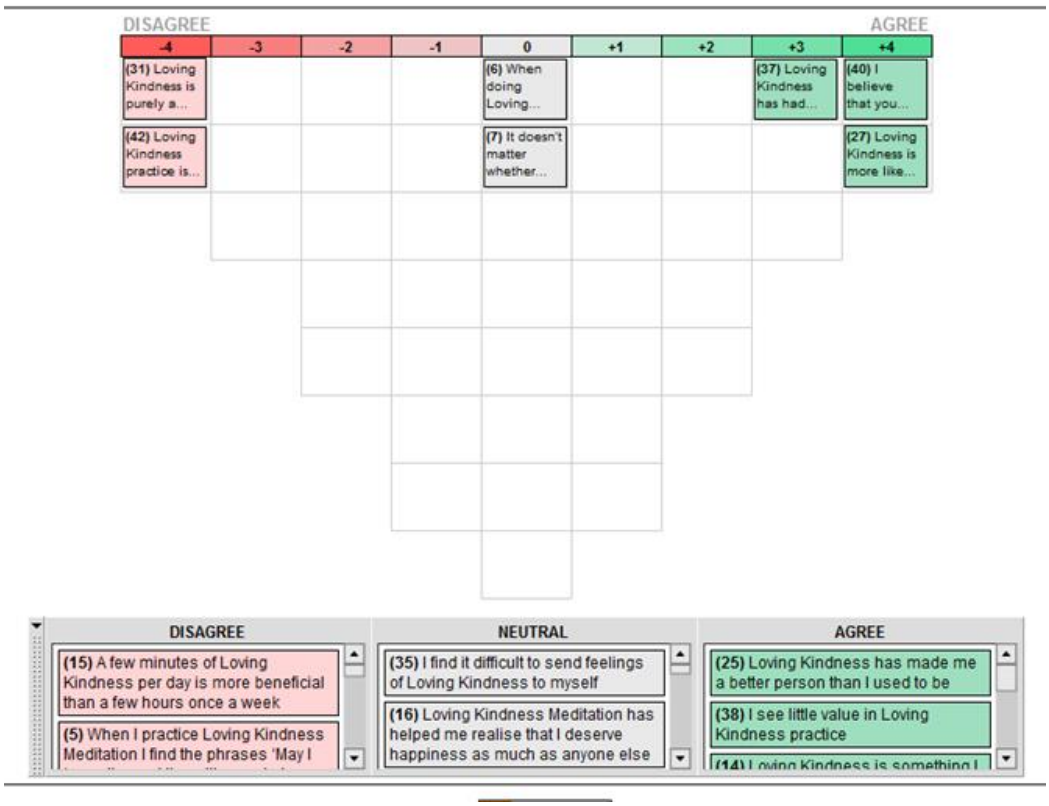
statements. Figure 3 shows this process; this was colour coded, so that when participants were presented with the statements for sorting into the grid later on, it was clear what their initial thoughts on each statement had been. This was done to aid the subsequent sorting process into the grid.

Figure 3: A screenshot showing the initial sorting phase



The next stage was to place statements into the grid in relation to one another. Figure 4 shows the full grid as well as the pre-sorted groups of statements at the bottom of the page. Participants were encouraged to start at either end, to place the most agreed and disagreed with statements and then to start working inwards towards the neutral section. Once statements have been placed into each space they could be moved again, so that each statement is considered carefully in comparison to the others.

Figure 4: A screenshot of the grid sorting process



Once participants had finished their grid, they were prompted by the programme to make sure they were happy with the placement of the statements before moving on. The next page had space for participants to comment on reasons for placement of the two top and bottom statements. The final page had an open ended comment box for any additional reflections.

5.2.5. Ethical considerations

This study was granted ethical approval from the University of Northampton postgraduate research ethics board, and adhered to the BPS ethical guidelines (The British Psychological Society, 2009)

Where recruitment involved meditation organisations and groups, consent was obtained from the leader or manager before members were approached to be asked to take part in the research. Written confirmation of the agreement from the organiser or facilitator of the groups was available for

participants to view if they wished. In order to gain fully informed consent from each participant, an information sheet was sent to participants before they were asked to complete a consent form. This ensured that participants were aware of what they would be asked to do, their right to withdraw their data and how they could do so, and how their data would be stored, before consenting to take part. There was no deception involved in this study.

There was no anticipated harm to participants taking part in this study, as the study aims were to gain an understanding of the practice and its effects. The statements were however assessed by myself, to ensure that they did not contain anything potentially upsetting or harmful, and they were also subject to a pilot study, in which issues with the statements could have been raised. Participants were also made aware that they could stop the Q study whenever they wished, and could withdraw their data following completion of their sorting process should they wish to. The details on how to withdraw their data were given in the information sheet. The last page of the survey acted as a debrief, and reminded participants of withdrawal processes and how to contact the researcher should participants need to.

Participants' identities were kept anonymous through providing them with a participant number. Their demographic details such as age, sex, and length of time practising meditation, was therefore not linked to their identity, and was linked to a participant number instead. All data was kept securely on the researcher's home and work computers only to ensure confidentiality of the data. Participants were asked to state whether they are happy for their anonymised data to be kept for future analysis and sharing with other researchers in the information sheet. Participants were made aware of data storage and length of time in the information sheet. Lastly, data protection was in accordance with the Data Protection Act (1998); data was stored securely by the researcher, using an encrypted folder on the researcher's work and personal computers. These details were included in the information sheet.

5.3. Analytical steps

Details on how to conduct Q analysis are available, but there are no specific analytic steps to follow. Barry and Proops (1999), M. Brown (2004), Watts and Stenner (2005), Watts and Stenner (2012) and Zuger (2005), provide general guidelines and steps for analysis, an amalgamation of which are summarised below:

(1) Entering data into a specialised programme for analysis
(2) Factor analysis of the data to identify groups of participants understanding
(3) Exploration of the factors
    a) Rotating factors
    b) Exploring the factor arrays, including a subjective interpretation of whether the factor solution reflects the data from the researcher's perspective
    c) Re-extracting a different number of factors depending on the outcome of the previous step
(4) Interpretation and presentation of the final factor solution

This analysis section will be split broadly into these stages, with a description of each of the stages in context of the current data, to show how the process works in practice. It is important to note however that the process is not linear. The rotation, exploration of the factors, and possible re-extraction of factors requires exploration of the statistics, but largely relies on interpretation from the researcher when considering the number of factors that are extracted. It is therefore more a cyclical process when exploring the best options for the data. In addition to this, as will be explained later, the data in this study was more complex than anticipated, and so the stage where factors were extracted went through a number of iterations to understand the data.

It is also important to note that Watts and Stenner (2005, pp. 6-7) are quite clear that there are numerous ways to engage with the Q process and that the guidelines available are just that; there are no hard and fast rules to adhere to. On that basis, I deemed it important to explore a range of sources in order to analyse and understand my own data. In addition to referring to

texts on Q analysis, I attended workshops[1] on Q-methodology and read discussions on a listserv where experienced Q-researchers such as Steve Brown, Simon Watts and Peter Schmolck are very active.

Engaging with advice and texts highlighted the importance of the researchers' understanding of the data, in the analysis and presentation of the emerging themes, and what these groupings mean in context. This is linked to the 'quali-quantological' nature of the method. This element becomes particularly relevant in the analysis section where both an objective and subjective interpretation of the data produces the final outcome. The quantitative element of the analysis makes use of factor analysis to help identify groups of participants' understanding, but much of the process of which factors to present to the reader is subjective, and reliant on the researcher exploring the factors and thinking about the groups that have been identified by the statistical analysis. Q analysis is therefore more subjective than a conventional factor analysis interpretation, so at points where there has been subjective input into the analysis this is highlighted.

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[1] The workshops were designed to enable attendees to understand Q-methodology and analysis and to give attendees practical experience in working with Q-methodology data sets. One was at the University of Northampton and was hosted by the Graduate School who facilitate training for postgraduate students and one was the University of East Anglia (UEA), both of which were facilitated by Simon Watts who is based at UEA.

Each participant's data was entered manually to the PCQ (Stricklin & Almeida, 2000) programme which is specifically designed to analyse data for a Q-methodology study. The programme flags any replicated numbers when entering data to reduce human error. Once complete, the whole data set is subject to factor analysis, to explore groupings of opinion on the topic; each emerging factor representing a different group (Zuger, 2005).

Factor analysis seeks to explain the maximum amount of common variance, using the smallest number of constructs, by identifying where there are clusters of variables that correlate highly with one another (Field, 2014). Contrary to conventional use of factor analysis, where clusters of variables would be identified, for example when identifying different personality traits within an overall personality measure, factor analysis in Q groups opinion and shared understanding by viewing each person's completed grid as one piece of data. This is supported by Steelman and Maguire (1999) who state that 'Q-methodology implies the correlation and factoring of persons. R-methodology implies the correlation and factoring of traits' (p. 363). This statement highlights the difference between conventional use of factor analysis, and how it is employed in Q-methodology, to identify groups of people and their associated opinions.

Shared understanding is indicated by correlations between participants' grids in how their statements have been sorted as a whole set, and are interpreted in the same way a correlation is; the closer to 1, the higher the loading of that participant onto the factor (M. Brown, 2004). Where similarities in sorting the statements lie, a factor emerges that reflects an understanding about the phenomenon in question. If this happens multiple times, with participants being grouped to create four or five different factors, an impression of the different opinions about a topic begin to emerge. Each group of participants is identified through how highly each person loads onto a factor. In relation to the participant groups, the analysis also produces a factor array or ideal sort. This is a grid made up of an amalgamation of that group of participants' grids.

The factor array is based mostly on those participants that load the highest onto that factor, but are also inclusive of the other participants' statement placement in that group. This gives the researcher an idea of that groups' understanding of a phenomenon, which are explored in comparison to other factors to identify where differences in opinion lie across the sample. Demographic details gathered about participants can help present a picture of the group and their associated understanding about the phenomenon.

Factor analysis makes use of correlations to identify areas of similarity which Brown (1993) suggests is used in Q-methodology to identify the number of different Q sorts that exist across the participants. He goes on to suggest that where Q sorts, or the finalised set of statements for each person, are similar and have a high correlation, there is similarity in their beliefs about the topic in questions. These beliefs hold what Brown terms a 'family resemblance' (p. 111) where they belong to one family, identified by high correlations with one another, and which are uncorrelated with members of other families that may exist across the sample. Factor analysis therefore helps the researcher identify how many families there are, which relate to different opinions about the topic in question.

Two forms of factor analysis can be used in Q; centroid factor analysis or Principal Components Analysis (PCA). Newman and Ramlo (2010) state that PCA, while commonly used within conventional use of factor analysis, assumes that the individual sort is non-changing. This is unlikely in a Q study, where an individual may sort their statements differently if asked to at different time points. Newman and Ramlo (2010) therefore suggest that centroid analysis, which does not have these underlying assumptions, is more appropriate for Q analysis. Due to this, centroid analysis is also the only form of factor analysis available when using PCQ (Watts & Stenner, 2005). Centroid analysis was therefore the method that was employed in the current study.

To identify the participants that load onto each of the factors, the researcher calculates a significance level as a cut off. This is worked out using a general equation, based on the number of participants; 1/sqrt no. of participants

(Watts & Stenner, 2005). Participants would therefore 'significantly' load onto a factor if the analysis shows they are over this level. If they are under this level on all factors, indicating that their placement of statements is not in line with any of the other participants in the sample, they are classed as not significant, and therefore are not included in the interpretation of the factors. Should a participant load significantly onto more than one factor, they become a confound. This means that they share understanding with more than one of the other groups of participants. Confounds will also not be included in the factor arrays and therefore the interpretation of the topic. Where the cut off for significance is very low, this can impact on the clarity of the analysis and interpretation as many participants will become confounds. This therefore means that the factor arrays will rely on fewer participants to draw from. The cut off can be increased (Watts & Stenner, 2005) as part of the exploration of the factors. The adaptation of the cut-off point can help get a clearer picture of the groups of participants, and their associated understanding about a topic.

The PCQ programme uses a standard cut off rate of .40 as a significance level. The data for this study indicated that this could be lowered to .21 for the significance level, but this resulted in a large number of confounds. This is another area where subjectivity from the researcher affects the outcome of the factors, as there is a process of trying different significance levels and extracting different numbers of factors, until a satisfactory outcome that the researcher feels reflects the complexity of the data is presented. For this data, the significance was set at .40 as this is the general level for PCQ and through multiple iterations of the data analysis, the level was raised to .50 as the data was much more complex than imagined and resulted in a lack of clarity between the factors. Raising the significance level therefore helped to identify some of the differences between the factors, and therefore opinions and understanding of LKM. This is referred to again when presenting the analysis.

Following centroid factor analysis, the data is rotated. Rotation of the data is conducted to help identify the maximum variance within the collection of sorts (Brown 1993). There are different forms of rotation, including varimax,

which is most commonly used in Q research (M. Brown, 2004) and allows the programme to find the 'best estimate' of factors with the Q sorts that represent these (Barry & Proops, 1999, p. 341). An alternative is hand or judgemental rotation, that allows the researcher to manually explore the factors and move these around based on their knowledge of the data. This is something that is often done to confirm theories (Van Exel & Graaf, 2005), as opposed to exploring the data with no theoretical assumptions. As there were no theoretical assumptions in this study, Varimax rotation was used.

The PCQ program has a function that allows the researcher to choose how many factors will be extracted. Alternatively, the researcher can allow the software to extract the number of factors it thinks is the best solution for the data, on a statistical basis. The researcher explores an initial outcome to decide whether re-analysis with more or fewer factors is needed. In terms of the quantitative analysis, this can be done using Eigenvalues that are produced as part of the analysis. The general rule of thumb is to have a cut off of 1; any factors that have an Eigenvalue of below 1 should not be analysed, and those above should be (Barry & Proops, 1999, M. Brown, 2004; Watts & Stenner, 2005). This is due to the explained variance that an eigenvalue represents, with a larger eigenvalue explaining more variance (Kline, 1994 p. 30). Watts and Stenner (2005) highlight the arbitrary nature of this cut off in the context of Q-methodology, as factors that have Eigenvalues higher than 1 may be extracted from random data. They suggest that an alternative could be based on how many participants load onto each factor, with two participants being enough for a factor to be extracted and analysed. There are therefore no clear guidelines on which factors should be extracted and analysed.

Subjectivity is particularly relevant here as this is where the researcher has to explore the data to ensure that the factor solution is reflective of the data, and that they are able to present a clear picture of the opinions and understanding of a phenomenon to the reader. M. Brown (2004, p. 10) presents an example of this subjectivity whereby after extracting four factors, factor five had an Eigenvalue of 1.06 with two participants loading significantly onto it. Statistically, and according to the suggestion of having

two participants loading onto a factor, this would be extracted as a fifth factor. However, upon subjective interpretation of the factor by the researcher on how she felt the factors best represented the analysis in relation to the data and how that was represented in the factor arrays, factor five was not included in the interpretation. This highlights how in Q, statistical analysis can be used by researchers as a basis, upon which there is a layer of subjectivity in how the factors are viewed and extracted. The analysis is therefore a process of exploring both the statistics as well as the factor arrays and groups of participants, to present meaningful findings for the reader. It is up to the researcher as to how much they want to rely on the statistical outcomes of the analysis to base their interpretation of the data on.

Upon exploration of the analysis in this study, a number of factor extractions were viable options. When looking at the unrotated data i.e. before Varimax rotation had been conducted, all of the participants loaded highly onto one factor, from .53 up to .81. As stated previously, these numbers can be interpreted in the same way as a correlation, so the closer to 1 the stronger that participant loads onto that factor. Having a range that starts at .53 therefore indicates a consensus in how participants viewed LKM, and so the data could be interpreted as one grouped understanding. However, when more than one factor was explored, it became apparent that while there were definite overlaps in how the statements were being sorted, particularly at the lower end of the scale where participants disagreed with the statements, there was a more of a range of opinion in the neutral and agree sections of the factor arrays. This suggested that while there was general agreement across the sample in regards to what was being seen as a negatively sorted, there was an array of opinion at the other end. If this has not been included, some of the depth and complexity in the data and therefore participant's understandings of Loving Kindness practice, would have been missed.

I explored opinion on the possibility of one-factor solutions on a listerv from authoritative voices, as well as reading around the interpretation process that, as already stated, places emphasis on the element of subjectivity in the

analysis process. In regards to one factor solutions, S. Brown (2016) was clear on a discussion list, that while it is important to present what the analysis shows in terms of that one main factor, that in some cases, ignoring the subtle differences that exist in the data from other factors being viable options for extraction, depth in understanding about the opinions or understanding of that phenomenon that exist within the sample group may be missed. In a post on the discussion list, he posted this in response to a query that a student had regarding the analysis of his data:

> The resulting factors … strongly suggest a single overwhelming factor… plus perhaps two or three specific factors… (S. Brown, email communication, 28th February, 2016)

Here, S. Brown is suggesting that it is not always as simple as presenting one single factor, and that in some cases additional factors can also be presented. He goes on to say:

> The behavioural implications of this first factor are that all 50 participants are in substantial agreement and have therefore ranked the statements in highly similar ways, which the one general factor documents…The remaining factors provide evidence of specificities; i.e., of deviations on the part of specific respondents from the consensus shared by all… it must be remembered that persons significantly associated with factor 2 are even more significantly associated with factor 1; i.e., they agree with the consensus primarily, but also depart from it in ways that the rest of the participants do not. The nature and source of that departure could be a finding of great interest (S. Brown, email communication, 28th February, 2016).

Taking this argument into account, it seemed that a one factor solution, statistically, made sense. However, keeping my own understanding of the data in mind, and what S. Brown put forward on the discussion list, it seemed to me that not including analysis of the other factors, that show where understanding does diverge from the consensus, would not be reflective of the complexities in understanding LKM that exist and are shown in the data.

Therefore, the analysis below presents the overall one factor solution that reflects an overall idea of the practice, but also presents three factors below it as well. The lack of significant difference between the remaining factors

and the overall one factor solution is due to consistent sorting at the lower, negative end of the spectrum, as well as around the broad neutral area in the middle, across the sample. Some of this overlap can be seen in Table 3 e.g. statements 1, 2, 8, 26, 30 and 36-38, where there is consistency across the factors in the placement of those statements. This means that regardless of how the other statement placement may differ at other points in the grid, due to the use of factor analysis and the consistency in sorting those statements negatively, the whole sample becomes one group of understanding. The differences in the rest of the grid between the three factors, when examined, were quite marked in some cases, for example statements 10 and 27 in particular. This shows that overall there is a general agreement in the entire sample on some of the statements that were disagreed with, but differences exist in how the practice is understand apart from that, that if not presented, would not be giving an entire picture.

Table 3 shows the placement of each of the statements for both the one factor solution, as well as the three factor solutions. This allows for comparison of statement placement across the groupings. This helps identify and interpret important statements for each group, as placement of a statement in one factor can be compared to where this placement is different for other factors.

Table 3: Factor arrays for one and three factor solutions

	No.	One factor	Three factors		
			A	B	C
Loving Kindness can be used as a secular practice	1	0	0	0	1
I practice Loving Kindness to maintain and/or improve my own wellbeing	2	0	0	0	1
I consider Loving Kindness Meditation to be a spiritual practice	3	1	1	0	2
I view Loving Kindness Meditation as being about training the mind	4	0	0	1	0
When I practice Loving Kindness Meditation I find the phrases 'May I be well, may I live with ease' etc. useful	5	1	2	0	1
When doing Loving Kindness Meditation, I often bring images of people or their name to mind	6	2	2	1	3
It doesn't matter whether you use phrases or visualisations during the practice; whatever works for you	7	1	2	2	1
I personalise the traditional way of doing the Loving Kindness practice	8	0	0	1	0

I vary the focus of the practice depending on how I'm feeling that day or whether I have an issue with a particular person	9	-1	0	-1	3
Loving Kindness is like connecting with an energy that it always there in your heart	10	1	-1	1	4
I practice Loving Kindness in all aspects of my life, not just during Meditation	11	4	1	3	2
You don't need to meditate on Loving Kindness, just trying to be a nicer person is enough	12	-2	-2	-1	2
I only use Loving Kindness when I've had a bad day or negative encounter with someone	13	-2	-3	-3	-2
Loving Kindness is something I do on a regular daily or weekly basis	14	2	3	1	0
A few minutes of Loving Kindness per day is more beneficial than a few hours once a week	15	-1	-1	-1	0
Loving Kindness Meditation has helped me realise that I deserve happiness as much as anyone else	16	1	1	0	-2
Loving Kindness has allowed me to feel like I can be at home with myself	17	1	0	2	1
Loving Kindness has made me more compassionate	18	3	1	3	0
Loving Kindness has made me less judgemental of myself and others	19	2	3	1	1
Loving Kindness has improved how I relate to others and consequently my relationships have changed	20	4	2	4	1
Loving Kindness has wider physiological and physical impacts e.g. on my immune functioning and helps ease pain	21	0	-1	1	2
Loving Kindness has improved my cognitive abilities e.g. attention	22	-1	-1	1	1
Loving Kindness has helped me to see my emotions in a different way	23	2	1	2	0
I believe Loving Kindness can change default attitudes	24	3	1	2	4
Loving Kindness has made me a better person than I used to be	25	2	2	3	-1
The feelings of Loving Kindness are the same as compassion	26	-1	-1	-1	-1
Loving Kindness is more like friendliness than love	27	-1	4	-1	-1
Loving Kindness is extending love to everyone	28	-1	-1	0	0
Loving Kindness is a form of Mindfulness	29	0	1	-1	3
There is little difference in the effects of Loving Kindness and other practices I engage with	30	-2	-2	-2	-2
Loving Kindness is purely a mental process	31	-2	-2	-2	-2
Loving Kindness has a physical element	32	0	3	0	-1
I find Loving Kindness lacks force	33	-3	-2	-2	-3
Loving Kindness becomes easier over time	34	1	4	2	0
I find it difficult to send feelings of Loving Kindness to myself	35	-2	-4	-2	-1
I don't see the value in sending Loving Kindness to 'enemies'	36	-4	-2	-4	-4
Loving Kindness has had little effect on me	37	-3	-4	-3	-3
I see little value in Loving Kindness practice	38	-4	-3	-4	-4
If I don't practice Loving Kindness regularly I feel like the day gets off on the wrong foot and I waste time and make mistakes	39	-1	-1	-2	-2
I believe that you have to start by directing Loving Kindness to yourself before you can extend it to other people	40	0	0	0	2
I think directing feelings of Loving Kindness towards myself is more a formality	41	-3	-3	-3	-3
Loving Kindness practice is a fundamental part of me and my life	42	3	0	4	-1

5.4. Analysis

Before exploring the one factor solution, it is important to note what placement of the statements by practitioners in certain places means. In accordance with Q-methodology advice generally, statements in this study were varied to cover the possible range of opinion. In terms of gathering an understanding of Loving Kindness Meditation, this meant including statements on the perceived effects of the practice, how it is perceived in relation to other practices, how it fits in with practitioners' lives and what it is like to engage with LKM in practice.

Statement placement may therefore indicate how much practitioners value certain elements of the practice, in terms of contributing to their understanding of the practice; those that were sorted as very high were most agreed with. These statements may also reflect the aspects of the practice that are most important in terms of understanding the practice, or important aspects of the practice for practitioners to convey, likewise at the negative end. Those that are in the middle are not redundant, but reveal the aspects of the practice that the practitioners do not feel necessarily define the practice. It is interesting to note for example, where some groups sort statements at the high or low end, while other groups may sort those same statements sort them in the middle. This identifies a difference in the importance that the statement has for the former group in comparison to the latter. Analysis reveals not only different understandings of the practice, but also those aspects of the practice that practitioners feel are of more importance to them in their understanding. The form of statement this is, in terms of whether this is the effect the practice has, or how the practice is perceived in relation to other practices, may therefore highlight some of the important parts of the practice.

As stated, the area where there was most overlap in consistency of statement placement was at the negative end of the spectrum, which is therefore where the focus of the analysis in the one factor solution section will lie. Differences in understanding, seen at the upper end of the spectrum of agreement will be focused on in Factors A, B and C.

5.4.1. One factor solution

This factor accounts for 52% of the variance and contains all 22 participants, 12 female, 10 male. The length of time they had been practising ranged from 10 months up to 35 years, the regularity of practice ranged from whenever it feels appropriate, to all the time, the length of time when they did meditate extended from 10 seconds to all the time, and they were aged between 28 and 66. Full details on the demographic questions are presented earlier in section 5.2.

Practitioners in this sample, which includes a range of ages, experience with LKM, as well as variation in how often and for how long they sat for, has the consistent view that the practice is powerful (33; -3, 37; -3) and important to them (38; -4). The self and enemies are both crucial parts of the practice (41; -3, 36; -4), but directing LK to the self was not seen as much of a challenge (35; -2), and directing LK to the other target groups does not necessarily rely on being comfortable in sending LK to the self (40, 0).

One other area of consistency in statement placement was regarding whether the practice was viewed as a secular or spiritual practice. The placement of statements regarding its 'uses' were not only consistent across the sample, but were also consistently placed around the neutral area of the grid; (1; 0, 2;0, 3; +1, 4;0). This suggests that the sample as a whole had no particularly strong view on how they view the practice as being spiritual or secular, and that they also have a seemingly multi-purpose view of the practice.

As such, the key aspects of the practice that were consistently placed in the same area of the grid by the whole sample, indicate that the practice is viewed as powerful and something that they see a lot of value in, that the enemy- and self-foci are important parts of the practice, but also that the self is not a huge challenge to engage with, and may not be fundamental in being able to engage in directing LK to the other groups. Lastly, the sample here, who are wide spanning have no particularly strong opinion on how they view their practice as being spiritual or secular, or for a specific purpose, neither do they differentiate between these, and see the practice as being

both something that is more a spiritual practice, as well as something that can be more pragmatic in its use.

In terms of the placement of the remaining statements, as this is where the differences lie, the upper end of the spectrum for this overarching factor is of less importance in understanding the different opinions. Therefore, the analysis will move on to explore each of the factors in turn, with emphasis being placed on the neutral and upper end of the spectrum in order to add depth and understanding of where opinion differs.

5.4.2. Three factor solution

The three factors presented below account for 60% of the variance and include 18 participants; details for each factor are presented at the start of each explanation.

Factor A: The practice and its practicalities

This group describe their practice in terms of what it is like to engage with. The practice extends beyond the mental process, and is viewed and experienced as part of the individual.

Factor A included five participants; 4 male and 1 female, with ages ranging from 30-64. They had a range of 4 to 35 years' experience meditating, with four participants meditating every day or most days, and one meditating once a week. When they did meditate, this was from a range of 3 minutes up to 20 minutes and they had a range of personal practices, including Vipassana, Anapanasati, Yoga, Samatha and Insight meditation. The group of participants was therefore varied, and there was no particular aspect that held them together in terms of demographic or meditation experience.

As an overview of the lower end of the spectrum, and to demonstrate similarity in how statements were being sorted at the negative end, the kinds of statements that were least strongly agreed with were those around the impact the practice has had on them (37; -4), the value of sending loving kindness to the self (41; -3) and the overall value of the practice (38; -3). This was very similar to the one factor, overall solution; (37; -3), (41; -3), (38; -4) and therefore reflects similar understanding.

At the other end of the spectrum, where statement reflects agreement, emphasis for this group was on the understanding of the practice as becoming easier over time (34; +4), that it is more like friendliness than love (27; +4), that it is something they do on a regular basis (14; +3), and that the practice has a physical element (32; +3). These statements are more about the what it is like to engage with the practice, and what it means to them as opposed to, for example, the perceived benefits of the practice. This group seem to be interested in the more practical set of statements and how they understand their practice.

The placement of the statement regarding that the practice has a physical element (32; +3), while very high for this group, making it important for them in terms of their understanding of the practice, was also sorted quite a lot lower for the other factors at -1 (C) and 0 (B). As such, this is an important element of the practice for this group, but is also one that distinguishes this groups' opinion and view of loving kindness from the other groups of practitioners. A comment left by participant 6 helps contextualise the placement of this statement, by highlighting that this group of participants see the practice as being embodied, and as being experienced in their whole body:

> I find softening towards experience to be both an expression of and a support for Metta. This softening is expressed in my body (S32; 6).

This notion of the practice being embodied is further supported by placement of other statements, that suggest that the practice is not just a mental process (31; -2), is something practitioners can engage with 'off the mat' (11; +1), and something that's not just for use when having a bad day (13; -3). The placement of these statements combined may support a more 'lived' view of the practice.

As such, the groups' statement placements suggest that their understanding of the practice as being to do with the practical elements of the practice, with some of the statements around how the practice is understood, and what LKM is like in practice, being placed at the upper end of the spectrum. However, when explored in relation to the other statements and in

conjunction with the comments left by participants, this group's view on the practice is as one that has an element of being about the person as a whole and indicates that this group see the practice as being 'lived'. The focus on the physical element of the practice indicates that practitioners view the practice as more than just repeating a mantra, that the practice is itself felt throughout the body. The focus on friendliness rather than love further emphasises this point by suggesting that the practice is not tapping into an emotion or feeling, it is more of a change in attitude, and the person themselves is changing as a result.

Factor B: The practice has made me a better person

This group describe their practice through its benefits and impact that it has on them. They view their practice as something that has made them a better version of themselves, and is part of the way their live.

This factor accounted for the most amount of variance within the sample at 23%. It is made up of six individuals; five female and one male, aged between 33 and 58. They have a range of experience, from 10 months to 25 years, with all saying that they practice on a daily basis. Most of the time their practice was for anywhere between 10 seconds and an hour long 'formal' sitting practice, with one who had an extensive practice of 20 years stating that they practice all of the time. Their practices include a range of other meditation types including Mindfulness, Anapanasati, TM and yoga as well as loving kindness. They were similar in demographics to factor A, in terms of the variety of experiences and age, yet were mostly female where the above factor was mostly male.

There was a similar emphasis for this group on the sense of the practice as being part of the individual, but the statements chosen by this group seemed to be more emotive and indicate perhaps more of an emotional connection to the practice in comparison to Factor A. For example, the placement of two of the highest statements were that the practice is fundamental to the individual, and is practised in all aspects of their lives (42; +4, 11; +3). In this group, the statements chosen indicated that the practice was important to the practitioner, and it was as if they were trying to live their lives in a

more 'Metta' way, and that this was an important aspect of them as people and how they live their lives.

The rest of the statements that were placed at the upper end of the spectrum again emphasise the importance of the practice to these practitioners, by highlighting the impact the practice has had on the individual in improving relationships (20; +4), making them more compassionate (18; +3) and a better person (25; +3). This was different to the first factor, as these all focus on what the practice has done to the person and suggest huge benefits. In comparison, Factor A placed these same statements as agree, but lower than this group (20; +2, 25; +2, 18; +1) suggesting that while they did see these as something they agreed with, these were not the most crucial aspects of the practice in terms of their understanding.

The importance of the practice to the practitioners in this group is further supported by them all stating that they mostly practice on a daily basis. The regularity of practice indicates participants in this group see the value in having a consistent practice that becomes part of their lives, and part of them. It also seems to have been an influential one, with statements around the impact of the practice in making them better people and the practice having an effect on their relationships with others as being important, placed high on the spectrum. The influence and power of the practice, in creating positive change within the practitioner is what defines this group's opinion and understanding of the practice.

Factor C: I can use the practice to help strengthen me

This group of participants view the practice as being part of them, but is something that is adaptable and is more of a skill that can be tapped into in times of need.

This factor accounted for 19% of the variance and is made up of six females and one male aged between 28 and 66. These individuals are the oldest and youngest participant in the sample. They are also some of the least experienced with LKM compared to the rest of the sample, having between less than a year and 6 years' experience. They have a range of practices, but

only one meditates daily, with the rest meditating anywhere between every other day to whenever it feels appropriate. When they do practice this can be for fairly long periods, with two stating 10-15 minutes and the rest being 30 minutes to an hour. Most practise Mindfulness as well as LKM, with prayer, yoga and Reiki stated as additional practices. As such, what sets this group apart from the other two is their relative lack of experience in terms of longevity, as well as how frequently they engage with their practice.

This group of participants viewed the practice as something that was innate and a part of them (10; +4), expanded on with the comment:

> I believe that loving kindness meditation allows me to reconnect with the strength within (P2).

This comment suggests that everyone has the ability to access this strength, through engaging with LKM practice, and therefore could be seen as a natural element of the self for individuals to tap into.

Interestingly, the practice was also seen as something that may differ day to day (9; +3). An interpretation of this is that the practice is adaptable depending on the days' circumstances, supported by the comment that was left:

> I tend to focus on the person who is causing the most turbulence (P2).

The placement of this statement was also important in terms of how the other factors sorted it, being at 0 for Factor A and -1 for Factor B, which suggests an indifference as to where this statement is placed. The fact that this is, in comparison, so highly placed by this group, suggests that this element of the practice stands out for this group and is not only important to them, but also important relative to the other groups' placement. This could suggest that the practitioners see the practice as something that can be 'used' when needed; reflected by the fact that they don't have a daily practice, and is seen more as a skill to help the person deal with stressful situations.

Other statements that were sorted at the upper end of the spectrum were that the practice can change default attitudes (24; +4), that practitioners use visualisations and images during practice (6; +3) and that LK is a form of mindfulness (29; +3). The latter is perhaps unsurprising given that nearly all practised Mindfulness as well as LKM, whereas the other groups had more of a range of additional practices. The statements chosen at the very upper ends are more about the process and procedural elements of the practice. In comparison, those statements regarding the influence of the practice through the perceived outcomes, that were rated highly by the other factors, were placed around the neutral area for this group (25; -1, 23;0, 18;0, 19; +1, 21; +2, 20; +1).

This group have more of a procedural understanding of the practice; they can see the value in it, the impact it can have on a person, and see it as something that is innate, but there is an element of it being something that can perhaps be tapped into to help reduce stress or improve relationships, and there is a lack of emotional connection with the practice that seems to be evident in the other two factors. This could be reflective of the relative lack of experience with the practice and perhaps highlights how novices may view the practice as being more about the process and 'how to', as opposed to having experienced vast change and therefore see it as a part of them and who they are as people.

5.5. Discussion

There was consistent overlap at the lower ends of the spectrum of agreement. This resulted in an overall impression that the practitioners in the sample had strong views on those statements that they strongly disagree with. These included disagreeing with statements such as 'I see little value in Loving Kindness practice', which indicates the worth of the practice. Additionally, statements around not seeing the importance of the self and enemies in the process, were consistently placed at the negative end, which shows that the self and enemies are seen as important parts of the practice. Lastly, the neutrality over the placement of the statements regarding the spiritual or secular nature of the practice indicated that there was little

differentiation between whether the practice was seen as a spiritual practice or a more secular one, and that this aspect of the practice was not of particular importance in defining the practice indicated by the neutral placement of all of these statements.

The main differences in how the practice was viewed were evidenced by different placement of statements at the upper end of the spectrum. There was an overarching sense that the practice is inextricably linked to the individual who is practising, but this was communicated differently by each of the groups. Factor A focuses more on the process of the practice and highlights the embodied nature of the practice, and how it could be considered an attitude rather than engaging with a specific emotion or feeling. Factor B also highlights the practice as being part of the person, but the statements they use to communicate this are more emotive than factor A. Statements that talk about the practice as being fundamental to the person and their identity, and statements regarding how the practice has had large impacts on the person, were placed at the positive end. The simplest differentiator between the two groups of practitioners in factors A and B seems to be a sense of importance and impact; factor B seem to attribute many aspects of themselves to the practice whereas factor A communicate this in a more pragmatic way. For example, Factor A sorted statements around the physicality of the practice and that it became easier over time at the upper end. In comparison some of Factor B's highest sorted statements were that the practice is fundamental to the individual, and is practised in all aspects of their lives (42; +4, 11; +3), which have more of a connection to the value of the practice and the importance this holds to those practitioners in their lives.

The last factor, C, is different from the first two factors, in the amount of time they have been practising. This last group had less experience compared to the other groups. Their view on the practice again highlights the link between the practice and the practitioner, but this time it is more about the practice as being something that is adaptable and engaged with when they might need it. This suggests an opinion that is more about being able to make use of an innate skill, but that the connection to the practice is less

emotional and much more pragmatic than Factor B in particular, which perhaps comes from the shorter amount of time practising.

These factors reflect three subtle differences in how the practice is perceived and understood; (1) the practice is more of a way of being, but also has practical elements to it, (2) the practice is incredibly important, changes the practitioner for the better, and is a part of the individuals' identity, and (3) Loving Kindness as being almost a 'tool' that is something that is within the practitioner, to be accessed to strengthen the individual when needed, but is not something that necessarily defines them. In addition, aspects of the practice that were common across the sample, discussed in the one factor solution, refer to aspects of the practice itself. These were the overall importance and value of it, the important role that enemies and the self-foci play in the process, as well as this multi-use view that practitioners had.

Some of the themes that emerged from the interviews can be added to by the patterns of understanding from this study. For example, the self was seen as a crucial part of the practice by interviewees in the first study. This was highlighted as a crucial element across the factors, evidenced by the consistent placement of statement 41, regarding the lack of importance of sending LKM to the self, at -3 which indicates support of the self-focus of the practice. Similarly, while the enemy focus was raised in relation to presenting a challenge in the interviews, and so became an important part of the practice that could create a barrier for engagement, the impression from this sample was that the enemy focus held a huge amount of importance when engaging with the practice. The understanding of the enemy focus has therefore been added to, by the placement of statements, as well as comments left by participants, as will be seen in the following sections.

Understanding LKM

One of the overarching senses from the interviews was that it was difficult to pinpoint exactly what LKM was in terms of a specific emotion or feeling. A better way of understanding the practice was to view it more as an attitude or way of being. This way of understanding LKM was supported by some of

the placement of statements and comments left by participants in Factor A in particular.

In Factor A, one of the highest placed statements was regarding the practice to be more like friendliness than love (27; +4). A comment left by participant 1 adds depth to the placement of this statement, indicating primarily that this comes from their teacher, but also comments on the difference in terms; love and friendliness, as having different associations, one with an emotion and the other with more of an attitude or way of being:

> The Pali word "Metta" means "boundless friendliness" according to one of my teachers. Love suggests feeling and emotion, whereas friendliness suggests a kind of attitude: you can be friendly to everyone, regardless of who they are or what they've done. That said, the Buddha did say that we should treat everyone like a mother treats her only child - a high bar that would include love! (S27; P2).

This also supports the observation from study one of the difficulty practitioners had with the term 'loving kindness' because of the associations it has with love in a western sense. This further supports the importance of the language in how the practice is presented and conveyed to novices in particular, as this could result in different outcomes based on how they understand the practice.

One of the observations from study one was that there seemed to be a multi-purpose view of LKM, as being something that could be engaged with for more spiritual change, as well as on a more secular level, and viewed more as a skill. Statements used in this study that are linked to this, were whether the practice was to maintain or increase wellbeing, seen as a secular practice, being about training the mind, and being a spiritual practice. The placement of all of these statements around the neutral part of the grid suggests no particularly strong opinion on practitioners' views on the practice in this sense, and also that these factors are not largely important in their own understanding of their practice. This is perhaps due to the practitioners all being Western individuals who may, by nature, have a more combined secular and spiritual sense of practices. It seems though, that labelling the

practice as one or the other seems not to be of importance here that was reflected across the factors when examined individually.

Self

The placement of the statements regarding the self and enemies, indicating that these are important parts of the practice, mirrors findings from the previous study where emphasis was placed on the self as being an important part of the practice. The sample in the first study were all very experienced, thus to have a consensus on the self as being important across a range of experience levels that are included in this study, further supports this point about the practice and one that needs to be emphasised when planning the study for novices.

One of the themes to come out of the interviews was that the self was a crucial part of the practice, but also one that was perhaps the most challenging. The self was seen as an important aspect of the practice in this sample, with the statement 'I think directing feelings of Loving Kindness towards myself is more a formality' (41; -3) being sorted at the negative end. This was not fundamental to continuing on with the practice though, with the statement I believe that you have to start by directing Loving Kindness to yourself before you can extend it to other people' (40, 0) being placed around the neutral area. In addition, the challenge that the self-focus seemed to present to practitioners in the first study, was not as much of an issue for this sample. The placement of the statement 'I find it difficult to send feelings of Loving Kindness to myself' (35; -2), is more towards the neutral and negative end than the agree end of the spectrum. It is therefore encouraging that practitioners in this sample did not feel this is presenting too much of a barrier to engagement. This difference in opinion regarding the challenge of the self between those in the first and second studies could however be due to the amount of engagement with the practice. Those in the first study had extensive experience and reflected back on the challenges they had experienced as well as observed in others, and it may therefore be that those in this study being relative novices in comparison, may not have engaged fully in the practice, or have had time to find this focus a challenge

yet. So while it is encouraging that the self-focus does not seem to be presenting much of a barrier for this sample, it may be something that does become a challenge later in practice which reflects the journey aspect of engaging with the practice. The complexity of the self-focus is further expanded on with some of the comments from practitioners:

> It is not a formality, I see true benefit in this practice (S41; P22) when someone finds this stage of the practice relatively easy, it is still not a formality. It helps give a firm foundation for the other stages and can be returned to when those other stages come up against obstacles. There are people who find this stage very hard indeed and it's certainly not a formality for them. It can need a lot of attention and encouragement. (S41; P19)
>
> I think we need loving kindness as we tend to judge ourselves very harshly (S41; P5)

The reflections from participants regarding the value in sending LK to the self, suggests that this aspect of the practice can be difficult for some, but provides a solid basis that practitioners can return to, and also helps to reduce some of the negativity that we might direct to ourselves. This reflects some of the suggestions from the first study, where there was an emphasis on becoming a better person, and how the practice can help the individual overcome the effects of the negative ways we are expected to live. The self therefore seems to be a complex aspect of the practice; in one sense it is important for engaging in the practice, but practitioners in this sample don't seem to view this aspect as particularly difficult to engage with, nor do they view the practice as necessarily relying on the self-focus in order to engage with the practice.

Enemies

From the analysis in study one, the enemy focus of the practice was viewed as a challenge, but not much more was said about it. The emphasis from experienced practitioners was more on the self and developing this before being able to direct this to others. The placement of the statement 'I don't see the value in sending Loving Kindness to 'enemies' (36; -4) at the most negative end of the spectrum, consistently across the sample, was surprising given the range of other statements in the set. This highlights the

importance of this aspect of the practice to engage with, and based on the comments left by participants, this also seemed to be in some ways the 'point' of the practice:

> "Enemies", or "difficult people", are a really important part of metta practice because it helps you (a) recognise that they just want to be happy, even if they seek that happiness in cack-handed, cruel or unhelpful ways, and that if they were happier, they might not be so difficult and (b) that you can shift your feelings about someone over time. Several people have moved from "difficult" to "neutral" as a result of metta practice for me. (S36; P2)

> Anyone thinking this is fundamentally misunderstanding that loving kindness is unlimited in its scope. It is described as boundless and immeasurable in Buddhist tradition. Those terms refer to the kinds of beings who are included in loving kindness..... i.e. all beings. Of course, it's not easy to try to feel loving kindness towards someone who has hurt you in some way and it needs effort and a firm basis of loving kindness for oneself to make some progress. I think people who make some headway in the 'enemy' stage soon realise that they themselves are greatly benefitted. I also think there is a misunderstanding that developing loving kindness towards an enemy implies letting them "off the hook" for whatever very real hurt they may have done. In fact, it helps the person who has been hurt reclaim their emotional independence from their enemy. (S36; P19)

These reflections highlight the impact that the practice can have on the individual practising, as well as the relationships with others that we find difficult. Participant 19 suggests that there is a cyclical nature to the practice and its directions; that 'making headway' as they put it, helps to gain something personally. They also highlight the importance of the self in forming a solid base to base extending LKM to others. This emphasis on the importance mirrors findings from the interviews, although this was not necessarily shared with the rest of the sample, as mentioned in the section above. While the enemy focus of the practice may present a challenge, it seems a worthwhile, powerful and crucial part of the practice to engage in.

Keeping in mind that the statements regarding the self and enemies were those that were consistently placed at the lower end across the whole sample, they represent a wide range of practitioners' understanding in relation to the importance of directing loving kindness to the self and

enemies, as well as the perceived impact and importance that the practice holds. This supports the themes that emerged from study one, but add to our understanding around the complexity of the focus on the self. While important, the self does not present as big a barrier as previously thought. It also seems that the self is no more important than sending those feelings to enemies that in this case are seen as also very valuable, powerful part of the practice.

Strengths and limitations

The strengths of Q-methodology lie in its ability to combine the strengths of qualitative and quantitative research (Dennis & Goldberg, 1996), and is a way of identifying 'socially shared viewpoints and bodies of knowledge' (Watts & Stenner 2005a, cited in Watts 2008, p. 37). In this study, the method allowed for different viewpoints on LKM to emerge across a sample of practitioners with a range of experience levels. One of the strengths of this study is that the amount of variance explained by the factor solutions was high. Having a shared variance around 35–40% is regarded as a good solution (Watts & Stenner, 2012), and therefore the shared variance being 52% for the one factor solution, and 60% for the three factors, is a good outcome.

The main concern with the study and the resulting analysis is the single consensus factor. This could indicate an issue with some of the statements; they may have been worded in a way that caused the sample to place them in the same section. The piloting process that I used did not highlight any issues around the wording of any of the statements. On reflection, the only statement that was sorted as strongly disagree by the sample that could have lent itself to consensus could have been statement 38: 'I see little value in Loving Kindness practice'. This was included to reflect the more negative views of LKM that exist, that was also expressed in the interviews. While it is likely that the sample would have disagreed with this given their current engagement with the practice, the placement of this at the most negative end, as well as where it was placed in relation to all of the other statements was not necessarily expected. For example, one of the other statements that

speaks to the value and importance of the practice was 'Loving Kindness practice is a fundamental part of me and my life', was sorted differently across the sample.

The other statements that created a consensus across the sample were 'I don't see the value in sending Loving Kindness to 'enemies'' and 'I think directing feelings of Loving Kindness towards myself is more a formality'. I did not anticipate that either of these statements would be sorted in the same way across the sample. As such, I do not think any of the statements created any particular bias, or lent themselves to be agreed or disagreed with by the whole sample, particularly as the variation in how the practice is seen and practised across the literature and the interviews. In addition, single factor solutions have been observed within published literature (e.g. Morera *et al*., 2015). I am therefore confident that the single factor solution in this case reflects consistency in those core aspects of the practice, of the self and enemy foci, as well as the overall importance and value of the practice.

5.6. Conclusions

The main findings that emerged from the single factor solution were that the practice is very important and worthwhile, and that the enemy and self-foci are important parts of the practice. Additionally, consistent placement of the statements regarding the function or reason for practice, e.g. for spiritual reasons, or for improving attention, around the neutral area of the grid, indicated a multiple use perspective of the practice, and supports a notion of adaptability, and flexibility around the practice. Differences emerged towards the strongly agree end of the grid, where there seemed to be differing levels of connection with the practice. These differences were however subtle, and in terms of how we understand LKM, the finding from the single factor solution are more useful here.

5.7. Summary

As this study builds on the previous, it is important to compare the findings here, to those previously observed, to explore how our understanding of LKM has deepened. Building on the previous studies findings, this adds depth to how we understand the self-focus. Analysis here suggests that while the self-focus is important, the focus on the other groups was not dependent on having establishing the self-acceptance of LK, although this still seemed to provide an important grounding for the practice nonetheless. In addition, the challenge that the self reportedly presented in the first study was not emphasised as much here. This is encouraging, as with a range of experience levels, this factor is not presenting that much of a barrier to practice.

The enemy focus was raised as a potential barrier in study one, whereas here the emphasis was more on the powerful impact that this can have on the individual practising, and how it is an important part of the practice to engage with. This links back to the notion that connectedness might be a key factor to the practice; if connecting with others, particularly those who we dislike, is a key part of the practice and the resulting transformation that is seen, then connection to others, and the wish to do so seems an important part of the practice.

The other aspect of the practice that provided a consensus across the sample was the placement of the statements around the purpose or nature of the practice, e.g. as being for wellbeing, regarded as a spiritual practice, for increasing attention etc. in the neutral area of the grid. This supports the finding in the first study that practitioners seem to hold a multi-purpose view of the practice, as something that can be used to reduce stress or engaged with when they feel the need, as well as something they might engage with on a long term basis, and try to incorporate this into their lives. This is perhaps a function of being a western meditator; practitioners are likely to come across the practice through apps, online, through more clinical or therapeutic means, as well as seeking it out themselves. This means that they perhaps have a more flexible view of meditative practices in general, as something that can be both spiritual and secular.

The differences in how the practice was viewed seemed to be in relation to the connection that participants had with their practice. All of the factors had an embodied element to the way that they presented the practice, but the connection with this was slightly different across the factors. For Factor A, this was quite pragmatic, and focused on the processes involved in the practice. Factor B was similar, but the statements they chose at the upper end of the grid were much more emotive and indicated perhaps a more in depth connection to their practice. Factor C were slightly different, and while they acknowledged that their practice was an innate part of them, their view on this was more as a skill that could be tapped into as and when it was needed. This group had some of the least amount of experience in relation to the rest of the groups, and as such this could be as a result of this.

While this study does not necessarily clarify the key elements of the practice, it builds on the previous findings. In keeping with the mixed methods nature of the thesis, the combination of these two methods used so far; qualitative analysis of semi-structured interviews, combined with the quali-quantological nature of Q-methodology, has allowed for not only in depth understanding of LKM and how it may be viewed by practitioners, but also of how this might compare to a wider sample. Together, these methods have allowed for an identification of core components of the practice;

Ways of practice: The practice was seen as more of an attitude or way of being in the first two studies, and the actual method of manifesting LKM varied. This also included a sense of flexibility about their practice, in finding ways that worked for them, but acknowledging the core components of the practice which include connectedness, wholeness and openness

Multi-purpose view of the practice: The practice is seen as flexible and viewed as both a spiritual and secular practice, but this is also changeable over time, and may be dependent on the level of experience practitioners have with the practice. This suggests a wider process or journey with the practice, that can be facilitated or hindered by acknowledgement of the connection we have with others and the focus on the self and enemies, both important aspects of the practice, both that could present a barrier, and also

both that are impacted by western cultural norms on how we should act and react to ourselves and others

*Impact of the practice: T*he practice is important to practitioners, and for most, this seems to have become part of their life and who they are as people. Study two also emphasised the change that LKM can result in, and its impact. The practice has the ability to facilitate powerful change within those who practice, and could have an impact on the relationships practitioners have with others.

The self as a key part of the practice: This was emphasised as being of importance in studies one and two. In addition, the self was also reported as challenging for some to engage with in study one, but less so in study two. This could have however been due to the relative inexperience of those in the second study compared to those in study one, meaning that those in study two may not have yet encountered the strength of challenge that the self could present.

Challenge and importance of the difficult person: This was also highlighted in both studies one and two as being something that is valuable, and could be considered a core part of the practice, but was one that could present a challenge to participants.

Practice focus: Given the importance of the self, enemies, as well as the inclusivity and importance of connectedness that came from studies one and two, all five groups are important to include.

These observations are seen not only in very experienced practitioners, but also with a range of experience levels. This provides us with a solid base upon which LKM practice can be taught to novices, in an ecologically valid way.

Chapter 6: A study exploring the effects of an existing, online LKM programme

6.1. Overview of study

This chapter presents the third study; a quasi-experimental study that explores the effects of LKM practice on anticipated outcomes of the practice, which in this case were empathy, self-compassion, and satisfaction with life. This study is the first of two more experimental based studies that explore the impacts of LKM, based on wanting to evaluate the impact of a more ecologically valid form of the practice, in more naturalistic settings.

One of the main findings that came from the literature reviews and the first two studies is the need to explore how the practice is engaged with in the real world. Exploration of practitioners' viewpoints in studies one and two suggested that the practice is more about the intention and engagement with the core components of the practice, with variation in how exactly the practice is engaged with. In order to further this understanding and explore the impacts in a more quantitative way, it was therefore important to measure the impacts of a real-world programme where participants had the flexibility to engage with their practice as they wished, to see what impact the practice has on a day to day basis. One way that this can be done is through the increasingly used formats of online or via apps. This would allow for exploration of the impact of the practice as it is being practiced in real world scenarios, giving us an idea of the impacts that the practice is having with more general public samples.

An opportunity arose to evaluate the impacts of an existing, online programme. This allowed for exploration of the effect of the practice in a real-world scenario, but also reflected a form of the practice that had been put forward in studies one and two; the core components of the practice were emphasised, with the actual way in which participants chose to practice being more flexible. The use of this programme in particular, detailed further in section 6.2.2., builds on studies one and two by exploring the real-world

impacts of the practice, as well as by using a programme that is in line with the ways that the practitioners presented their practice.

In addition, the literature's predominant focus on particular interventions or samples further highlights the need for an exploration of the impact the practice could have for more general public samples, and the impacts of real world practice if LKM is to be suggested as a way to improve wellbeing. The literature presented in section 2.3 largely explores the application of LKM in specific scenarios, using interventions and programmes that are sometimes created for specific groups (e.g. Carson *et al*., 2005; Johnson *et al*., 2011; Shahar *et al*., 2014; Weibel, 2007). This research is useful for highlighting some of the impacts of specific programmes or interventions, with specific groups and samples. However, in order to establish whether LKM could be beneficial for more general public samples, exploration of existing meditators or looking at the impact of a practice taught to novices, but one which is reflective of how existing meditators practice would enable us to establish more about the potential that the practice has for wellbeing on a broader scale.

Additionally, the variation across the literature presented in section 2.3, in terms of how it is used and applied across the research means that there is little clarity in which studies are exploring a form of LKM that is close to how existing practitioners may be engaging with it. As such, assumptions based on some of these studies about the impact that LKM could have on an individual who decides to engage with the practice, are not as clear as they may seem from a review of the entire evidence base. Some clarity over what LKM is has been gained from the first two studies, in identifying some of the key features that seem to be common across practitioners' understandings of LKM. This led to existing literature being viewed through a new lens, which resulted in some of the studies measuring what seems to be an aspect of LKM, but perhaps not the entire practice.

For example, those studies that focused only on one or two of the five groups normally included in LKM such as Hunsinger, Livingston and Isbel, (2012a) and Hutcherson, Seppala and Gross (2008), are less reliable in terms of how

we can conclude the impacts of LKM practice. From this comes a need to explore how LKM, as it is described and understood by practitioners, might improve the variables that previous research has suggested that LKM impacts on. One way which this can be done is to explore the effects of existing ways of practice, as this ensures that what is being engaged with by participants is high in ecologically validity, and an idea of the impact of the practice, as it may be practised on a daily basis can be established.

With the increase in focus on wellbeing in general, and the influx of meditation programmes, online resources, and apps, there are now a variety of ways individuals can choose to engage with meditation. Apps are widely used, with a large amount relating to wellbeing, self-help and happiness being available (Howells, Ivtzan & Eiroa-Orosa, 2014). The availability and accessibility of accessing materials online or via apps, means that individuals can have instant access to a wide range of guided meditations. For example, Headspace, Calm and Insight Timer have apps and online resources, allowing access to guided meditations at any time. The content on these apps varies, often having freely available as well as subscription based content. Content varies across the different companies, but includes a variety of guided audios, differing levels of reminders via your mobile phone to practice every day, and varying levels of support or guidance on different types of practice, but an individuals' practice is largely self-directed in how often the practice, what length of time, which type of practice they engage with, and what time of day etc.

While the increase in apps and online resources means that meditation is more accessible, it increases the variation in how meditation may be being practised and presented to individuals. It does however reflect the way general public individuals are increasingly likely to come across meditation practice. This format of engagement with meditation is not widely explored in terms of measuring outcomes or effectiveness, with some studies that do exist looking at use of apps for specific uses. Examples include a planned study using a mindfulness app for smoking cessation (Garrison, *et al*. 2015), mindfulness and general wellbeing (Howells, Ivtzan & Eiroa-Orosa, 2014) and mindfulness and stress reduction (Carissoli, Villani, & Riva, 2015).

Other examples employ existing apps to explore the impact of meditation practice. For example, Lim, Condon and DeSteno (2015) explored the effects of mindfulness on compassionate behaviour. Individuals novice to meditation were asked to engage with 14 days of meditation via the Headspace app available on mobiles. This study is high in ecological validity in terms of the practice and mode of delivery that was being asked of them, as it asked novices to engage with an app which has been widely engaged with (Pierson, 2016). The results from this study can therefore give us an indication of what impact meditation practice, in a format that many existing practitioners are engaging with, could have on individuals.

In terms of exploring LKM programmes in particular, Galante, Bekkers, Mitchell, and Gallacher (2016) compared LKM to light exercise across 4-week online programmes, consisting of twenty 10-minute videos for participants to engage with real-time. There were also online forums and participants were encouraged to keep an online personal diary. Results showed improvements over the 4-week period on a range of measures such as perceived stress, satisfaction with life, wellbeing, and empathetic concern, however there was no real difference between the LKM and light exercise groups. As such, while there is an overall positive outcome, as LKM helps improve a number of wellbeing measures, the active control also did. Further research exploring the effectiveness of LKM based online programmes would help understanding of how the practice impacts on practitioners following engaging with programmes that are being increasingly engaged with.

Studies presented here which look at online and app based designs, some of which were created for purpose, and others which made use of existing apps, highlight the positive impacts that can be observed as a result of meditation via apps, and give an impression of the impact of the practice in an ecologically valid mode of delivery. Research is lacking in this area however, which gives rise to the need for additional research that explores the impact of practice, as it is engaged with on a day to day basis. While programmes, apps, and online programmes exist and are being engaged with, we know little about the impact of these programmes. If engaging with meditation in

these forms is accessible and inviting to individuals, it is therefore increasingly important to assess the effects of these types of delivery.

Lastly, this study also provided opportunity to explore some of the mechanisms that underlie the links between LKM and wellbeing related measures. To explore the potential LKM has on wellbeing, establishing the ways in which the practice may lead to improving wellbeing related measures, helps to support this link, as well as identify additional areas where the practice might be useful to certain groups of people. Some existing research has begun to explore how LKM might improve wellbeing and related beneficial measures, while exploring its impacts. For instance, the study presented above by Lim, Condon and DeSteno (2015) measured the impact of 14-days engaging with Mindfulness on compassionate behaviour. They also explored how Mindfulness may result in this improvement, and suggested that while there was an increase on compassionate behaviour in the mindfulness group compared to a control group, this did not seem to be as a result of improvements in empathetic accuracy, the ability to observe others' thoughts and feelings. As such, while Mindfulness may improve levels of empathy, as well as compassionate behaviour, these variables were not related in terms of linking mindfulness to improved prosocial behaviour. Given the different focuses and therefore perhaps different mechanisms that exist between different practices, it may be that LKM may also improve those kinds of prosocial outcomes, but the way LKM culminates in these outcomes may differ from Mindfulness practice.

One study that has looked at how LKM may culminate in change is Fredrickson *et al*., (2008), that looks at the Broaden and Build theory of positive emotion (Fredrickson, 2001), in relation to LKM. As discussed in chapter two, the broaden and build theory suggests that positive emotions broaden people's attention and thinking, which in turn enables them to engage with higher level connections, and a wider range of perceptions. These broadened outlooks result in the building of personal resources such as being present in the moment, or the ability to give and receive social support. These resources then culminate in more success and happiness in the following months and years. Given LKM's focus on, and resulting increase

in positive emotion, one of the ways that LKM could lead to higher levels of wellbeing may be through this exposure to positive emotion, and resulting change in individuals' outlooks, with subsequent change to longer term levels of happiness. As stated earlier, there is little research establishing the links between meditation, particularly LKM, and improvements in wellbeing related measures. As such, the study here will make use of wellbeing related measures, to explore any relationships which might exist, to further our understanding of if and how LKM may result in change.

Measures

When deciding on which measures to include in the evaluation of an existing programme, measures which had been previously observed as a result of face to face programmes were chosen, to see whether these findings could be affirmed as a result of a different format of delivery. Additionally, I wanted to choose measures that were expected based on the concept of the practice, as well as those outcomes that were highlighted in studies one and two as being expected or perceived.

The main aspects of the practice highlighted as a result of analyses of the first to studies included that the practice has an element of connectedness to it. Additionally, the self and enemies were important factors to the practice, as was the perception that the practice was influential and had become part of the individual in some cases. Measures relating to these variables were therefore looked at. For example, measures relating to compassion and empathy would help affirm whether connectedness, and focus on the self and others in the practice results in change, when LKM is practised in a more ecologically valid way. Additionally, measures looking at more general wellbeing such as satisfaction with life, would explore the broader impact of the practice on the practitioner, and their perspective on their lives.

Previous research that employs more structured face to face programmes, have seen differences in these variables; increases in empathetic concern (Császár, 2012), self-compassion (Weibel, 2007) and satisfaction with life (Johnson *et al.,* 2011) were all seen as a result of face to face programmes. The positive findings observed in previous research suggest that these are

not just factors that are theoretically linked to LKM, but are observed in practice. However, these are all following face to face programmes and in the case of Johnson *et al.,* (2009) and Johnson *et al.*, (2011) in particular, were seen from using LKM in a specific sample of individuals with a diagnosis of schizophrenia. Exploring the impact of alternative ways of delivery on these same measures, will therefore help understand the effects of the practice using a different and widely used format of delivery, and also what impacts the practice has with a sample of general public. Further details on the reasoning behind the choice of variable is given in Table 4.

Table 4: Rationale behind measures chosen

Measure	Reason it was chosen
Satisfaction with life	Previous research found change in sample who had schizophrenia (Johnson *et al.,* 2011). They saw improvements following 6 weeks of LKM, with large effects sizes, in a sample of individuals diagnosed with schizophrenia. In comparison, Uchino *et al.,* (2016) found no significant increase in general public sample. As such, mixed findings suggest a need to look further at the impact of LKM on this scale.
Self-compassion	Some of the factors such as connectedness to others, and self-kindness would be anticipated outcomes based on the literature as well as the importance of the self and others as raised in studies one and two. Improvements in SC also seen in previous LKM studies as a result of shorter 3 or 4 week face to face programmes (Smeets, Neff, Alberts & Peters, 2014; Weibel, 2008) and so looking to affirm with a different format of delivery.
Empathy	The focus on others as part of the LKM practice, as emphasised in studies one and two. Seen to increase in previous face to face based research (Császár, 2012), as measured using the Interpersonal Reactivity Index (IRI, Davis, 1980). Therefore, looking to affirm findings with online based practice.

Studies that explore the effects of existing programmes and interventions therefore help in ensuring that what is being measured is the impact of LKM practice, as it is practised in a real world setting. The outcomes of these kinds of programmes, allows us to surmise what the actual impact of LKM may be, because they employ forms of the practice which the general public are already engaging in.

Summary

The rationale for the overall thesis is based on wanting to explore the impact that LKM practice might have on measures of wellbeing. Previous literature on the effects of LKM is however mixed, in terms of how LKM is employed in the study design. This led a need to explore more about what the practice actually is, from the point of view of those who actually engage in the practice, which came from studies one and two. The findings from these two studies presented a new lens, through which the existing literature base could be looked at. This resulted in some of the previously observed findings needing to be reaffirmed by additional study, to see whether these effects were seen as a result of engaging with a form of the practice which is shared by existing practitioners. A study looking at testing the effects of a form of LKM which is high in ecological validity was therefore useful in furthering our understanding of the impacts of LKM, as it is practised by existing meditators, and which would also give us an idea of how the practice might impact on wellbeing in a more general public sample. Lastly, the ways in which meditation in general is currently being engaged with by the general public, are increasing, and now include online and app based practice. Additionally, the format of delivery of meditation practice has not been widely explored as of yet. As such, this study seeks to explore the impact of a form of LKM that is likely to be engaged with by the general public, to affirm some of the findings from previous research some of which is less ecologically valid in its implementation of LKM, while gaining an idea of the impact that LKM could have on the general public, and therefore whether this is a practice that could be encouraged for improving wellbeing in those audiences. The study will also allow for some of the variables measured to be measured in relation to one another, to help understand some of the mechanisms behind how the practice may result in beneficial change, to further support whether the practice is useful in improving wellbeing, and which aspects of the practice help support this change.

The aim of this study was therefore to explore the effects of LKM practice, with a range of practitioner types and experience levels, to see whether this had the same kind of effect that had been seen in previous research using

different study designs. An additional aim was to also explore the relationship between the variables, as this would give insight into how LKM may be manifesting in the observed changes. There were therefore two research questions for this study; (1) the effects of LKM practice via email reminders, and an exploratory research question; (2) exploring the relationship between the variables.

6.2. Method

6.2.1. Design

This study explored the effects of a 25-day online based Loving Kindness programme, on measures of self-compassion, satisfaction with life, and empathy. The study was therefore repeated measures, with the changes in the three DVs being measured over the 25-day period.

6.2.2. The programme

The '100-days of Loving Kindness' online programme is a 100-day period that featured daily email reminders, with occasional links to audio files, run by Wildmind. Wildmind is a Buddhist based, online organisation, who have a series of online programmes designed for anyone to engage with. The 100 days of LK programme was part of the 'going deeper' series, and donations were asked for in exchange for the provision of the reminders and files. The aim of the 100 days programme is to encourage individuals to commit to meditating on the four practices of the Brahmavihara, for 100 consecutive days. There was also a closed group space on Google, where those who had signed up could discuss their progress with others, ask questions of the facilitators, or generally create connections with others during this period. The 100-day period began with loving kindness over the first 25 days, and moved on to the other three Brahmavihara for the remaining 75. The research period therefore covered the first 25 days.

The programme consisted of daily emails, that contained text on an aspect of the practice and sometimes a link to an audio file to support practice. An example of the link to the resources is given in Figure 5, which shows that while resources are signposted, there is no specific audio that participants

are directed to. This increases the variability in terms of how participants may be practising, with the emails acting as a reminder to begin engaging with the different groups included in the LKM practice.

Figure 5: Screen shot of section of email from Day 1 that details links to resources

Resources: We have several lovingkindness meditations available on our Youtube channel, although those are mostly longer. There are also several in the lovingkindness section of our website. These are all free. And lastly, we have some guided meditations available in our online store.

An example of the email content is given in Figure 6 and

. These show how the practice is presented using traditional phrases, starting by with directing these to the self. Additionally,

shows how all of the five traditional groups were included across the 25 days as part of the suggestion in the emails.

Figure 6: Text from Day 1 email

Day 1: Bringing Kindness to Mind

Dear Kimberley

In one of the Buddha's teachings on purifying the mind, he said that the basic attitude we should cultivate can be summed up in this thought:
"May these beings be free from animosity, free from oppression, free from trouble, and may they look after themselves with ease."
Traditionally this kind and loving attitude starts with how we relate to ourselves. If we carry around a harsh attitude inside ourselves, in the way we talk to ourselves internally, then it's harder for us to have kindness for others.

So apart from doing some sitting metta practice as part of 100 Days of Lovingkindness, I'd encourage you to cultivate kindness toward yourself throughout the day.

The phrases I most often use in cultivating lovingkindness towards myself are:

- May I be well
- May I be happy
- May I feel at ease

Figure 7: Text from Day 23 email

Day 23: From Relatedness to Expansiveness

Dear <<First Name>>

Let's talk a bit more about the final stage of the lovingkindness practice.

Yesterday I wrote about how, in the fifth stage of the development of lovingkindness practice, where you're cultivating metta for all beings, it's enough simply to sense the space around you and to allow that space to be filled with kindness. Your mind is filled with kindness. Your mind permeates the space around you. And so the space you're aware of is filled with kindness. Therefore, any creature that is perceived in that space (or in the purely internal space of your memory or imagination) will be received kindly. You receive beings into your field of kindly awareness. I've actually talked about the same thing in relation to walking lovingkindness practice and driving lovingkindness practice.

I find this approach helpful when it comes to the transition from focusing on one person at a time — yourself, the friend, the neutral person, the person you find difficult — to wishing many beings well.

These extracts also show the level of support as being an overview of the practice, and not a prescribed way of meditating or specific audio to listen to. This programme was therefore more an email reminder service, but set within the remit of a challenge to encourage participants to have a sustained practice, alongside a group of individuals who have also set themselves that challenge. This is in contrast to the more structured programmes that have tended to be face to face, where practices can be led by a group facilitator (e.g. see Johnson *et al.,* 2011; Smeets, Neff, Alberts & Peters, 2014; Weibel, 2007).

It is also an existing programme that attracted over 1000 individuals to sign up before the programme started. While there is less control over what exactly the participants may be engaging with, the programme reflects a highly ecological valid programme to use within research. The results of which give us an indication of how the LKM practise, as it is being engaged with on a day to day basis, might impact on the measures of satisfaction with life, self-compassion and empathy. Additionally, the programme design is in line with the suggestions from studies one and two regarding the core concepts of LKM practice as including the five groups, but also by encouraging practitioners to use methods that work

for them, with emphasis being placed on the messages and intentions behind the practice.

6.2.3. Materials

Satisfaction with Life Scale (Diener *et al*., 1985)

Life satisfaction was measured using the Satisfaction with Life Scale (SWLS). The scale consists of 5 questions with a 7-point rating scale from 1 – strongly disagree to 7 – strongly agree. All items were positively scored and examples of the type of questions included are: 'The conditions of my life are excellent' and 'So far I have gotten the important things I want in life'.

The total score is attained by summing all items, resulting in a range of scores from 5, indicating low satisfaction, to 35 indicating high satisfaction. The scale is reliable, with an alpha of .87 (Diener, *et al.,* 1985).

Self-compassion (Neff, 2003)

Self-compassion was measured using the 26 item Self-Compassion Scale. This is made up of six subscales that form pairs that create the three main aspects of self-compassion; self-kindness and self-judgement, isolation and common humanity and mindfulness and over-identification. The self-judgment, isolation and over-identification subscales are all negatively worded and are therefore reverse scored when it comes to analysis. This means that increases in those scores would indicate an overall decrease, e.g. an increase in scoring on isolation reflects an actual decrease when it comes to interpretation. The higher the overall score, the higher the level of self-compassion.

Once questions have been reverse scored where appropriate, the mean of each subscale is calculated to create a score for each of the six factors. Neff suggests these can be summed or a mean of the means can be taken to create an overall self-compassion score. The overall scale has an internal consistency alpha of .92, indicating a high level of reliability (Neff, 2003). Descriptions of each subscale and example items are given in

Table 5.

Table 5: Descriptions and example items from the Self-Compassion scale

Subscale (no of items)	Description	Example item from scale
Self-kindness (5)	The participants' ability to be kind to oneself	I'm kind to myself when I'm experiencing suffering
Self-Judgement (5)	The level of judgement that the individual passes on themselves	When I see aspects of myself that I don't like, I get down on myself
Common Humanity (4)	How much participants relate to others and their situations	When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people
Isolation (4)	How much participants feel connected to others	When I fail at something that's important to me I tend to feel alone in my failure
Mindfulness (4)	How much participants feel they have a sense of control over their emotions	When something painful happens I try to take a balanced view of the situation
Over-identification (4)	How participants identify with emotion	When I'm feeling down I tend to obsess and fixate on everything that's wrong

Neff highlights that an individual may be low on self-judgement, but that doesn't mean they are actively kind to themselves and so being low on one factor wouldn't necessarily mean that they would score highly on the other.

Empathy (as measured using the Interpersonal Reactivity Index, Davis, 1980)

This scale considers Empathy as being multi-faceted and so has subscales within the overall scale to measure four factors; Empathetic Concern, Personal Distress, Perspective Taking and Fantasy. Three of the four factors were deemed as most interesting for this study. These were (1) Empathetic Concern that assesses 'other oriented' concern for unfortunate others, (2) Personal Distress that assesses 'self-oriented' anxieties and unease in tense settings and (3) Perspective Taking that assesses the tendency to spontaneously adopt the view of others (Davis, 1983). Each subscale has 7 questions, so the total in this case was 21 questions each with a five point likert response from 1 – 'does not describe me well', to 5 - 'describes me very well'. The subscales all have acceptable reliability ranging from .70-.78.

The three subscales used here were seen as most relevant to the study aims, in exploring the concern for others, the ability to adopt the view of others, and the feeling of unease when seeing others in distress. All of these elements were seen as measures that would be expected as outcomes of the practice, given the focus on others, which would impact on perspective taking and empathetic concern, as well as the different relationship with emotion, which may help reduce the personal distress factor. The fantasy subscale explores the tendency to imaginatively relate to fictional situations such as books or movies (Davis, 1983), and therefore was not used, as I was interested more in the impact on the relationships practitioners had with others, as opposed to how they might imagine their reactions and relations to fictional characters and situations. The use of only some of the subscales from the IRI is not uncommon, and has been seen across previous research (see Hunsinger, Livingston & Isbel, 2012b; Galante, *et al.,* 2016; McFarland, Webb & Brown, 2012; Wallmark, Safarzadeh, Daukantaitė, & Maddux, 2012 for examples).

Initial email

The first contact participants had was an email advertising the study. The email contained details on the aims of research and how participants could

get in touch with the researcher to take part. It was also made clear that participants did not have to engage with the research in order to take part in the 100-day programme. This was detailed at the start of the email, before further information that would typically be found in an information sheet was given. An extract of this is presented here:

> A team of researchers from the University of Northampton, UK, have an interest in exploring the effects of meditation. They are conducting a piece of research alongside Wildmind's 100-days of Loving Kindness Meditation programme. As you have signed up to the programme, you have been invited to take part in their study. If you are interested in knowing more, details have been included below.
>
> Please note that the research is being run by a research team at the University of Northampton, and not by Wildmind, and as such, we would like to emphasise that you do not have to take part in the research in order to carry on with the meditation programme

The full details of the text included in the email can be found in appendix 4.1. A link was given at the end of the email. The link took participants through to the survey, the first page being the consent form (see appendix 4.2.). This had questions regarding whether participants understood their right to withdraw, how the data would be used, whether their questions had been answered, and whether they consented to taking part in the survey.

Survey

An online survey was created using Bristol online surveys. The demographic questions asked participants about their regular meditation practice; what practice(s) this tended to be, how long participants had been meditating for and the regularity and average length of their meditation practice. Date of birth, current location and gender were also included. Following this were three scales; Satisfaction with Life (Diener, Emmons, Larsen & Griffin, 1985), Self-compassion (Neff, 2003) and Empathy as measured by the Interpersonal Reactivity Index (IRI; Davis, 1980). The scales were anticipated outcomes from the practice given its focus on the self and others, and were also chosen based on their use in previous research exploring the effects of Loving Kindness Meditation with novices. It was also important to keep the survey

short, as participants were primarily interested in taking part in the programme, and the research was in addition to this.

6.2.4. Procedure

Participants who signed up to the programme were given an opportunity to take part in the research via an email invitation. This email was written by myself, but sent out by the organisers to ensure legitimacy of the research request. If participants wished to take part in the study having read the information in the email, a link was provided that sent them to a webpage that had a consent form as the first page. The rest of the online survey included questions regarding demographic details, details of current and previous meditative practice, as well as the scales measuring satisfaction with life, self-compassion and empathy, explained further in the materials section above

The survey took approximately 15 minutes to fill in, and all participants were asked to do so before the 100-day programme began, although some entries were after day 1 or 2 of the programme. During the 25-day period, I took part in the challenge so that I would see exactly what participants received in terms of content. I also logged onto the Google group regularly to see what kinds of support were being given and to answer any questions from participants. No questions regarding the research were raised. While I monitored the google group, I did not monitor who was engaging with this aspect of the programme, or how often, or the content of their posts. Therefore I did not have a record of whether those who took part in the research also contributed to the group. Following the 25-day period of LKM practice, participants were sent out another email that reminded them of the research and invited them to take part in the second survey that was the same as the first. Participants who had not taken part in the first stage were invited to take part in the second if they wished to do so. Participants were asked to state a personal identifier as part of the consent form that was memorable to them, so their data could be matched. This ensured that the identity of the participants could remain anonymous, while still being able to compare data before and after the programme.

6.2.5. Sample

The number of individuals who signed up to the programme was over 1000. Of these, 217 filled in the survey before the commencement of the LKM part of the 100-days. The total number of people who filled in the survey after 25-days was 150, with 51 participants taking part in both stages of research.

Of the 51, 7 were male and 40 were female and 4 did not disclose. Individuals took part from around the world, with the majority being from the UK (17) and the US (14), possibly due to the organisation being run by someone who is from the UK, now based in the US. Other locations included Romania, Ethiopia, Netherlands, Spain, Belgium, Hungary, France, Hawaii Canada, China, Thailand, France and Australia. The length of time they had engaged with meditation in general ranged from never, up to 40 years.

A wide range of participants were attracted to the programme; those who were very experienced and who wanted to deepen their practice, as well as those who knew very little about the practice and who wanted an opportunity to engage with it. The majority (40) stated that they practice Mindfulness, with only 20 of the 51 stating that their practice includes Loving Kindness. It could be assumed then, that over half of the sample of 51 were novice to Loving kindness. Within this group who had previous experience with LKM prior to the programme, the longest was 10 years, with many of these having between 1-5 years' experience.

On closer inspection of the data, 15 of the 20 had between 0-2 years' practice; as such, just under half of the sample who filled in both sets of questionnaires had experience of LKM prior to the programme, and those who did had relatively short time frames they had been practising. These meditators were also consistent with their practice, with most (36), stating that they practise every day, with those who didn't, saying that they practise 3-5 times per week, and only one stating once a week as the least frequent.

The sample is therefore varied in terms of prior practice. Given that it is a programme for 'going deeper', it clearly attracted both individuals who were novice to these forms of practice, but also those who had an existing practice

who wished to engage with the practice for a sustained consistent period of time. Those who did have an existing practice, seemed to have a consistent, regular practice prior to the programme.

6.2.6. Ethical considerations

This study was granted ethical approval from the University of Northampton staff research board, and adhered to the BPS ethical guidelines (The British Psychological Society, 2009)

Consent to collect data from individuals taking part in the 100 days of loving kindness programme was obtained from the facilitator of the programme, who also runs the Wildmind website. The information about the study was written by myself, but sent out by the Wildmind organiser to increase credibility of the participation request. This email included information that would typically be found in an information sheet, to ensure that participants were fully informed of the research procedures, their rights to withdraw, and what would happen with their data before consenting to take part. The first page of the online survey was the consent form.

To avoid participants feeling that they were coerced into completing the surveys as part of engaging in the programme, I made it clear in the initial information that there was no obligation to take part in the study, and that they could take part in the programme without filling the surveys in. Participants could also choose to take part in one section of the research and not the other if they wished, i.e. they could fill in the first set of scales and not the second. Withdrawal procedures were also made clear from the outset in the information sheet, and each question in the survey has a 'do not wish to answer' option, should they wish to leave any questions out.

In order to protect the identity of those who did take part in the research, participants were asked to use an identifier personal to them, to link their data from time 1 to time 2, should they fill both surveys in. An identifier selected by the individual was chosen as a randomly allocated number would be difficult to remember given the long period of the programme. The only personal information asked for was age, gender and location, but these were

linked to the personal identifier only, and this information was only seen by myself as the data was pooled for analysis; individual data was not analysed alone.

All data was kept securely on the researcher's home and work computers only to ensure confidentiality of the data. Participants were asked to state whether they are happy for their anonymised data to be kept for future analysis and sharing with other researchers in the information sheet. Participants were made aware of data storage and length of time in the information sheet. Lastly, data protection was in accordance with the Data Protection Act (1998); data was stored securely by the researcher, using an encrypted folder on the researcher's work and personal computers. These details were included in the information sheet.

6.3. Analysis

The two research questions for this study were (1) to measure the effects of LKM practice via email reminders, and (2) was an exploratory question, to explore the relationship between the variables. The analysis addresses each of these in turn.

6.3.1. Measuring the impact of LKM programme

The hypotheses were based on the findings observed as a result of face-to-face programmes, and wishing to explore whether these findings are also observed following an email based programme.

Hypotheses:

1. There will be an increase in satisfaction with life across the 25-day period of LKM practice.
2. There will be an increase in self-compassion across the 25-day period of LKM practice.
3. There will be an increase in empathetic concern across the 25-day period of LKM practice.
4. There will be an increase in perspective taking across the 25-day period of LKM practice.

5. There will be a decrease in personal distress across the 25-day period of LKM practice.

A series of *t*-tests were used with data from the 51 participants who filled in both sets of measures at time 1 and time 2, to explore changes over the 25-day LKM period of the programme.

Table 6 shows significant increases in levels of self-compassion and satisfaction with life, following 25 days of LKM practice. The increase in perspective taking and decrease in personal distress were approaching significance, but the change in empathetic concern was not significant and showed a slight decrease over time. The effect sizes range from small for perspective taking, personal distress, and satisfaction with life, to moderate for self-compassion.

Table 6: Means and effect sizes for change over time

	Mean (SD)		Mean change [95%CI]	*d*
	Time 1	Time 2		
Satisfaction With Life	23.75 (7.41)	25.80 (7.08)	2.06* [0.94, 3.17]	.28
Self Compassion	19.38 (4.98)	21.62 (3.94)	2.24* [1.30, 3.19]	.50
Empathy – Perspective Taking	25.08 (4.65)	25.86 (4.64)	.78 [-.03, 1.58]	.17
Empathy – Empathetic Concern	30.02 (3.61)	29.75 (3.55)	-.27 [-.38, .93]	.08
Empathy – Personal Distress	16.83 (5.17)	15.98 (4.16)	-.85 [-1.77, .07]	.18

* Statistically significant $p < .05$

Hypotheses one and two, for increases in satisfaction with life and self-compassion were supported. However, the non-significance for the empathy scales meant that the hypotheses three, four and five were not supported. This suggests that a sustained 25-day period of LKM may have an impact on

improving levels of self-compassion and satisfaction with life, but there is little impact on levels of empathy, and in the case of empathetic concern, there was a slight decrease over time, which is in opposition to the expected increase.

6.3.2. Exploring the relationship between variables

This set of analyses was more exploratory, and looks at the relationship between the variables. Pearson's correlational analyses were used to explore how the variables related to one another, as well as length of time the participants had been practising, to see what relationships might exist. These were T1 scores that were looked at, to explore the relation between the variables, as opposed to what impact the programme may have had, and therefore the sample for these analyse ranges between 183 and 217.

Table 7 shows that apart from the relationship between empathetic concern and satisfaction with life, all relationships between the variables were significant. The strongest relationships were seen between satisfaction with life and self-compassion, perspective taking and self-compassion, perspective taking and empathetic concern, and personal distress and self-compassion, indicating that self-compassion may be a key variable.

Table 7: Correlational analyses between the variables

	Self-Compassion	Empathy - Personal Distress	Empathy – Empathetic Concern	Empathy – Perspective taking	Length of practice
Satisfaction with Life	.52** [.42, .61] n=217	-.39** [-.50, -.27] n=214	.05 [-.08, .18] n=215	.29** [.16, .41] n=217	.15* [.01, .29] n=183
Self-Compassion		-.49** [-.59, -.38] n=214	.20** [.07, .33] n=215	.52** [.42, .61] n=217	.43** [.30, .54] n=183
Empathy – Personal Distress			-.18** [-.31, -.05] n=213	-.34** [-.45, -.22] n=214	-.20** [-.34, -.06] n=181
Empathy – Empathetic concern				.51** [.40, .60] n=215	.21** [.07, .35] n=181

Empathy – Perspective taking	.41** [.28, .52] n=183

* Significant at <.05 level, ** Significant at < .01 level

To explore the impact of the self-compassion variable in relation to the others, and to explore the meditating effect that self-compassion may hold between satisfaction with life and the other variables, this was partialled out. The outcome of this culminated in the relationships between satisfaction with life, with length of practice and the empathy scales to become small and negligible in size; SWL and EC r=-.06, p=.37, [-.19, .08], SWL and PD, r = -.17, p = .01, [-.30, -.04], SWL and PT r = .03, p = .69 [-.11, .16], SWL and length of practice, r = -.07, p =.35, [-.22, .08].

In comparison, when the empathy scales were partialled out, the relationship between self-compassion and satisfaction with life remained. These analyses are exploratory, but do indicate that self-compassion may have some kind of mediating role between the amount that someone practices, and their satisfaction with life scores, over the impact that the empathy measures seem to have, but this needs to be explored more explicitly.

6.4. Discussion

The main analysis in this study explored the differences in the measures, before and after engaging with an email based 25 day LKM programme. Significant increases in levels of satisfaction with life and self-compassion were observed, alongside non-significant changes in measures of empathy. As the form of LKM that was engaged with was an existing programme, it was high in ecologically validity, and the sample were self-selected to take part in both the programme as well as the research. As such any changes over the time period would indicate changes as a result of real-world practice, and gives insight into the impact that the practice might have with a sample who represent individuals who engage with meditation programmes in their daily lives. The findings here therefore add to our knowledge of the

impact that LKM might have with a general public sample, as well as what impact a different method of delivery might have on facilitating changes

The significant increase in overall level of self-compassion mirrors increases in self-compassion seen as a result of a 4-week LKM programme that included some MM (Weibel, 2008), and as a result of a 3-week self-compassion intervention that included LKM as an element (Smeets, Neff, Alberts & Peters, 2014), both of which were face-to-face programmes. The significant increase in satisfaction with life, also mirrors findings from Smeets, Neff, Alberts and Peters (2014), and while Uchino et al, (2016) observed a non-significant increase in satisfaction with life following a 6 week face-to-face based LKM programme, this was a pilot study with just 9 participants, a factor that could account for the non-significance of their findings. The positive increases found in satisfaction with life and self-compassion mirror existing study findings that are predominantly as a result of face-to-face interaction. The findings here mean that the online, email based programme format support could be a viable option in improving wellbeing, for those who wish to engage with online programmes

The changes in the empathy scales here were not significant. The increase in perspective taking, and the decrease in personal distress were anticipated, however empathic concern was expected to increase, with a small decrease being observed. Previous research regarding LKM and empathy as measured by the IRI, has mixed findings in terms of changes over time, as well as differences compared to a control group. For example, significant differences were seen for perspective taking, but not for empathetic concern or personal distress when compared to a control group (Wallmark et al 2012), and Galante *et al.,* (2016) did not find a significant difference between LKM and an active control of light exercise on levels of empathy. In comparison, Hunsinger, Livingston and Isbell, (2012b) found a relationship, suggesting that a group of existing meditators reported greater levels of empathy compared to non-meditators. The non-significant changes seen here are therefore not necessarily a function of the online nature of the programme, as there seem to be mixed findings in terms of the impact that LKM might

have on levels of empathy when looking at face-to-face teaching, and looking at existing meditators in comparison to non-meditators.

Exploratory analyses suggested that self-compassion seemed to play a key role in the relationship between not only the outcome variables, but also between the level of experience of the practitioner, and satisfaction with life. This was based on the analysis that partialled out self-compassion, and resulted in the relationships between the other variables becoming mostly small and non-significant. This reflects previous research that has looked at the role of self-compassion with variables such as mindfulness and quality of life; Hollis-Walker and Colosimo (2011) found that self-compassion has a crucial role in the relationship between mindfulness and happiness, and Van Dam, Sheppard, Forsyth and Earleywine (2010) found it is a strong predictor of quality of life, around 10 times more so than levels of mindfulness. However, in a recent meta-analysis exploring the mechanisms behind how some of the mindfulness based interventions may lead to improved wellbeing, there was insufficient evidence for self-compassion playing a role between MBIs and wellbeing (Gu, Strauss, Bond, & Cavanagh, 2015). The seemingly significant role of self-compassion in this analysis, is therefore interesting, and given previous research, it may be that self-compassion is a meditator for LKM more so than for MM. The analyses conducted here were however exploratory, using the T1 scores, to see what kinds of relationships may exist between the variables, and therefore need further study before any firm conclusions can be drawn.

The findings here provide support for the role that LKM may play for maintaining and improving wellbeing, which may possibly be as a result of improved self-compassion. Studies presented above, and the results here, show that there is an increase in Self-compassion scores, as a result of LKM practice. The links SC has on measures such as satisfaction with life, therefore mean that a focus on the self and others, reflected in the SC measure, and which are the focus of LKM, suggests that LKM practice could be a key practice for supporting ongoing wellbeing.

While the findings are encouraging, caution has to be taken over relying on the causality of the findings, as there was no control group to provide a comparison. This means that some of the effects observed may have been as a result of just engaging with something that is focussing on the self, and feeling part of a larger movement who have committed to the programme. A recent study conducted by Galante *et al.,* (2016) found there was no real difference between an LKM programme and an active control group who engaged with light exercise. This suggests that further research using control groups who don't engage with anything, as well as using other forms of active control group, would be beneficial in understanding the impact of the practice itself. The findings here do nevertheless give insight into what may be happening to participants who engage with online based, existing, popular programmes.

The selection of scales used in this study was based on what had been suggested as outcomes from previous literature as well as studies one and two. Due to the study being opportunistic and on top of an existing programme, I wanted to make sure that filling in the scales would not put participants off from taking part in the programme, and therefore only three scales were included to make the research as accessible as possible. The three chosen were those that were all found to have improved over time as a result of previous interventions and programmes, and so were included to see whether improvements would also be found when the format of delivery reflected real world practice as well. In addition, the measures reflected impacts that practitioners in studies one and two raised. The conclusions that can be drawn from the findings are therefore limited to those few measures. A wider range of scales could be used in future to further understand the impacts that the practice might have.

One factor that may have presented a confound in terms of the impact of the practice, was the online closed google group. I did not know whether those who took part in the research were also engaging with the online group, or whether they were not, and as such, the provision of a group for support and building networks could have had an impact on some of the improvements observed. Caution therefore needs to be taken over drawing conclusions

based on the practice, as there were other factors involved in the programme.

Another limitation of this study was that the sample were self-selected, as the research was in addition to an existing programme. Not many of those who filled in the scales the first time, filled the scales in the second time. This could mean that those who filled in both sets of scales did so because they felt like the programme was of benefit to them, or were particularly committed to the programme. As such, the benefits seen as a result of the programme may not reflect the experiences of everyone who chose to take part in it.

While there may have been limitations of using an existing programme, one of the benefits was that it was not only high in ecologically validity because it was already an existing programme, but the type of programme it was, was reflective of some of the findings from studies one and two. One of the main elements that emerged from studies one and two was that the practice is flexible and able to be engaged with in a number of ways, as long as the underlying intention of the practice was being engaged with by practitioners. Additionally, all of the groups needed to be included in order to engage fully with the practice. The 100 days programme used here, engages all of the five groups of the practice, and the use of reminders via email, with occasional guided audios, means that the participants had the flexibility to engage with the practice on a practical level, e.g. using visualisations or phrases, however they liked. This was one of the aspects of the practice that emerged from the data particularly in study one, with a multi-perspective of the study from studies one and two supporting this notion of flexibility around the practice in general.

6.5. Conclusion

Evaluation of an existing programme that is engaged with by a sample who had self-selected to take part in the programme, has gained insight into what impact the practice can have, as it is practised in real world scenarios. Much of the previous research looking at the impact of LKM is in controlled environments or in specific settings and samples. While this helps us

understand the impact of the practice in those settings, we know little about how this might be applied to other samples or settings. The study here allows us insight into the function of the practice in a highly ecologically valid setting, and helps us understand the impact of existing, online based programmes.

The existing programme suggested that LKM has a positive impact on self-compassion and satisfaction with life, with non-significant changes, and differences in contrast to what was expected, in empathy scores. Additionally, LKM was seen as an important practice in supporting and improving wellbeing over time, based on LKM's relationship with Self compassion, and self-compassion's relationship with satisfaction with life.

6.6. Summary

The first two studies explored what the practice is, which highlighted that the practice can be best understood as a way of being and has core components, with flexibility around how the practice is actually engaged with on a day to day basis. This study moved on from gaining an in depth understanding, to measuring some of the suggested impacts from the literature as well as from studies one and two, in an experimental way. Additionally, the study aimed to explore the impacts of the practice as a result of a more ecologically valid way of practice than existing literature. Exploring the effectiveness of an existing programme, which is also reflective of the way in which the practice was understood and presented by practitioners in studies one and two, therefore adds to the knowledge gained in studies one and two regarding the practice and its impacts. Additionally, it gains insight into the impact of the practice as it is being engaged with in everyday life.

Significant improvements in the self-compassion scale, which includes a focus on the self and the relationships with others, as well as satisfaction with life suggests that the expected increases based on studies one and two here had seen an increase. Levels of empathy did however not change significantly over the 25-day period, and as such this does not support those anticipated

changes that were based on studies one and two here. The existing picture of the practice as having positive impacts on the individual, and the focus on self and enemies in particular having a positive impact on relationships with the self and others is supported by the findings here, which strengthens our understanding of the practice and its impacts.

The contribution of these findings to existing literature adds to our understanding of what LKM is, and what its core components and impacts may be. Additionally, the study shows the impact of a form of LKM that is high in ecological validity, and one that which reflects the ways in which LKM was presented in the first two studies in this thesis. This adds to the literature base which is predominantly as a result of interventions or programmes that are developed for certain purposes. This is important, as is we are to suggest that LKM could be used for improving wellbeing in general public samples, measuring the impacts of the practice in settings where general public samples are likely to engage in LKM, gives is a more realistic idea of the effect that LKM might have on this sample group, as compared to much of the existing literature which looks at specific groups or interventions. While these studies are useful in understanding the use of LKM in particular scenarios, LKM is being promoted and used in existing programmes, apps and websites, to be engaged with by anyone for reducing stress and improving wellbeing. It is therefore important that we also understand what impact the practice has in these scenarios, which this study would suggest is a positive impact. Additionally, the exploratory analyses contribute to existing literature by finding a seemingly important role of self-compassion, which adds to the small amount of literature that looks at the mechanisms behind how LKM may result in change.

Chapter 7: A study exploring the effects of LKM on wellbeing

7.1. Overview of study

The aim of this final study was to explore the effects of LKM practice on wellbeing, using a form of LKM which was grounded in the results and findings from the previous studies in this thesis, particularly studies one and two. One reason to explore the impact of LKM on wellbeing, is due to the potential it seems to have in improving levels of wellbeing, based on previous research. However, the literature base employs a number of different ways of practising LKM, and many of the studies explore the impact of LKM with specific samples, or for specific purposes, sometimes creating interventions or programmes to meet certain aims. This results in a need to research how we understand the practice more, before exploring its outcomes, which studies one to three in this thesis have been doing.

The full range of existing literature is presented in section 2.3. As an overview, the main critiques of existing literature are the differences in time scales, with the differences in time scales range from around 7 minutes (Hutcherson, Seppala & Gross, 2008), 8-9 minutes (Burgard & May, 2010), 6 hours across one day (Leiberg, Klimecki & Singer, 2011), one hour across 3 days (Hunsinger, Livingston & Isbell, 2012a) to four weeks (Weibel, 2007), and anywhere between six and 12 weeks (Carson *et al.,* 2005; Johnson *et al.* 2011; Kearney *et al.,* 2014; May et al., 2011; Shahar *et al.,* 2014). This makes is difficult to understand the impact that time spent engaging with the practice might have on the outcomes.

Another difference in the literature is the focus of the practice, e.g. just to loved one, vs being directed to all five groups. For example, some studies only focus on the neutral stimuli (Hunsinger, Livingston & Isbel, 2012a), on loved ones and neutral individuals (Hutcherson, Seppala & Gross 2008) and on the 'self' only (Schussel & Miller, 2013). In comparison, other studies ensure that LKM is directed towards all target groups (Leiberg, Klimecki & Singer, 2011; Carson *et al.* 2005; Weibel, 2008). This makes it difficult to

ascertain how much of the practice needs to be engaged with, in order for the practice to be classed as 'loving kindness meditation', and it is also not clear whether not focusing on one of these areas might impact on the outcomes of the practice. Reflecting on the findings of studies one and two, the self and enemies are important to the practice. This means that those studies which do not include all foci of LKM may not be measuring the outcomes of LKM, but a part of this. What we can conclude based on some of the studies above, is therefore limited in some cases, and therefore provides basis for further study, using the full practice, to ascertain the outcomes of the practice as presented and understood by existing meditators with a range of previous experience.

Lastly, research also differs in terms of whether the practice was studied alone (Hunsinger, Livingston, & Isbell, 2012a; Hutcherson, Seppala, & Gross, 2008) or combined with other practices or exercises (Elwafi, Witkiewitz, Mallik, Thornhill, & Brewer, 2013; Helber, Zook, & Immergut, 2012; Weibel, 2007), making it difficult to understand the impact of LKM alone. In addition to this, is the added complexity that some of the studies use specific samples, such as highly self-critical individuals (Shahar *et al*., 2014), individuals diagnosed with schizophrenia (Johnson *et al.,* 2011), and individuals who suffer from chronic back pain (Carson *et al.,* 2005).

This body of research is largely positive when looking at the outcomes from engaging with LKM, however the range of time scales, group-focus, whether the practice is studied alone, in conjunction with other practices, or is used as an intervention for a specific purpose, means that the impact of LKM practice is less certain than it may seem, given the range of what is called 'LKM' across the literature.

Additionally, one of the points highlighted in section 2.3. was that the longer loving kindness programmes explored within research are often for a specific use or application, and so have additional practices or discussion elements as part of the weekly session. This is similar to Mindfulness interventions such as MBSR or MBCT that have been widely studied, and result in positive changes. Unless an individual goes through an intervention programme,

Western meditators are likely to learn about meditation from a book, Buddhist centre or a sitting group, and more recently, from an online or app based as explored in chapter six. Personal practice for these individuals may be less structured than it would be when taking part in an intervention programme and may involve meditation daily or every other day, and possibly a face-to-face sitting group once a week. Given that a large amount of people will be engaging with meditation in this way, and the fact that we know less about the effects of meditation when it is practised outside of an intervention, as is more commonly explored in research, it is important to study the impacts of a practice that is closer to how existing practitioner may be practising.

This resulted in studies one and two, the findings from which provide a basis of what LKM is, and what its core features are, summarised in section 5.7. From this understanding, the practice, as described by others, could then be explored experimentally, to see what impact LKM has. This would give us an idea of what impact LKM, as it is practised by existing meditators, is having over time. As highlighted in chapter six, meditation is being more widely used and engaged with and promoted as being beneficial for wellbeing. However, the amount we know from research about a consistent version of LKM, that is close to how many existing practitioners may engage with it, and with a more general public sample, is small.

Measures

To explore the impact of LKM on wellbeing, a number of wellbeing-related measures that had been observed in previous LKM studies were chosen, as well as what had been stated as outcomes from studies one and two, and what was found in study three. As previously stated in chapter two, there were a lot of differences across the previous literature, and therefore a study which looked at testing some of these previously observed changes would help affirm some of these findings that may have been a result of very short exposure time, or from only part of the practice in regards to group-focus. The measures chosen were therefore a mixture of affect and wellbeing based

measured of self-compassion, satisfaction with life, positive and negative affect, and perceived stress.

In addition to exploring the effect the practice had on wellbeing, I also wanted to compare LKM to a control, to see if there were any differences in the two practices' outcomes. Comparison to a control group was something that was lacking in the previous study in this thesis, and inclusion of a control here would allow for differences to be attributed to the practice. Research looking at the differences between LKM and control groups has found no difference between LKM and an exercise group (Galante *et al.,* 2016), no difference between LKM and a relaxation group (Burgard & May, 2010), however there was a difference observed between LKM and guided imagery (Hutcherson, Seppala & Gross, 2008). Further exploration of comparison to an active control would therefore add clarity to these previous studies, to see whether a different form of active control might provide a difference, and in particular, inclusion of the mindfulness practice would allow for any differences in focus of meditation type to emerge. This would help clarify whether there are any aspects of LKM practice that may culminate in different changes, as a result of its focus.

The measures chosen were therefore not only expected outcomes of LKM, but also of MM in some cases, to see whether LKM would perform the same as MM, on measures that would typically be ascribed as impacts of MM in particular. For example, positive and negative affect, and self-compassion were anticipated outcomes from the LKM practice, given its focus on affective states during the meditation, which is more explicit than in the MM practice. However, Mindfulness, and attentional control, as measured by the Stroop test were also included, as measures that would be expected from mindfulness practice, but possibly not from LKM. Differences on any of these measures, would help identify any of the subtle differences in the different practice-foci, and therefore help understand the key elements of LKM and its associated impacts. Table 8 presents each of the materials, and why they were chosen, with more detail on each scale is given in the materials section in section 7.2

Table 8: a table of the measures used, and the reasons for each choice

Measure	Reason it was chosen
Positive and negative affect	Expected outcome from LKM, given its focus on well wishes and positive messages from the phrases, and found following 10 week LKM programme (Fredrickson, *et al.,* 2008), so looking to affirm findings.
Satisfaction with life	Used in study three, and found to have a significant change over time, therefore wanted to affirm findings as result of a face to face programme, and with group of novices. Previous research found change in sample of individuals with a diagnosis of schizophrenia (Johnson *et al.,* 2011), but not found in pilot study They saw improvements following 6 weeks of LKM, with large effects sizes, in a sample of individuals with a diagnosis of schizophrenia. While Uchino *et al.,* (2016) found no significant increase in general public sample. As such, mixed findings, so looking to affirm whether this is an outcome of LKM or not.
Self-Compassion	Used in study three, and found to have a significant change over time, and seemed important in relationship between practice and satisfaction with life. Therefore, wanted to affirm findings as result of a face to face programme, and with group of novices. Some scales of SC lend itself more to the focus of LKM; self-kindness and judgement, and connectedness to others, whereas others such as mindfulness, lend themselves more to MM outcomes. it was anticipated that there would be differences seen in the meditation types, which SCS could help identify. Also seen in previous LKM studies as a result of shorter 3 or 4 week programmes (Smeets, Neff, Alberts & Peters, 2014; Weibel, 2008) and so looking to affirm over longer periods of time.
Mindfulness	Would be expected as a result of MM practice, given that the scales include all elements of mindfulness. As such, any differences seen between the practices here, would help identify differences in the impact of the practice-focus. For example, would the focus on well wishes and more affect based sentiment in LKM mean that there would be less impact on the factors included in the mindfulness scale. In addition, May *et al.* (2014) found differences between LKM and MM on a different Mindfulness scale, so looking to explore the differences further here.
Stress	Mixed previous findings; Wallmark, Safarzadeh, Daukantaite and Maddux, (2012) found differences in stress as a result of LKM, the other immeasurables, and MM interventions. In comparison, a study which looked more directly at LKM compared to a control group, Császár (2012) found no difference in stress. Therefore, looking to explore this further, and to see whether any differences between type of practice.
Stroop test	Previously observed as an outcome for MM practice with existing practitioners (Chan and Wollacott (2007; Moore and Malinowski, 2009). Mixed findings for novices; Helber, Zook and Immergut, 2012) found no impact with LKM and MM, whereas Hunsinger, Livingston and Isbell, 2012a) found an impact with LKM. As such, attentional control somewhat expected for MM, but not necessarily for LKM. Therefore, may help to differentiate between practice impacts.

Summary:

Previous research exploring the impact of LKM is mixed in terms of study design. Our understanding of the potential that LKM may have on wellbeing, while promising, does not stem from a consistent understanding and implementation of LKM practice. Research exploring the impact of a practice that is closer to how LK is practised on a day to day basis, therefore provides us with a more realistic view on how the practice may impact on a more general public sample. The other studies in this thesis establish the core concepts of the practice. This study therefore addresses the need to affirm some of the previously observed outcomes in previous literature, using a form of LKM that is grounded in the findings from the other studies in this thesis. In addition, comparison to an active control group of mindfulness meditation, a practice that has a focus more on attending to the moment as opposed to explicitly focusing on affect and well wishes, means that if there are differences as a result of each practice, this will help clarify what LKM practice is, and what the effects of sustained practice are. The aims for this study are therefore to establish whether LKM will improve levels of wellbeing over eight-weeks, and also to explore whether there are differences between the meditation types on the measures, to further understanding of LKM practice. The below hypotheses are therefore split into those that will explore the impact of LKM practice, with secondary hypotheses looking at the potential differences between the practices.

Hypotheses:

1. There will be an increase in Positive Affect (PA) between T1 and T2.
2. There will be a decrease in Negative Affect (NA) between T1 and T2.
3. There will be an increase in levels of Satisfaction with Life from T1 to T2.
4. Levels of overall Self-compassion will increase over time.
5. All factors of the FFMQ will increase over time.
6. There will be a decrease in perceived stress levels over time.
7. The magnitude of the Stroop effect will reduce over time.

Exploratory analyses:

For each of the above hypotheses, the difference between LKM and MM will also be explored

7.2. Method

7.2.1. Design

The study explored change in measures related to wellbeing, before and after an eight-week meditation programme with students. The IV was the form of meditation practice participants were asked to engage with: Loving Kindness or Mindfulness.

There were multiple DVs. The self-report measures include Self-Compassion, Mindfulness, Satisfaction with Life, Positive and Negative Affect, and Perceived Stress. The extent to which participants could control their attention, was measured using an online Stroop task.

7.2.2. Participants and sampling

Participants were 41 Psychology undergraduates from the University of Northampton. The sample consisted of 31 female and 10 male students, who had an average age of 21.8 years with a range from 18-42, and who were novice to meditation

The main source of recruitment was the participant panel, within the Psychology department, at the University of Northampton. This requires first and second year students to engage in research as part of their research methods modules. Posters were also used around the Psychology department, and I went into some third year lectures to advertise the study to a wider audience. The split across year groups was first year, 25, second year, 9, third year, 10.

Forty-four participants signed up to the study, with one participant formally withdrawing. Two other participants stopped attending the weekly sessions without formally withdrawing and without responding to an attendance prompt email which assured participants that they were welcome the next week, and that they could use the audios available. Where participants did

not respond to the email, fill in their logs, or attend the sessions the next week, no further contact was made and data from that individual was removed from the data set. The attrition rate was therefore 6.82% across the eight-weeks. Just under a third (13) of the remaining 41 participants attended all eight-weeks of the programme, with the average attendance being 6.6 sessions.

Four groups, two mindfulness and two LKM were chosen to fit in with timetabling and to ensure that none of the groups were too large. Participants were first allocated to a group by drawing a number from a hat, where 1 and 4 were the MM groups and 2 and 3 were the LKM groups. Some students had to be reallocated to different groups, to fit in with their timetable. After withdrawals, the final number of participants in each session was Group 1 (MM)= 10, Group 2 (LKM) = 9, Group 3 (LKM) = 10, Group 4 (MM)= 12.

7.2.3. Wellbeing programme and session content

Based on the review of the literature, as well as the findings from the last three studies, the programme was designed to not only be in line with how practitioners perceive and present their practice, but also to reflect how individuals may engage with practice over a longer period of time than the programme. This would help gain insight into how the practice might impact on individuals who are engaging with LKM in their everyday lives. If found to be beneficial, this would support the use of LKM in improving wellbeing long term. The main elements of the practice that emerged from studies one two and three are given in sections 5.7 and 6.6, with a summary of the relevant findings for creating a programme being summarised here:

Ways of practice: The practice was seen as more of an attitude or way of being in the first two studies, and the actual method of manifesting LKM varied. To reflect this, I suggested the use of the traditional phrases; may I be happy, may I be healthy etc. but also suggested that participants could make use of one phrase that resonated for them, colours or energies, and that the emphasis should be on the underlying message of the practice. This

also included a sense of flexibility about their practice, in finding ways that worked for them

The self and enemies as a key parts of the practice: This was emphasised as being of importance in studies one and two but that it could present a challenge to participants. As such, I ensured that the programme started with the self to help develop a basis for the practice. As all foci were important to include, I ensured that the programme worked up to including all five groups, and that there were a few weeks when all of these groups were included, to get participants used to changing the focus of the well wishes.

Given the potential barrier for the focus on enemies, I made sure that this was introduced a little later on in the programme in case this presented too much of a challenge early on, but did want to ensure that participants had enough time to engage with this aspect of the practice before the programme end.

Keeping the above findings in mind, and the literature, a longer programme allowed for longer time to explore the impacts that the practice may be having on novices. The programme was eight weeks in length, and comprised of weekly 40-50 minute, face to face sessions. Sessions began with a short introduction and checking in with participants, followed by a 20 or 25-minute meditation. Time was put aside at the end for comments, discussion around challenges or questions. Some questions were also dealt with outside sessions, face-to-face and via email. This mirrored many of the current ways of being able to meditate, such as online or app based programmes, where specific support is largely participant-led.

The two mindfulness and two loving kindness groups were split so that there was one MM and one LKM group on one day, and the same on the other, and were counterbalanced to control for tutor fatigue. Participants were asked to attend the same session each week, but in cases where they could not, they could come to the alternate one. Participants were asked to only attend one of the sessions per week, and attendance was closely monitored to ensure they were only attending one session per week.

Sessions were facilitated by myself; I have a personal practice that I learnt from a Tibetan Buddhist as part of my Masters study. As well as regular practice, I have also been on retreat and have experience of guiding meditation sessions with Masters students as part of their course, facilitating work-based workshops and guided meditations, as well as workshops at conferences. I developed and facilitated a mindfulness sitting group, focused on ongoing wellbeing for staff, with one of my supervisors. Lastly, I have a meditation teacher qualification, DipBSoM, through the British School of Meditation (BSoM) whose courses are verified by OfQual and the Open Colleges Network (OCN). I also felt that given that I had conducted and analysed the first two studies in this thesis, I had a good impression of the practice from a range of viewpoints, including some very experienced practitioners, and had had time to consider how the analysis from the first two studies could contribute to the development of the programme.

In addition to the face-to-face sessions, participants were provided with audios, shared via Dropbox and email, to support their personal practice. These were either recorded after the session using the brief scripts and notes I had made, or I recorded the session itself and used that to upload as the audio for that week. Participants were advised that if they wished to follow their own practice they could set timers using apps such as 'insight timer'. The variety of suggestions was to ensure that participants remained engaged in the process; attrition from meditation programmes can be high and as such I wanted to avoid participants dropping out due to materials not being to their taste. However, it was also important to ensure that participants were broadly engaging with loving kindness or mindfulness, depending on their assigned group, and as such use of the audios I provided was encouraged. The tracks corresponded with the practice that had been engaged with in the sitting group that week. It was not possible to ensure that participants in either group did not practice any other forms of meditation outside of the group setting, but they were encouraged to focus on the practises we had covered and the content of the audios for the duration of the programme.

It was important that the sessions for MM and LKM were as similar as possible, apart from the actual meditation they were being taught. The meditations themselves were therefore timed, and were the same length for both the MM and LKM groups. To ensure that there were as few differences as possible across the groups doing the same meditation, e.g. groups two and three who were both engaging with LKM, I wrote myself a brief script and noted how long each of the sections was. For example, I made a note of when I moved from the Self to a loved one within the meditation, so that participants in the other group who were also engaging with LKM were getting as similar meditation guidance as possible.

Details of each of the practices are given in Table 9, and each weeks' practice was designed to build up over the eight weeks. For example, given the emphasis placed on the self-focus as being important for basing the remaining foci on, as put forward in studies one and two, the LKM practice began with the self only in week one. Each week additional foci were added, to ensure that the focus on the self was being developed, especially given its potential to present a challenge as suggested in studies one and two, while introducing participants to different aspects of the practice. Week two built on this by including a loved one, the self and a neutral person and week three included a loved one, the self and a difficult person. This was done until each of the foci was included in week 5, after which they practised directing LKM to all groups, particularly those they found difficult to do, for weeks five, six and seven.

The design of this was based on the observations from the previous studies in this thesis, in allowing time for a practice to develop and for change to be seen, as the changes seemed to manifest over longer periods of time, and made sure that the difficult person, which may provide a challenge, was not introduced too quickly. Taking the previous studies' findings into account, I also ensured that I placed emphasis more on the practice as an attitude, and that different methods such as the use of phrases, visualisations, or colours could be used to manifest this, but that this should be something that the individual could be comfortable with.

Table 9: Session content for each week

Week		*Loving Kindness*	*Mindfulness*
1	Practice	10 min loving kindness intro – LKM to the self	10 min mindfulness intro – body scan
	Discussion	Introduction to programme + requirements 10 min posture, time of day suggestions, importance of regularity	
2	Practice	20 mins; loved one (10), self (5), neutral person (5)	20 mins –body scan (10), mindfulness of breath (10)
	Discussion	Reflections from first week of practice, talking about distractions and how to reduce them; assurances that this is part of the process. Brief discussion about what research shows.	
3	Practice	20 mins; loved one (10), self (5), difficult person (5)	20 mins; body scan (5), mindfulness of breath (15)
	Discussion	Reflections and brief discussion of integrating into daily life; suggestions of setting timers or doing brief meditations at specific points during the day - e.g. every time you boil the kettle.	
4	Practice	20 mins; loved one (8), self (4), whole world (8)	20 mins; very brief checking in an body scan (2 mins), then mindfulness of breath
	Discussion	Reflections from previous week's practice, what kinds of practice they've been doing, whether it's becoming any easier; half way point reflections.	
5	Practice	25 mins; loved one (5), self (5), neutral (5), enemy (5), whole world (5)	25 mins mindfulness of breath
	Discussion	Reflections on practice over past week.	
6	Practice	25 mins; loved one (10), then whichever group they found most difficult (15)	25 mins mindfulness of breath
	Discussion	Reflections on practice over past week.	
7	Practice	25 mins; loved one (5), self (5), neutral (5), enemy (5), whole world (5)	25 mins mindfulness of breath
	Discussion	Reflections on practice over past week.	
8	Practice	15 mins to loved one and self	15 mins mindfulness of breath
	Discussion	Thanks and discussion about continuing practice. Remaining time was given to fill in scales and last log.	

For more detailed examples of the session outline and content, please see appendices 5.3. and 5.4.

7.2.4. Materials

As presented in section 7.1, the materials were chosen in response to what had been observed in the literature with different study designs. In addition to this however, was what had been seen in study three, as presented in section 6.6.

The scales used in this study were predominately self-report measures; self-compassion, satisfaction with life, mindfulness, stress, and positive and negative affect. In addition to this was an information sheet and a consent form, and an online Stroop test.

Positive affect (Watson, Clark & Tellegen, 1988)

Affect was measured using the Positive Affect and Negative Affect Scale (PANAS). This scale contains two measures, one for Positive Affect and one for Negative affect. Both scales have ten terms relating to emotion or current mood, and participants are asked to rate how much they have felt this emotion in a given time period e.g. today, in the last week, in the last month.

There is a five-point rating ranging from very slightly/not at all, to extremely, in relation to how much they felt this emotion in the given time period. This results in a range of scores from 10-50 for each scale, 50 indicating a high level of positive or negative affect. Examples of the terms used for the Positive affect scale are 'interested', 'enthusiastic' and 'determined' and for the Negative affect scale are 'scared', 'upset' and 'ashamed'. Individuals can score highly on one scale and low on the other; research suggests those with high levels of positive affect are not necessarily low in negative affect and vice versa (Diener & Ashgar, 1986).

The alpha scores range from .86 to .90 for the Positive affect scale and from .84 to .87 for the negative affect scale, showing good reliability (Watson, Clark & Tellegen, 1988).

Satisfaction with Life Scale (Diener, Emmons, Larsen & Griffin, 1985)

Life satisfaction was measured using the Satisfaction with Life Scale (SWLS). This consists of 5 questions with a 7-point rating scale from 1 – strongly disagree to 7 – strongly agree. All items were positively scored and examples of the questions are: 'The conditions of my life are excellent' and 'So far I have gotten the important things I want in life'.

The total score is attained by summing all items, resulting in a range of scores from 5, indicating low satisfaction, to 35 indicating high satisfaction. The scale is reliable, with an alpha of .87 (Diener, Emmons, Larsen & Griffin, 1985).

Self-compassion (Neff, 2003)

Self-compassion was measured using the 26 item Self-Compassion Scale (SCS). This is made up of six subscales that form pairs that create the three main aspects of self-compassion; self-kindness and self-judgement, isolation and common humanity and mindfulness and over-identification. The self-judgment, isolation and over-identification subscales are all negatively worded, and are therefore reverse scored when it comes to analysis. This means that increases in those scores would indicate an overall decrease, e.g. an increase in scoring on isolation reflects an actual decrease when it comes to interpretation. The higher the overall score, the more self-compassion.

Once questions have been reverse scored where appropriate, the mean of each subscale is calculated to create a score for each of the six factors. Neff suggests these can be summed, or a mean of the means can be taken to create an overall self-compassion score. The overall scale has an internal consistency alpha of .92. This indicates a high level of reliability (Neff, 2003). Descriptions of each subscale and example items are given in

Table 5, in chapter 6.

Neff highlights that these factors are not mutually exclusive from one another, giving the example that an individual may be low on self-judgement, but that doesn't mean they are actively kind to themselves, and so being low on one factor wouldn't necessarily mean that they would score highly on their opposite.

Five Factor Mindfulness Questionnaire (Baer *et al*., 2008)

Mindfulness was measured using the Five Factor Mindfulness Questionnaire (FFMQ). This is a 39-item scale containing 5 separate factors of mindfulness; observe, describe, acting with awareness, non-judging of inner experience and non-reactivity to inner experience. Each of the factors is measured using 8 questions, apart from the non-reactivity to inner experience factor, that includes 7 questions. Each question has a five-point rating scale from 1, never or very rarely true, to 5, very often or always. As a result, each factor has a score ranging from 8-40 (7-35 for non-reactivity to inner experience), with higher scores indicating a higher level of that factor.

Of the 39 items, 19 require reverse scoring and comprise of the 8 questions that make up the acting with awareness factor, the 8 questions that make up the non-judging of inner experience factor, and 3 of the 8 questions in the describe factor. The remaining factors, observe and non-reactivity to inner experience, have 8 and 7 questions respectively, and are positively scored. Example questions and descriptions of the factors are given in Table 10. The factors have adequate to good internal reliability score with alphas ranging from .72 to .92 (Baer *et al*., 2008).

Table 10: Descriptions and examples of items from each factor of the FFMQ

Factor	Description*	Example item from scale
Observe	The ability to notice and attend to experiences both internal and external such as cognitions, emotions sounds and smells	When I take a shower or bath, I stay alert to the sensations of water on my body
Describe	How much the individual labels their internal experience with words	I'm good at finding words to describe my feelings
Acting with awareness	How much the individual is able to attend to the moment as opposed to being on 'automatic pilot'	I do jobs or tasks automatically without being aware of what I'm doing
Non-judging of inner experience	How much the individual has a judgemental attitude towards their thoughts and feeling	I believe some of my thoughts are abnormal or bad and I shouldn't think that way
Non-reactivity to inner experience	The ability to allow thoughts to come and go without being caught up in them or carried away by them	I perceive my feelings and emotions without having to react to them

* all factor descriptions are from Baer *et al*., (2008)

Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983)

Perceived stress was measured using the Perceived Stress Scale (PSS). This scale has 14 items, 7 that are reverse scored. The scoring for the original scale is from 0 - never, to 4 - very often. Participants are asked to choose a number and statement that reflects the amount they have felt in a particular way, in a given time period, that can be adapted for use, e.g. 'in the last month/in the last week/in the last few days, how often have you felt nervous and 'stressed''.

Overall perceived stress is measured by reversing responses to items 4, 5, 6, 7, 9, 10 and 13, and summing across all scale items. A high score would indicate a high level of perceived stress and scores can range from 0-56. The scale has alpha levels of between 0.84 and 0.86 with different

samples, indicating a good internal reliability (Cohen Kamarck & Mermelstein, 1983).

The Stroop test to measure cognitive adaptability (Stroop, 1935)

The Stroop interference test, developed by Stroop in 1935, measures selective attention and cognitive adaptability (Homack & Riccio, 2004). The test presents participants with a series of words such as 'blue', 'red', and 'green'. The congruent condition consists of the words being presented in the same colour text as the word describes e.g. 'blue' written in blue ink. In comparison the incongruent condition consists of words written in a different colour to the colour that it describes e.g. 'red' written in green ink. Participants are required to identify the colour that the word it written in. The stroop effect involves attention and impulse control (Kozasa *et al.,* 2012) to be able to direct attention to what is being asked of the individual, i.e. to identify the colour of the word. The incongruent condition, where the word is written in a different colour, should therefore take longer in comparison with the congruent condition. The focus on attention in meditation practice, suggests that an aspect like the stroop effect may be reduced as a result of meditative practice.

Variations of the test have been used within research on meditation as a way of measuring executive attention (Chan and Wollacott, 2007), and cognitive control (Hunsinger, Livingston & Isbell, 2012a). Both studies found that meditation; mindfulness and loving kindness respectively, seem to reduce the 'effect' of the Stroop task. For example, times to complete the incongruent and congruent conditions were significantly quicker for those who had undertaken a three-day loving kindness programme, when compared to a control group. In addition, the difference between time to complete the congruent and incongruent conditions was reduced, suggesting that meditation enables participants to have improved control over directing their attention (Hunsinger, Livingston & Isbell, 2012a). The Stroop test was included here to see

whether LKM, which has a less explicit focus on attentional control compared to MM, would have an impact on cognitive control.

Information sheet and consent form

Participants were given an information sheet (see appendix 5.1.) to provide them with the information they needed to decide whether to take part in the research or not. Details included what participants would be expected to engage with in terms of the programme length, that there would be allocation to one condition, but that they would be given access to the other groups' resources following completion of the programme.

If participants were happy with the details given in the information sheet, they were asked to fill in a consent form (see appendix 5.2.), before commencement of the programme. The consent form asked participants to confirm that they were aware of their rights to withdraw from the study at any point and how they could do so, that their data would be anonymised, and kept confidential, and lastly that they had been given an opportunity to answer any questions and that they consented to taking part in the study.

Recording engagement outside of sessions

To record the amount of practice participants had engaged with outside of the face-to-face sessions, a Google form was created and sent out each week. This was sent out from the second session so that participants had had one week to have practised outside of the formal sessions. From week two, a link to the forms was sent on the day before the next session. This acted both as a reminder of the weekly session but also as a prompt to record their practice. Participants were asked to be as honest as possible when filling these in, resulting in some entries of '0' minutes practice for that week. As well as asking participants how often they had practised that week, it also asked them the average length of their practice(s) and had a comments box should they want to add any reflections on the process. The only week that the log record differed was week 8, the last entry. This allowed space for participants to record reflections from the whole programme.

7.2.5. Procedure

Following recruitment, participants filled in the set of scales online, one to two days before the programme began (Time 1). Participants were allocated to one of two conditions; LKM or MM and then attended eight face to face sessions, once a week for eight weeks. Starting from week two, before each session, participants were sent a link to a google doc where they could record their reflections from the previous week, and record the amount of times they had practised that week, as well as the average duration of the practice(s). Audio recordings were provided to help support practice outside of the face-to-face sessions.

After eight weeks of practice, participants were asked to fill in the same set of scales (Time 2), and to record any final reflections on the programme as a whole, including any challenges they had experienced, and any benefits they would attribute to the practice. Participants were debriefed and thanked for their time. Comparisons were made across the time periods, to observe the effects of the programmes on the DVs. Effects were then compared across the two groups, to explore the differences between the meditation types.

7.2.6. Ethical considerations

The study was granted ethical approval by the University of Northampton's postgraduate research ethics board, and adhered to the BPS ethical guidelines (The British Psychological Society, 2009)

In order to gain fully informed consent from each participant, an information sheet was given to participants before they were asked to complete a consent form. This ensured that participants were aware of what they would be asked to do, their right to withdraw their data and how they could do so, and how their data would be stored, before consenting to take part. At this point, participants were also made aware that there were two conditions that they may be assigned to, to ensure that there was no deception involved. Participants were informed that they would be given access to the resources for the other group that they were not in, following completion of the programme.

All data was kept securely on the researcher's home and work computers only to ensure confidentiality of the data. To ensure anonymity of participants' identities, participant numbers were used to link data across the eight weeks. This was detailed in the information sheet. Participants were asked to state whether they are happy for their anonymised data to be kept for future analysis and sharing with other researchers in the information sheet. Participants were made aware of data storage and length of time in the information sheet. Lastly, data protection was in accordance with the Data Protection Act (1998); data was stored securely by the researcher, using an encrypted folder on the researcher's work and personal computers. These details were included in the information sheet.

To reduce potential harm for participants, given their lack of experience with meditation and expectations they may have regarding the meditation and outcomes from the programme, I ensured that the practice was presented as clearly as possible, and I allowed time for questions as a group as well as on an individual basis. To manage expectations, the programme was introduced as a programme for general wellbeing, and did not claim to reduce any specific negative mental health concerns. I also made it clear in the information sheet that participants could withdraw from the programme at any point should they wish to do so. In addition, participants were made aware that they did not need to answer any questions they do not feel comfortable answering when filling in the scales at the start and end of the programme. The weekly log of practice and reflections were also optional. Participants were also aware that they could withdraw from the programme at any point without providing reason. They were also aware that they could withdraw their data following completion of their interview should they wish to. All information on not having to answer particular questions, and how to withdraw data were given in the information sheet.

7.3. Analysis

The final number of participants included in the analyses was 41 after data had been withdrawn following participants withdrawing from the process. Not all participants filled in all scales and/or completed the Stroop task on both occasions. Therefore, the number of participants included in analyses ranges from 32-38. Where few items were missing, mean substitution was used, where values were replaced by the mean for that individual, and in cases where this was a subscale the mean of the subscale was used for the missing value (Kang, 2013).

Each of the scales is analysed in turn, starting with measuring the difference between time 1 and 2 for the LKM group. This allows for insight into the changes that are occurring over the eight weeks in the scales measured. Analyses then looks at whether there are any differences between the two meditation groups, to explore the possible differing effects of the meditation type. To explore the differences in magnitude of change between the practices, the average change over time was calculated for each scale. These averages were then compared across the two groups, to see whether one meditation type saw a significantly larger change over time compared to the other, which would indicate that there were differences in the impacts of each practice. This would help identify areas where the practices differ and therefore what impact different foci has on measured outcomes.

Descriptive analyses were conducted on the data to check parametric assumptions, which were met for the data set. Additionally, apart from the Negative affect scale, where there was a significant difference in the scores at T1 (p= .04), the rest of the scales did not differ at T1.

7.3.1. Positive and Negative Affect

Each of the 10-item scales, one for positive affect and the other for negative affect were summed and the mean of each scale was calculated. While an overall increase was expected over the eight-week period, due to the focus of the LKM practice on manifesting affective related states, it

was anticipated that the change over time in affect as measured by the PANAS would be more substantial for the LKM group than the MM group.

Hypotheses:

1. There will be an increase in Positive Affect (PA) between T1 and T2.
2. There will be a decrease in Negative Affect (NA) between T1 and T2.

Table 11 shows that there are increases in levels of Positive Affect for the LKM group over time. A paired samples t-test found that this was significant $t(14) = 1.99$, $p = .04$, d = .92. For Negative Affect there was a minor reduction over time, which was not significant, $t(14) = .08$ $p = .47$, d = .01. The null hypothesis for seeing an increase in positive affect can therefore be rejected, but cannot be rejected for the expected decrease in negative affect.

Similar findings were seen for the mindfulness group, where there were significant improvements for positive affect; $p = .04$, d = 51, but there was a significant decrease seen in negative affect; $p = .05$, d = 56.

To explore whether the change over time may have been different across each of the groups, a mean change over time variable was calculated (Time 2- Time 1). The increase in positive affect was very similar for both groups; LKM Mdiff = .42, MM Mdiff =.43), which therefore suggests that the practices see similar changes over the time period for PA and a test of difference was therefore not conducted.

For negative affect there was a larger difference between the groups, with MM seeing a larger reduction; LKM Mdiff = -.01, MM Mdiff = -.25. An independent measures t-test was conducted to see whether this difference was significant, which is was not; $t(33) = -1.16$, $p = .13$, d = .41. In addition, and as stated above, there was a significant difference between the LKM and MM groups at T1 on levels of negative affect, with LKM having significantly lower levels of NA. As such, some of the difference in the magnitude of change for levels of NA between the meditation types could be attributed to this.

Table 11: Means and SDs for Positive and Negative affect change over time

	Condition (n)	Mean [LCI, UCI] (SD)		Mean difference [LCI, UCI] (SD)
		Time 1	Time 2	
Positive Affect	LKM (15)	3.06 [2.58, 3.54] (.86)	3.48 [3.02, 3.94] (.83)	.42 [-.03, .88] (.83)
	MM (20)	2.88 [2.50, 2.95] (.80)	3.31 [2.89, 3.73] (.89)	.43 [-.06, .93] (1.06)
Negative Affect	LKM (15)	1.90 [1.62, 2.18] (.50)	1.89 [1.47, 2.30] (.75)	-.01 [-.40, .37] (.69)
	MM (20)	2.45 [2.09, 2.80] (.76)	2.15 [1.65, 2.64] (.05)	-.30 [-.65, .05] (.74)

The findings suggest that there was an improvement in PA, and a non-significant reduction in NA, although this may have been due to low levels of NA at T1 seen in the LKM group. These changes over time were similar for each meditation type, and indicate that each meditation type sees similar changes in levels of affect.

7.3.2. Satisfaction with Life

The items from the scale were totalled to give each person a final score out of 35.

Hypothesis:

1. There will be an increase in levels of Satisfaction with Life from T1 to T2.

As can be seen in Table 12, there was an increase in SWL means over the eight-week period. A paired samples t-test revealed that this difference was significant for the LKM group; t (12) = -2.81, p = .01, d =.44. The null hypothesis can therefore be rejected, and those in the LKM group saw an increase over the time period for SWL. There was a similar significant increase in SWL scores for the MM group; p = .02.

Given the focus of LKM practice, it was anticipated that this practice would see a larger change over time as compared to the MM group. To explore whether one of the increases was larger than the other, the mean change was calculated. While the increase was larger for the LKM group (Mdiff = 2.54) compared to the MM group (Mdiff = 2.24), this difference was not significant $t(32) = -.20$, $p = .42$, d = .07, suggesting that the changes over time were similar for each meditation type.

Table 12: Means and SDs for change over time on SWL scale

	Condition (n)	Mean [LCI, UCI] (SD)		Mean difference [LCI, UCI] (SD)
		Time 1	Time 2	
Satisfaction with Life	LKM (13)	23.92 [20.43, 27.42] (5.78)	26.46 [22.97, 29.96] (5.78)	2.54 [.57, 4,51] (3.26)
	MM (21)	21.43 [18.10, 24.79] (7.38)	23.67 [19.91, 27.42] (8.24)	2.24 [.09, 4.39] (4.72)

Levels of satisfaction with life increased across the eight-week period for the LKM group, however both meditation types saw similar change, and as such MM and LKM do not differ in terms of how they may impact on satisfaction with life.

7.3.3. Self-compassion

An overall self-compassion score was calculated for each participant by reverse coding responses to the negatively worded items comprising the self-judgment (Qs 6-10), isolation (15-18) and over-identification (23-26) subscales, then calculating the means for each of the six subscales. Due to the reverse scoring, higher scores indicate an improvement in each subscale, which in some cases may indicate a decrease, e.g. levels of isolation; an increase in means over time, indicates a decrease in feelings of isolation. The means for each subscale were summed to create a total self-compassion score. Higher scores therefore indicate greater levels of self-compassion.

Hypothesis:

1. Levels of overall Self-compassion will increase over time.

Table 13 shows that the means for LKM increased over the eight-week period. A paired samples t-test revealed that this increase was significant, with a moderate to large effect size; $t(12) = -2.93$, $p < .001$, d = 82. The null hypothesis here could therefore be rejected, and shows that levels of self-compassion increased over the eight-week period. A significant increase in overall self-compassion was also seen in the MM group; $p = .01$.

Given the focus of LKM practice, it was anticipated that this practice would see a larger change over time as compared to the MM group. To explore whether there are differences between the meditation types in the magnitude of change over the eight weeks, the mean change was calculated. While the LKM group had a larger change over time (Mdiff = 3.44), than the MM group (Mdiff = 1.78), the difference was not significant; $t(32) = -1.26$, $p = .22$, d = .43. This suggests that the meditation types see similar outcomes on levels of overall self-compassion.

Table 13: Means and SDs for total Self-Compassion levels

	Condition (n)	Mean [LCI, UCI] (SD)		Mean difference [LCI, UCI] (SD)
		Time 1	Time 2	
Self-Compassion total	LKM (13)	17.12 [14.30, 19.93] (4.66)	20.55 [18.34, 22.75] (3.65)	3.43 [.88, 5.98] (4.22)
	MM (21)	16.36 [14.23, 18.49] (4.68)	18.15 [15.86, 20.44] (5.03)	1.78 [.26, 3.31] (3.36)

To explore the possible differences between the meditation types further, the subscales of the SCS were explored. The SCS, as stated above, has six subscales, which when looked at on a subscale level, may see different changes depending on the type of meditation that was engaged with. For example, the mindfulness and over identification subscales may

see a larger difference for the mindfulness group than the LKM group. It was anticipated that the LKM group may see larger changes on the self-kindness, self-judgement, common humanity and isolation scales, and MM may see larger changes on the Mindfulness and Over-identification scales.

Self-kindness and self-judgement

The LKM group saw an increase in levels of self-kindness and decreases in self-judgement, however neither of these changes was significant. Self-kindness; t (12) = -1.51, p = .08, d = .55, Self-judgement; t (12) = -.99, p = .17, d = .26. As such, LKM does not significantly impact on levels of self-kindness or self-judgement. In contrast, the change seen for the MM group was significant for self-judgement; p = .03, as well as for self-kindness; p = .02. This suggests that self-kindness and self-judgement changes may be affected differently according to the type of meditation that participants engaged with.

To explore this further, the mean change was looked at, which saw the same level of increase in self-kindness (LKM = .49, MM = .49). The differences between groups was a little more substantial for the self-judgement subscale (LKM = .26, MM = .41), but the differences between the groups were not significant p = .33.

Over identification and Mindfulness:

Levels of over-identification decreased but this was not a significant change for the LKM group; $t(12)$ = -1.56, p = .07, d = .47 . For levels of mindfulness, there was a significant increase; $t(12)$ = -3.01, p < .001, d = .76. The null hypothesis for the change in mindfulness can therefore be rejected. The same pattern was seen for the MM group, were there was also a non-significant decrease in over-identification; p = .18, and a significant increase in levels of mindfulness; p = .01.

It was expected that the MM group would have seen more of a change in these subscales given the focus of the practice on attending to the moment. Based on the mean change, the larger changes were however observed in the LKM group for levels of mindfulness (Mdiff = .63) compared to the MM group (Mdiff = .39). This pattern was also seen in the changes for over identification; LKM Mdiff = .54, MM Mdiff = .18. Neither of the differences between the LKM and MM groups were significant; Mindfulness p = .19, Over Identification p = .16.

Type of meditation did not seem to impact on the observed change seen in levels of mindfulness or over-identification. In addition, the changes in the scales were not as expected, with the larger change being seen in the LKM group.

Common Humanity and Isolation:

There was a decrease in levels of isolation observed for those in the LKM group, but this was not significant; $t(12) = -1.38$, $p = .10$, d = .49 . Additionally, there was an increase in levels of common humanity, which was significant; $t(12) = -4.21$, $p < .001$, d = 1.11. The same pattern was seen for the MM group, with a non-significant decrease in isolation; p = .46, and a significant increase in levels of common humanity; $p = .03$. This suggests that LKM has an impact on improving connectedness with others, but not on feelings of isolation.

To see whether the changes were larger for either of the meditation types, the mean change was looked at. For common humanity, the change for the LKM group (Mdiff = 1.10) was larger than the increase observed in the MM group (Mdiff = .38), which was a significant difference with a moderate to large effect size; $t = -2.35$, $p = .02$, d = .80. This was in the expected direction; the focus of LKM practice on sending well wishes to others, as well as the self, had a larger impact on levels of feelings of connectedness than MM.

The difference for isolation was larger for the LKM group (Mdiff = .46), compared to MM group (Mdiff = .02). The difference between these mean changes was not significant (*p* = .13), and there was little difference between the meditation groups on levels of isolation.

Table 14: Mean change over eight weeks, for subscales of Self-Compassion

Subscale	Cond (n)	Mean [LCI, UCI] (SD)		Mean difference [LCI, UCI] (SD)
		Time 1	Time 2	
Self-Kindness	LKM (13)	2.99 [2.47, 3.51] (.86)	3.43 [2.99, 3.87] (.72)	.49 [-.33, 1.32] (1.86)
	MM (21)	2.40 [2.02, 2.78] (.83)	2.79 [2.34, 3.25] (1.00)	.49 [.08, .89] (.89)
Self-Judgement	LKM (13)	3.22 [2.63, 3.81] (.98)	3.48 [2.88, 4.09] (1.00)	.26 [-.32, .84] (.96)
	MM (21)	2.48 [2.04, 2.91] (.96)	2.89 [2.40, 3.38] (1.07)	.41 [-.01, .83] (.92)
Isolation	LKM (13)	2.75 [2.19, 3.31] (.93)	3.21 [2.59, 3.83] (1.03)	.46 [-.27, 1.19] (1.20)
	MM (21)	2.98 [2.46, 3.49] (1.13)	3.00 [2.56, 3.44] (.97)	.02 [-.45, .50] (1.04)
Common Humanity	LKM (13)	2.56 [1.92, 3.20] (1.06)	3.65 [3.11, 4.20] (.90)	1.10 [.53, 1.66] (.94)
	MM (21)	2.71 [2.25, 3.18] (1.02)	3.10 [2.67, 3.52] (.93)	.38 [.01, .75] (.82)
Mindfulness	LKM (13)	2.90 [2.29, 3.52] (1.02)	3.54 [3.17, 3.91] (.61)	.63 [.17, 1.09] (.76)
	MM (21)	2.86 [2.45, 3.27] (.90)	3.25 [2.75, 3.75] (1.10)	.39 [.06, .72] (.72)
Over-identification	LKM (13)	2.69 [2.00 3.39] (1.15)	3.23 [2.60, 3.86] (1.04)	.54 [-.21, 1.29] (1.24)
	MM (21)	2.94 [2.53, 3.35] (.90)	3.12 [2.73, 3.51 (.85)	.18 [-.21, .57] (.86)

7.3.4. Mindfulness

This scale is made up of five factors of mindfulness; observe, describe, acting with awareness, non-judging of inner experience and non-reactivity to inner experience. Items were reverse scored and an overall score for each factor was calculated, results of which can be seen in Table 15.

Hypothesis:

1. All factors of the FFMQ will increase over time

Given the focus of the mindfulness practice, it was anticipated that the larger changes would be seen for this group on these factors.

Observe

The subscale measures the ability to notice and attend to experiences both internal and external e.g. cognitions, emotions sounds and smells (Baer *et al*. 2008). The LKM group saw a significant increase and a moderate effect size; $t(12) = -2.56$, $p = .02$, d= 60. This means that the null hypothesis for seeing an increase in the observe scale can be rejected. The MM group also saw a significant increase; $p = .001$.

When exploring the difference between the meditation types, the mean difference was compared. The increase was larger for the MM group than the LKM group; MM Mdiff = 4.90, LKM Mdiff = 3.69, but this difference was not significant and the effect size was small; $t(33) = .65$, $p = .26$, d = .23. Therefore, the anticipated larger change for the MM group was not supported.

Describe

The LKM group saw a significant increase with a small to moderate effect size for the describe scale, which measures the ability the individual has to label inner experience with words; $t(12) = -2.19$, $p = .03$, d = .46. The null hypothesis regarding the change over time can therefore be rejected, which indicates that levels of the ability to label inner

experiences has improved over the eight weeks. In contrast, the MM group had a non-significant increase; $p = .12$.

The LKM group saw a larger increase (Mdiff = 3.62) than the MM group (Mdiff = 1.76). The difference between the groups however was not significant; $t(33) = -.84$, $p = .21$, d = .30.

Acting with awareness

The acting with awareness scale measures how much the individual is able to attend to the moment as opposed to being on automatic pilot (Baer *et al* 2008).

The increase was not significant; $t\ (12) = -.87$, $p = .20$, d = .40, and therefore the null hypothesis cannot be rejected, and LKM has little impact on the ability to attend to the moment. The same non-significant finding was seen for the MM group; $p = .07$.

To explore the difference in the magnitude of change between the groups, the mean differences were compared. These were very similar for the groups; LKM Mdiff = 2.77, MM Mdiff = 2.57, and the difference was not significant and had a very small effect size; t - .03, $p = .49$, d = .01.

Non-judging of inner experience

Non-judging of inner experience refers to how much the individual has a judgemental attitude towards their thoughts and feelings (Baer *et al*. 2008). The increase here was not significant; $t(12) = -1.41$, $p = .09$, d = .45. The null hypothesis for seeing a change over the eight weeks cannot be rejected. In contrast, the MM group did see a significant increase in this scale; $p = .03$.

The difference between the groups was very similar; LKM Mdiff = 3.00, MM Mdiff = 3.19. This difference was not significant; $t(33) = -.04$, $p = .48$, d = .01. Both practices seem able to increase this ability relatively equally.

Non-reactivity to inner experience

Non-reactivity to inner experience measures how much the individual is able to let thoughts and feelings come and go without getting caught up in them (Baer *et al.,* 2008). There was a significant increase seen in the LKM group; t (12) = -2.97, p = .006, d = .78. The null hypothesis can therefore be rejected, which indicates that the ability to let go of feelings and thoughts is improved over the eight weeks. Similarly, the MM group also saw a significant increase; p = .003.

The LKM group saw a larger increase for non-reactivity (Mdiff = 3.85), compared to the mindfulness group who saw a smaller increase (Mdiff = 2.52). The difference between the conditions was not significant, with a small effect size; t = -.92, p = .18, d = .41. There was no difference between the conditions, and the increase was seen for LKM and not MM, as predicted.

Table 15: FFMQ mean change

	Condition (n)	Mean [LCI, UCI] (SD)		Mean difference [LCI, UCI] (SD)
		Time 1	Time 2	
Observe	LKM (13)	22.15 [18.33, 25.97] (6.32)	25.85 [22.17, 29.52] (6.08)	3.69 [.55, 6.84] (5.20)
	MM (21)	25.00 [22.22, 27.78] (6.10)	29.90 [27.67, 32.14] (4.91)	4.90 [2.06, 7.75] (6.24)
Describe	LKM (13)	26.08 [21.11, 31.04] (8.22)	29.69 [25.28, 34.11] (7.31)	3.62 [.01, 7.22] (5.71)
	MM (21)	24.05 [20.45, 27.65] (7.91)	25.81 [22.12, 29.50] (8.10)	1.76 [-1.23, 4.75] (6.57)
Awareness	LKM (13)	24.38 [20.07, 28.70] (7.15)	27.15 [23.09, 31.22] (6.73)	2.77 [-4.17, 9.71] (11.48)
	MM (21)	22.62 [20.11, 25.13] (5.52)	25.19 [21.96, 28.42] (7.09)	2.57 [-.85, 5.99] (7.40)

Non-judgement	LKM (13)	25.31 [20.92, 29.70] (7.26)	28.31 [24.59, 32.03] (6.16)	3.00 [-1.63, 7.63] (7.66)
	MM (21)	23.76 [20.44, 27.08] (7.29)	26.95 [23.18, 30.73] (8.30)	3.19 [-.00, 6.39] (6.87)
Non-reactivity	LKM (13)	18.69 [15.24, 22.14] (5.71)	22.54 [20.05, 25.03] (4.12)	3.85 [1.02, 6.67] (4.45)
	MM (21)	17.95 [15.35, 20.55] (5.71)	20.48 [18.04, 22.92] (5.36)	2.52 [.87, 4.18] (3.28)

7.3.5. Stress

Perceived stress was calculated by reverse scoring the positively worded items and summing the total, thus a high score indicates greater levels of stress.

Hypothesis:

1. There will be a decrease in perceived stress levels over time

The total level of perceived stress saw a significant reduction over time for the LKM group; $t(12) = 2.88$, $p = .007$, d = 1.00. The null hypothesis can be rejected, which suggests that the levels of perceived stress reduced over the eight-week period. There was a similar significant decrease for the MM group; $p = .004$.

The differences over time were similar for each meditation group; LKM Mdiff = -6.69, MM Mdiff = -6.38, and this difference was not significant; $t(32) = .094$, $p = .46$, d = .03.

Table 16: Means and SDs for the Perceived Stress Scale

		Mean [LCI, UCI] (SD)		Mean difference [LCI, UCI] (SD)
		Time 1	Time 2	
Perceived Stress Scale total	LKM (13)	31.77 [28.10, 35.44] (6.07)	25.08 [20.67, 29.49] (7.30)	-6.69 [-11.76, 1.62] (8.39)
	MM (21)	33.62 [30.32, 36.92] (7.24)	27.24 [23.07, 31.41] (9.16)	-6.38 [-10.92, 1.84] (9.98)

7.3.6. The Stroop test

To explore the impact that meditation has on cognitive control, the Stroop test was used. The average time per individual, for congruent and incongruent words, was calculated. If the Stroop effect was evident, the time taken for the congruent condition would be quicker than the incongruent condition.

Hypothesis:

1. The magnitude of the Stroop effect will reduce over time

The focus on attending and developing control over this is more explicit in the mindfulness practice, compared to the LKM group, and so a larger change was anticipated for the mindfulness group.

Table 17 shows that the means for the incongruent conditions are slower than the congruent conditions in all cases. At time 1, these are significantly slower for the LKM group (p = .008), which indicates that the stroop effect is evident. At time 2, the difference between the congruent and incongruent conditions is lessened, but the incongruent condition is still significantly slower than the congruent condition (p = .03). As such, while the stroop effect may have been slowed, the difference between the congruent and incongruent conditions across the time periods is small (Mdiff = 8.94). The hypothesis therefore cannot be supported.

In comparison, the Mindfulness group also saw a significant difference between the incongruent and congruent conditions for time 1 ($p < .001$), indicating that the stroop effect was evident at time 1. However, following the eight weeks, the difference between the conditions had reduced to 23.43, and the difference was no longer significant. This suggests that the stroop effect had reduced over time for the mindfulness condition, but not for the LKM group. The differences between the time 1 and time 2 changes, was not significantly different however when comparing the MM and LKM groups (MM Mdiff = 152.88, LKM Mdiff = 8.94, $t(30) = 1.60$, $p = .12$. The pattern of seeing a larger change for the MM group was supported, but the difference between the LKM and MM groups was not significant.

Table 17: Mean differences between congruent and incongruent mean scores

	Mean [LCI, UCI] (SD)						Change over time Mean [LCI, UCI] (SD)
	Congruent time 1	Incongruent time 1	Difference time 1	Congruent time 2	Incongruent time 2	Difference time 2	
LKM (14)	933.35 [805.41, 1061.29] (221.59)	1086.15 [904.10, 1268.20] (315.30)	152.80 [49.22, 256.38] (179.39)	909.33 [759.35, 1059.31] (259.76)	1053.19 [880.26, 1226.12] (299.50)	143.86 [9.49, 278.23] (232.72)	8.94 [-175.23, 193.12] (318.99)
MM (18)	895.54 [791.25, 999.83] (209.72)	1071.85 [948.19, 1195.51] (248.67)	176.31 [101.91, 250.70] (149.60)	953.57 [852.35, 1054.79] (203.55)	977.00 [879.76, 1074.24] (195.54)	23.43 [-29.68, 76.53], (106.80)	152.88 [59.90, 245.86] (186.98)

7.4. Discussion

Analyses explored the impact of LKM practice as a result of an eight week LKM programme, focused predominately on sustained meditation practice that was grounded in existing practitioners' understandings and perspectives of the practice. Results showed significant increases in levels of positive affect, satisfaction with life, and overall self-compassion. Looking at the subscales of self-compassion, there were significant increases in levels of mindfulness, and common humanity, and the scales of observe, describe and non-reactivity to inner experiences. Lastly, there

was also a significant decrease in levels of perceived stress, and little impact on reducing the stroop effect, which indicates cognitive control.

These findings add to existing literature by exploring the impact of a practice that reflects how existing practitioners understand and engage with their practice. To date and to my knowledge, this study is the only one that intentionally based the programme design in existing practitioners' understanding of their own practice. This ensured that what was being engaged with was reflective of LKM practice as it is understood by those who practice it, as opposed to being part of the practice, e.g. only focusing on the loved ones or self, or being added to with other practice, to develop an intervention or programme for a specific purpose or sample. In addition to ensuring that the practice being engaged with reflected existing practitioners practice, I also wanted to look at how the practice might impact on general public samples, and so wanted the programme to also reflect real world practice.

As discussed, the evidence base for LKM currently looks a variation of ways of employing LKM, some of which are interventions and programmes which make use of other practices and activities on top of LKM. These studies are useful in those particular settings, however if individuals are engaging with meditation in general as part of their day to day lives, they are likely to engage with online or app based support, as explored in study 3, or they may practice on a daily basis and attend a weekly group meeting, normally facilitated by a teacher. In order to establish therefore what impact LKM might have on a general public sample, it was important that the programme was designed so that it was as close as possible to how they may realistically engage with meditation, and could continue to do so after the research had ended. The findings from this study therefore not only show what impact an ecologically valid form of LKM that stems from existing practitioner experience can have, but also tell us how LKM might be impacting on a number of individuals who engage with LKM in their daily lives.

The findings from this study therefore indicate that a version of LKM which reflects real world practice, can improve wellbeing related measures such as satisfaction with life, increase levels of positive affect, and decrease levels of stress, and can improve relational measures such as overall self-compassion which explored the relationship with the self as well as others, and lastly, can also improve attentional measures such as cognitive control and some of the measures of the mindfulness scales, following eight weeks of practice. These findings are encouraging for those who already have an existing practice, but also for the potential that LKM has for improving wellbeing for general public samples, as the way in which the programme was designed was to be accessible and simple to engage with, and something that could be practised following the programme end.

In regards to how the findings here fit in with what has been previously observed in research, previous research tends to be mixed in finding significant or non-significant changes in the measures used here. Additionally, there were certain measures where LKM was anticipated to have a large impact on the change over time, due to its focus on affect and connection with others, compared to variables that may be attributable to other forms of meditation, with differing foci. For example, changes in positive and negative affect, and self-compassion were anticipated as the practice focuses on manifesting affective states, and on the self and others. Other measures such as stress and cognitive control were less anticipated given the focus of the practice being less explicitly on attentional processes for example, as well as from previous LKM research having mixed findings on those kinds of measures.

In relation to Positive and Negative affect, these scales measure more immediate mood and emotion, and ask participants to rate how much they have felt a collection of positive and negative emotions in a given time period e.g. today, the last week etc. (Watson, Clark & Tellegen, 1988). The measure therefore looks at more present mood and instances of this. Previous research on whether LKM impacts positive and negative affect is mixed; significant increases in PA and non-significant decreases

in NA were seen following 10 weeks of LKM (Fredrickson, *et al.,* 2008). In comparison, while there were decreases in NA and increases in PA, neither of these were significant changes following eight weeks of practice for May *et al.,* (2011). While this may indicate that PA may take longer than eight weeks to see change, the present study saw significant increases in PA following eight weeks. However, there was a non-significant decrease in NA observed, and so it may be that eight weeks is where significant changes begin to be seen in the regularity of positive emotion on daily bases.

Equally, the non-significance of the change in NA may be as a result of the practice impacting on improving PA, but not necessarily decreasing NA. Diener & Ashgar (1986) suggest individuals can be high or low on both scales at the same time, it is not necessarily that if you are high on PA, you score low on NA. This finding was also observed in Fredrickson *et al.,* (2008) who also found that PA increased but NA did not significantly decrease. While the lack of decrease in NA for the LKM group could have been due to the low scores prior to the start of the programme, given previous findings, it could also be that LKM impacts on PA more so than on NA. This would be important to establish moving forward, as LKM may not be appropriate for use with samples whose needs are to reduce levels of negative affect. It also suggests that if it takes long periods of time in order to see change in levels of PA and NA, it would be useful to take measures at more frequent time points across programmes, to establish whether there are any time points at which change begins or starts to plateau. This would help in supporting novices in giving them an idea of how long they need to stick with practice in order to begin observing change.

One of the other areas that LKM focuses on is the focus on the self and others as part of the practice. As such, an improvement on the self-compassion scale was anticipated. This was a previously observed finding from shorter, three- and four-week LKM based programmes (Smeets, Neff, Alberts & Peters, 2014; Weibel, 2008). Both of these studies used interventions that included LKM as an element; Weibel (2008) used

mindfulness as well as LKM, and Smeets *et al.,* (2014) had a number of other exercises across the three weekly sessions, including a self-compassion journal, designing self-compassion phrases, and an 'informal' loving kindness practice. As such, while there were increases in SC observed in those studies, these involved a number of other practices in some cases, and as such, it is not clear how much of an impact LKM itself had on the levels of SC. The findings from this study therefore add to our understanding of how LKM might impact on SC, as the focus here was on an LKM practice only, and while other factors such as feeling part of a group, or making the decision to focus on self-improvement for a period of time may also have impacted on some of the measures used here and elsewhere, reducing the amount of additional activities or exercises used in the programme allows for conclusions to be drawn on LKM more confidently than some of the more complex designs.

Lastly, there were some measures that LKM had a significant impact on, that were not necessarily expected as a direct result of the practice-focus such as perceived stress. For example, while the practice does involve attending to something, often the phrase being used, a visualisation, or the intention behind the practice, I anticipated that the larger changes would be to the more affective and wellbeing related measures, given LKM's focus. Prior to the study, the expectation for a reduction in stress was unknown, as there are mixed findings across the literature. For example, a reduction in perceived stress was seen following a programme including mediating on mindfulness as well as the four immeasurables, which includes LKM (Wallmark, Safarzadeh, Daukantaite & Maddux, 2012). In comparison, a study which looked more directly at LKM compared to a control group, found that there were no significant differences following an LKM intervention on a measure of personal distress, but there were significant differences when using a more clinical measure, the Outcome questionnaire, that indicates the stress levels of the individual (Császár, 2012). As such, whether LKM itself impacts on levels of stress may depend on how it is measured. The finding here

therefore give insight into the impact that LKM might have alone, as previous studies have looked at LKM in conjunction with other practices.

Analysis also focused on which of the observed effects might be due to LKM in particular, as opposed to engaging with any form of meditation. To do so, an active control group who practised mindfulness was included in the study. The findings from the MM group largely mirrored the findings that the LKM group saw. The only scale where the change between time 1 and time 2 differed between the meditation groups, was for the common humanity scale, where the LKM group had a significantly larger change over the eight weeks, compared to the MM group. This suggests that the focus of LKM is having the anticipated larger impact on social and relational aspects in comparison to MM.

The focus on others' in the LKM practice does therefore lead to larger changes in feelings of connectedness to others over time in comparison to mindfulness. The common humanity and isolation scales of the SCS refer to how much the participant sees links between the self and others; if they encounter a negative situation, do they assume that they are alone in this and that other people don't experience what they have, or can they see that others' have had similar experiences (Neff, 2003). The increase could be due to the underlying message of LKM being able to appreciate that everyone wants to be happy, and so everyone is linked in this way and we share this goal. This, as well as sending the same wishes to everyone you encounter, means that this practice was more likely to increase ability to relate to others. This finding was supported by the participant reflections, who reported improved existing relationships with both those who are difficult but also with loved ones:

> I have found it easier to see the person I dislike, I find it easier now to hang around with them which has made it easier for our friends too. I have also started to look after myself more now, I go to the gym and eat healthier (participant 37, LKM group)

> I have noticed that I am a lot calmer and relaxed since taking part in the practice as well as being more aware of the feelings I have for other people especially loved ones in particular. (participant 10, LKM group)

The connection with others was only reported by those in the LKM group and not in the MM group, which supports the finding from the statistics.

Similarly, there were effects seen in the MM group that indicated differences in the focus of the practice, and the associated outcomes. For example, while the change over time in the stroop test was not significant, the mindfulness group saw a change between time 1 and time 2, and seemed to reduce the impact of the stroop effect, indicating improved cognitive control. In comparison, the LKM group saw relatively little change in the impact on this same scale, indicating that the focus in the MM practice on attention and drawing the attention to something, means that this practice had a larger effect on this type of outcome, in comparison to LKM. Previous research looking at LKM and attentional measures is mixed. For instance, Helber, Zook and Immergut (2012) did not find a significant improvement in stroop effect, when meditation, both MM and LKM, were taught over a semester as part of a class. However, Hunsinger, Livingston and Isbell (2012a) found that three days of LKM did lead to significantly better improvement on the stroop task compared to the control group. It may therefore be that there are immediate impacts, following fewer maybe more intensive sessions as observed in the Hunsinger Livingston and Isbell (2012a) study, as compared to no difference being seen in the longer Helber, Zook and Immergut (2012) study, nor was a difference seen here. The findings here add to the mixed findings, but do find commonality in the longer term outcomes, and may suggest that it takes longer for cognitive changes to occur when the focus of the practice is not explicitly on attention.

Very similar changes were seen across the other measures. As the meditation types have different foci, it may be that they culminate in similar changes, but through different routes. This is supported by Lim, Condon and DeSteno (2015) who looked at the mechanisms of change

behind mindfulness and compassion based practices, in relation to increases in compassionate outcomes. They suggested that compassionate based meditations might lead to increases as a result of empathetic processes and prosocial emotions. In comparison, mindfulness practice may do this through increased attention to stimuli, or a reduction of self-related biases. Some of the subscales of the SCS shed light on this in particular.

For the self-kindness and self-judgement scales for example, a larger difference would be expected as a result of LKM in comparison to MM, instead similar changes were seen. While the focus of LKM is more explicitly about being kind to the self, and others, the mindfulness practice also places emphasis on not judging should the individual notice they are distracted. Both practices may therefore result in improvements in self-kindness and self-judgement, but may do so in different ways. For the MM practice, it may be more about letting go of judgement about not doing the practice correctly, and being less harsh on the self when bringing attention back to the breath. This is also encouraged in the LKM group if practitioners become distracted, but the practice has the addition of sending well wishes to the self.

In theory, this focus in LKM should result in larger increases as a result of this practice. However, the focus on the self can be difficult for some to engage with; there is a resistance to want to be kind to the self, particularly in Western culture, as suggested by practitioners in study one. This was seen in this study as well, with comments on the perceived challenges of the programme including the focus on the self, and this presenting a potential conflict.

> …As well I found it really difficult to focus on myself, and I thought I shouldn't be sending myself those message but to someone else… (participant 34, LKM group)

Should this focus have resulted in discomfort, participants may have chosen to move on to other groups during the practice. This could therefore provide reason for the lack of distinct difference between the meditation types.

Another anticipated difference was on the mindfulness and over identification subscales, where in this case, LKM practice saw a slightly larger change on the mindfulness and over-identification scales than the MM group. These subscales refer to the more emotional side of practice; the ability to be realistic and rational when difficult situations might arise, and not blow situations out of proportion. Over-identification is then almost the opposite of this; getting carried away with emotion and feeling (Neff, 2003). It was expected that the MM group would see a larger difference over time on these subscales due to these subscales representing outcomes of mindfulness practice; the ability to take a step back from emotions and feelings ruling the individual, and instead being able to view them as something that the individual has more control over. However, the LKM group saw slightly larger change on these subscales.

This may have been due to LKM's more explicit focus on emotion, as difficultly in feeling certain ways towards the self and other would have been at the fore of the LKM practitioners. Improvements in awareness of the feeling and emotion in the MM group were seen in the participant reflections, but these were also seen for those in the LKM group, who commented on being able to better understand themselves, and their emotions:

> When I am in a challenging situation I automatically respond by meditating. I also think my emotions and self-awareness has been heightened in this process and I am more in tune with myself. (participant 31, LKM group)
>
> From practicing I have found that I am more relaxed and have a clearer outset on whatever was on my mind, and if it was causing me stress the meditation would result in a reduction of this. (participant 16, MM group)

Both groups seem to have improved their ability to understand emotion and feeling, but as with the above scales of self-kindness and judgement, may have done so in different ways. Based on the reduction of over-identification that was seen for the LKM group, this practice also seems to have increased participants' ability to not get caught up in these feelings.

It may have been the focus of the LKM practice being more explicitly on emotion and feeling, that allowed greater identification of how practitioners felt, which culminated in a larger increase for the LKM group compared to the MM group.

The other scale where similarities in the outcomes were seen across the meditation types was on the FFMQ which measures different elements of mindfulness. For two of the scales; non-judging of inner experience and acting with awareness, the meditation types saw very similar changes over the eight-week period. These scales relate to how much the individual is able to attend to the moment (acting with awareness), and how much the individual judges their thoughts and feelings (non-judging). As such, the similarity in change over time for these scales indicates that on these abilities, the meditation types do not really differ.

In addition to there being different mechanisms behind how each practice manifests in change, the similarity in outcome for some scales may also indicate a consistency in certain functions of meditation types. Based on the above, these might include attending to something, and not judging what they find internally as being 'good' thoughts or 'bad' thoughts. These findings support how some authors present meditation as a broad practice. For example, Kristeller and Johnson (2005) suggest that while there are different forms of meditation, each practice has underlying similarities. These include featuring an attentional process, will often involve repetition and will often involve being non-judgemental, as opposed to being analytical about thoughts. These are the same aspects that were found to see similar change over time on the FFMQ, and support the idea that there are certain elements of meditation practice that are found across practice types.

Overall, while there were little differences between the meditation types in terms of magnitude of change over time, one significant difference on the social connectedness scale supports the notion that the focus on others as part of the LKM practice culminates in larger change, compared to mindfulness where there is less direct focus on this element. As such,

this becomes an element of the practice which helps us to understand its core features. The similarity across the other scales in how the practices influenced change, indicates that there may be different ways that they result in change, alternatively, it may be that there are some underlying consistencies across all meditation practices, which some of the scales tapped into.

While the results and interpretation of these findings provides insight into how each practice might impact on individuals, research is also beginning to look at individual responses to each meditation type, and are finding that some of the variability in differences over time periods is associated with individual differences, and preference over meditation type (May, Johnson & Weyker, 2016). As such, future research could also explore the impacts of individual differences, and tracking individuals' journeys over meditation programmes to explore this further.

In future studies, either a wait-list control could be employed, to see how the meditation type compares to a group who have no change, or to have an additional active control which is not a meditation practice, but still asks participants to engage in some kind of self-development, such as study skills group. This would help identify whether the differences observed are as a result of the practice, or as a result of engaging in a programme that focuses on improving the self. Other active controls that have featured in previous research include exercise (Galante *et al.,* 2016), and relaxation (Burgard & May, 2010), both finding no difference between LKM and the active control. As such, further research is needed to help identify the impact of the meditation practice and its content, from the impact of the intention to focus on developing oneself in some way.

The idea was to develop a programme that was reflective of ways in which practitioners may realistically engage with their personal practice, and to help support ongoing practice following completion of the research. Participant reflections suggest that some wished to continue on with their practice following the programme end, which could indicate

that they saw the practice, as it was engaged with during the programme, as something they are able to continue on with and engage with on a regular basis. This could indicate that the programme was reflecting ways that participants would engage with the practice in their own lives.

> Very difficult to just meditate from nothing so really good to take part in a long program to get a better understanding and have designated time to actually practice. (participant 2, LKM group)

> I have found it very useful and plan to continue doing it especially in stressful and busy times. I have also found the body scan useful in getting to sleep. (participant 13, MM group)

> It's been good to been given an opportunity to sit down and meditate, it's made it easier to continue on due the already established routine these practices have laid out (participant 24, LKM group)

These comments suggest that the way the programme was designed helped support practice, with a suggestion that some may continue beyond programme completion. This indicates that the programme was effective in establishing a practice, with the addition of support which was participant-led, and also provided a network of individuals who were also engaging with the practice. Additionally, the ways participants planned on continuing on with the practice encompassed both on a long term basis, but also to use it in a reactive way, when feeling stressed or anxious. This mirrors findings from studies one and two, where this multi-perspective view of the practice was presented.

In terms of the measures that were used these were primarily self-report measures, and were chosen based on previous literature, findings from the previous studies in this thesis, and from expectations around the focus of the practices, as detailed in Table 8. However, some of the measures used have received recent critique. For example, criticism of the SCS suggests we have to interpret these findings with caution. Research seeking to explore the six-subscale structure, failed to find the six subscales that Neff put forward, across samples with Buddhists and non-Buddhists (Zeng, Wei, Oei, & Liu, 2016), and across a convenience

sample of adults, adult meditators, and adults suffering from recurrent depression (Williams, Dalgleish, Karl and Kuyken, 2014). Williams *et al.,* (2014) also suggested that more research is needed to develop a more robust self-compassion scale.

In support of the SCS, some of the findings from the FFMQ measure support the findings from the SCS. For example, the non-judging of inner experience factor revealed very similar differences between the groups, which was the same finding as the self-judgement subscale of the SCS. In addition, the larger change in levels of non-reactivity to inner experiences for the LKM group was also found in the mindfulness and over-identification scales of the SCS. While the scales may not measure the exact same thing, and the differences between the meditation types are quite small, there seems to be consistency in how judgement of feelings and thoughts seems to be changing in a similar way for both meditation types, but that the meditation types differ when it comes to being caught up in those experiences. This therefore provides some support for the validity of the SCS in what it is measuring. Future research should aim to test and develop available measures, or move to more implicit or behavioural measures to explore differences in factors which may be difficult to measure using self-reporting, such as compassion.

Reflecting further on the scales used in this study, future research could build on the findings here by focusing more on wellbeing measures, in particular those that would be anticipated as a result of LKM practice, to further understand the impact the practice is having on wellbeing, and the ways in which it is helping improve different variables. This study was constrained in the number of measures that could be included on any particular dimension, and so looked to previous research to see which measures had been used. This afforded comparison with earlier studies, and also allowed for a variety of scales to be included, to see what impact LKM might be having on not just those which might be anticipated from the practice, but also those which may be less so. For instance, some of the measures were reflective of outcomes that might be seen as a result

of mindfulness, to see whether the remit of the impacts of LKM also includes the effects seen from other practices. Lastly as an aside to the main research aims, I was able to explore the potential impact that LKM might have for students, and so the measures were also those that might be of interest to them. For example, perceived stress, attentional control and positive affect are variables that students would likely be interested in improving to help support their studies and wellbeing.

Other scales could have been used that would help look at other areas of wellbeing, and which LKM might impact. For instance, this study could have considered more Eudaimonia based measures. Huta and Waterman (2014) suggest that both eudaimonia, and hedonia are components of wellbeing. They suggest that eudaimonia includes concepts such as self-acceptance and growth, and hedonia is more associated with pleasure and an absence of distress. The scales used in this study are more focused on hedonia, for instance life satisfaction and positive affect, and as such the area in which this study is lacking is the inclusion of scales measuring eudemonia, which would help in assessing LKM's impact on multiple aspects of wellbeing.

In addition, the focus of the practice includes the self and others, and the only measure included here that looks at the relationship with others is the subscale of the self-compassion scale. This study was however relatively exploratory in terms of seeing what impact a more simplified programme that reflected ways in which general public might practice had on the outcome measures. Having observed the difference in connectedness between the meditation types as a result of this study design, therefore means that additional research could build on this by looking at other measures associated with connectedness, and possibly some more behavioural measures to assess change in this area as well.

7.5. Conclusions

One of the aims of this study was to explore whether a programme which reflected real-world practice would affirm some of the previously observed findings in the literature, which often employ complex programmes including additional aspects. Additionally, the practice that was employed here was grounded in the findings from studies one and two in this thesis, to ensure that the programme being delivered was reflective of a consistent understanding from a range of existing practitioners. Present findings have shown that it is likely that there are positive outcomes as a result of eight weeks of LKM practice, which include affective and wellbeing related measures. The comparison between LKM and MM allowed for identification of improvements that were only seen as a result of LKM practice, and therefore would indicate a key features of the practice. The only significant difference observed between the meditation types was on the connectedness with others scale, where the LKM group saw a significantly larger change over the eight weeks, in comparison to the MM group

The way this study adds to the wider literature is by providing findings of a programme which reflected ways of practice that were close to real world ways of practising LKM both in terms of the programme content, but also in the design and accessibility of the programme in supporting regular practice.

7.6. Summary

This chapter presented a culmination of the findings from the previous studies, in exploring the impact of an ecologically valid LKM programme, which reflected a practice as defined and understood by existing practitioners, but also one that would be likely to be engaged with following the end of the programme.

This chapter adds to the understanding of LKM that has been developed over the last three chapters by testing the effects of the practice, and helping to identify what the main aspects of the practice are. Looking

back at the findings from the previous chapter summaries in sections 4.6, 5.7 and 6.6, the findings here have added a different perspective on the practice. This is one that is more quantitative in design, that draws together some of the reflections from participants in earlier studies, as well as from what had previously been observed in the literature, to test whether these effects are seen when taught to a group of participants who are novice to meditation.

The main ways this study adds to the understanding of LKM established from the previous studies in this thesis are in establishing the impact that the practice can have. The impact of the practice that was discussed in the qualitative studies in particular is added to here, by observing change in measures such as satisfaction with life, this indicates that it may be having an impact on participants' wider perception of how content they are with their lives.

Additionally, the importance of the self and enemies as part of the practice, have been supported here. The difference between LKM and MM being observed for the connectedness scale, and this becoming a factor that is a core part of the practice, supports the importance of this element of the practice that was observed across studies one and two in particular.

Lastly, two of the scales used in study three were also used here, and similar outcomes were observed; increases in self-compassion and satisfaction with life were observed here, as well as in study three. As such, this provides support for some of the causality that was lacking in study three, in terms of determining whether LKM impacted on those outcomes, and provides support for these findings being seen as a result of both face to face and online based LKM programmes. The emphasis placed on finding ways to practice which suit the individual, while focussing on the intention behind the practice, and keeping those core aspects of the practice in mind, reflected in the programme used in study three as well as here, means that this format of delivery seems to result in positive change.

Chapter 8: Conclusions

8.1. Overview of chapters

An overview of literature and the differences that impact on how we understand LKM, given in chapters one and two, presented two research avenues: one that explores the effect of the practice on wellbeing, and the other was to explore how LKM is understood to base future research on, so clearer conclusions can be drawn on LKM as a sole practice. The main aims of the thesis were therefore to; (1) Understand more about practitioners' views and experiences of the practice and (2) Explore the effects of LKM on wellbeing. To achieve this aim, four studies of mixed methods were decided on, two of which met each aim. The first two studies were more qualitative in nature, and were designed to ascertain what the practice is, and how it is perceived and understood by practitioners themselves. The second two studies built on the findings from the first two studies, and explored the practice using more experimental measures, to establish the effects that the practice has on a number of wellbeing related measures.

The mixed methodology approach to the project, and individual methods for each study, were presented in chapter three. This chapter discussed how projects could be considered mixed methodology, and argued that the four different methods were considered appropriate for use, to address each research aim. Each of the four studies was then presented in turn across chapters four to seven. Each chapter contained an overview of the methods used in each study, followed by details on the type of analysis used, and analysis and discussion.

Chapter four presented study one; a qualitative study that looked at the experiences of LKM, from an experienced practitioner viewpoint. The research question was 'How do practitioners understand and experience Loving Kindness Meditation?'. This was explored via interviews with experienced practitioners, from which three main themes emerged; the practice, the process and the practitioner.

There was a predominant idea that the practice is best understood as an attitude or way of being, a part of the practitioner, and is not an emotion that is simple to pinpoint. This is partly due to the lack of direct translation, which makes it difficult to verbalise and describe the practice, but also because the practice seems to be complex. There was an overarching context of Western culture, which resulted in potential barriers to engagement and challenges with the practice. This perspective also resulted in a multi-use view of the practice; as both something that can be used on a long-term basis, preventative basis, but also as something that can be used as a reactive, stress reduction measure. This resulted in more of a whatever works approach to the practice, where the emphasis was more on the underlying components of the practice, as opposed to a specified way of practice. Wholeness, connectedness, openness and a wish to be happy all seemed to be underlying components of the practice. Lastly, reflections on the practice were positive, and if engaged with long term, there was a sense that the practice can make the person an improved version of themselves.

The analysis in study one shed light on some of the reasoning behind why there may be such variation in how the practice was viewed and studied in previous research. This was primarily due to the practice being better understood as more of an attitude or way of being, as well as cultural norms impacting on how the practise is viewed and subsequently engaged with. Building on this, some of the key components of the practice emerged, such as connectedness, wholeness and openness, which all seemed to be common across how people described their practice. Lastly, emphasis was placed on the importance of the self and enemy foci, both presenting possible challenges to engage with, but also both core parts of the practice. For enemies this was more in terms of the connectedness that the practice resulted in, and for the self, this provided a basis for practitioners to come back to, and from which LK could be extended to others.

This insight, particularly in terms of the self and enemies being important, meant that the previous research could be reframed. From this, some of the previous literature seemed to only engage part of the overall practice, which meant that some of the conclusions drawn from the impact of LKM as a practice are less reliable. In order to establish whether this view of the practice was consistent across other practitioners, additional study was needed.

Chapter five presented study two. This study built on the first by widening the sample in terms of experience with LKM, to establish whether there was any consistency in how LKM was understood, across a wider sample. The research question for this study was 'Is there consistency in understanding of LKM across a range of practitioners?'. Q methodology was chosen to explore consistency in the understanding of LKM gained in study one, with a wider sample of different levels of experience. The method allows for depth as well as breadth to be established, which helped meet the aim of this study in understanding more about LKM practice. The analysis narrowed the focus back down from the variation that came from the analysis of the interviews. Key parts of the practice that were identified in study one, such as the importance of the self-focus of the practice, were supported by the sorting of the statements here.

Generally, there was little difference across the sample in how they sorted their statements, due to overlap in how the whole sample sorted statements relating to the self and enemies. This helped clarify what the key parts of the practice are, which included the importance of the self and enemies, the multi-purpose view of the practice in being preventative and reactive, and how important the practice is. Differences lay in the upper ends of the spectrum of agreement, where differences were identified in how groups of participants described and embodied their practice. These were slight differences, and reflected the emotional connection that different groups had with their practice, as well as, to some extent, how the connection to the practice might develop over time. The methodology met its aims of being able to identify where

consistency lay, and to identify where these similarities were, whilst maintaining the depth of understanding regarding LKM.

Chapter six moved on to the second overarching aim of the thesis, and the two empirical studies. Study three was presented in this chapter, and its research question was 'What effect does LKM have on wellbeing over a sustained period of time, via an online programme?'. The rationale behind this study stemmed from much of the literature on LKM being around interventions or programmes that were created for purpose, with little known about evaluating the effects of existing, current ways that many individuals are engaging with meditation, such as online and app based programmes and support. As such, a study based on understanding the effects of LKM as it is practised in real-world scenarios, for maintaining or increasing wellbeing over longer periods of time was appropriate to allow for insight into the effects of LKM as it is being currently engaged with. The benefit of the way this study was designed was the high ecological validity of what participants were engaging with.

Findings from this study looked at the main impact of engaging with LKM over the 25-day period. Additionally, exploratory analysis looked at the relationship between the measured variables. The findings from the changes over time showed a positive change in wellbeing measures. This positive impact suggested that LKM practice as part of an online programme results in similar changes to those observed in face-to-face studies. This provides insight into the effects of LKM, via a programme and format of delivery that is now widely engaged with. This adds to the literature by exploring different formats of delivery, and drawing conclusions based on LKM as it is being currently used.

Analyses of the relationship between the variables suggested that self-compassion was an important mediating factor between practice and satisfaction with life. If LKM results in higher levels of self-compassion, which was evident from the analysis in this study as well as previous research, there is support for looking further into the effects of LKM to enhance wellbeing. The analyses here also found little impact of the

levels of empathy. This lack of distinct change, and the mixed findings in previous research, suggests that researchers should exert caution if expecting LKM to lead to higher levels of empathy, or using empathy as a descriptor of the essence of the practice.

The findings from this study therefore help to affirm some of the reported benefits in the previous two studies, and suggest that engaging in an LKM programme does help to increase some measures related to wellbeing; life satisfaction and self-compassion. In regards to self-compassion, the exploratory analyses also serve to suggest that this may provide a crucial role in the links between practice and satisfaction with life more so than measures of empathy. If self-compassion is seen to increase as a result of LKM, then this provides support for encouraging LKM in numerous contexts, to help support increases in wellbeing measures, and conducting research to evaluate this.

The final study in this thesis aimed to address some of the questions that remained following the first three studies. The samples that were used in the previous studies were mostly existing meditators, with few who had no experience of LKM practice. The use of existing meditators was to establish what the practice is, and how it might function in relation to previous level of experience. However, the sample that was not explored by the three studies is those who are entirely novice to meditation. Exploring how the practice might impact on a sample who have no experience of meditation, in a controlled setting, helped establish the impact that the practice had without the influence of other practices that existing practitioners may have alongside their LKM practice. In addition, a question raised as a result of study three, was the lack of control or active control to compare the results to, and the need for this to help us further our understanding of LKM practice alone. Choosing to have an active control being another form of meditation, allowed for any impacts of LKM in particular compared to another form of meditation, to appear should this exist.

Chapter seven presented study four, the last in this thesis, that had the research question of 'What effect does LKM have on student wellbeing, in comparison to MM, over eight weeks?'. The rationale behind this study stemmed from wanting to establish what effects the practice might have on its own, without other practices, tasks etc., over a long period of time, which were features of previous research. The other reason for wishing to explore LKM with novices, using experimental measures, was to complete the holistic exploration of LKM as a practice. The lack of research looking at LKM, and the differences identified in that which did exist, left me considering what the practice was, as well as what its effects might be. The design of the thesis was therefore to look at the practice from a number of viewpoints, to establish a well-rounded view and understanding of the practice. This last study contributes to the understanding of LKM, by looking at the impact the practice could have on novices, and to explore the impact using experimental means. This design and sample complements the existing meditators perspectives, and the use of qualitative, quali-quantological, and quasi-experimental methods in exploring the practice.

The outcomes of the programme showed that the practice has positive impacts on wellbeing related measures and affective measures, as anticipated, but in addition, there were also positive changes in terms of stress which while anticipated for other forms of meditation, were less expected here based on the practice focus as well as largely mixed findings across the previous literature.

There was one main difference between the meditation types, which focused on the connection with others. This supports findings from the previous studies in this thesis that suggested that connectedness was a core element, and the importance that was placed on enemies as part of the practice. There were similar changes seen across the other measures, with differing mechanisms behind the changes being a possibly reason as to why there were similar changes, as well as some of the measures identifying commonalities across all meditation practices, being measured.

Some of the reflections from the qualitative comments reinforced the quantitative findings as well as providing support for some of the themes that emerged from studies one and two. These included the multi-perspective view that practitioners seemed to have of meditation in general, as something that is both preventative as well as reactive.

The use of a mix of methods in this case allowed for LKM to be explored from a number of perspectives; both the more subjective, in depth understanding of the practice, but also from a more quantitative exploration of the impacts. The combination of methods allowed for the latter study in the thesis to draw on the findings from the previous studies, so that an in depth understanding of the practice fed into the design and implementation of the last study, ensuring that what was being tested was reflective of real world practice. Additionally, the combination of findings from each of the studies allows for a more holistic understanding of the practice. The conclusions that are drawn from the combination of these studies, culminates in an overview of the key components, which includes the identification and evaluation of the effects LKM has. These details meet the aims of the overall thesis, and are presented in section 8.2.

8.2. Understanding Loving Kindness Meditation

In terms of addressing each of the aims, the core components of the practice which emerged across the studies will be discussed below, as well as to what extent LKM could be employed to help maintain and improve wellbeing.

Ways of practice: The practice was seen as more of an attitude or way of being in the first two studies, while the actual method of manifesting LKM varied. This included a sense of flexibility about their practice, in finding ways that worked for each individual, while acknowledging the core components of the practice which include connectedness, wholeness and openness. In addition, there seemed to be a multi-purpose view of the practice, with a perception that the practice could be used in both preventative and reactive ways.

This culminated in a personalisation of each individuals' practice, with the experience level of the practitioner potentially being a contributing factor. For example, those who had been practising longer seeming to have embraced LKM as a way of living, but also used in stressful situations, or when they knew they might see people who they find difficult, almost as a 'top up'. This is further supported by some of the findings in study two, where the slight differences in the groups and how they sorted their statements seemed to be the connection they held with the practice, and the perception of what the practice might be useful for, suggesting that individuals may engage with their practice in differing ways.

The extent to which practitioners see the practice as a part of them, their emotional connection to the practice, as well as whether they engage with it as a preventative measure for ongoing wellbeing, or use it on a more reactive basis, may be dependent on a combination of their level of experience with the practice, and their personalisation of the practice in how they wish to engage with it. There is therefore an element of individual difference that may impact on the practice and how it is engaged with. While this may increase the different ways the practice is engaged with on a day to day basis, it gives practitioners a sense of ownership over their practice, with the core components behind the practice, and the focus on this intention being more important.

Impact of the practice: The practice is important to practitioners, and has positive impacts on practitioners in terms of their wider wellbeing. For some, this becomes part of their life and who they are as people, suggesting that it is seen as a valuable practice. In addition, the self-reported impacts from the first two studies, as well as effects that were measured across the last two studies, support the importance and value of the practice. These effects centered around connection with the self and others in particular, and became a way of differentiating LKM from other practices such as mindfulness.

Connection with the self and others: Both the self and enemy-foci were seen as core parts of the practice across the studies, with the acknowledgement that they also presented a challenging part of the practice. These were highlighted as important factors in studies one and two, with experimental findings in studies three and four highlighting that connectedness with the self and others were also seen as effects of the practice. In addition, self-compassion was seen to be improved by the practice, as evidenced in study four, which was also seen as a key factor in developing the links between LKM and satisfaction with life.

The notion that the practice had an underlying concept of connectedness emerged from the first study. This was built on in the last study, where increases in measures relating to connectedness to others were seen for the LKM group more so than the MM group. This difference between the types of meditation was the only one that was statistically significant, suggesting that this is a key factor that differentiates between the practice types. The ability that the practice has on relationships and feeling a wider sense of connection is a key aspect of the practice, and one that was found as a result of years of practice, but also following an eight-week programme. Connections and relationships therefore became a core part of how the practice can be understood, which encourages the use of LKM for ongoing wellbeing and improved relationships.

LKM and wellbeing: The findings from all of the studies indicated that LKM has a positive effect on a number of wellbeing related measures, including satisfaction with life and positive affect, but also on measures that are more to do with relationships and connectedness. This, teamed with the accessibility and flexibility that the practice seems to have, means that the practice has the potential to be encouraged with the general public to help support and improve wellbeing.

Some of the analyses in this thesis started to explore some of the mechanisms behind how LKM may culminate in positive change, which seemed to be due to the connectedness elements as mentioned in the previous point. Additional research needs to be conducted to explore

these relationships further, but self-compassion and relationships with others may be how LKM differs to other forms of meditation, and may be how LKM improves wellbeing.

This section has presented an overview of how an understanding of LKM has been established across the studies included in this thesis. It has identified consistencies in findings across the studies, and provides key traits and components of LKM practice, as well as identifying some of the effects the practice can have.

8.3. Future directions and applications

The findings in the study contribute to the existing literature base by exploring LKM in ways that are closer to how existing meditators are likely to engage with LKM. This is in regards to the practice that participants were engaging with, as well as the format of delivery of the programmes. Additionally, the combination of the studies in this thesis ensured that the studies in the latter stages of the thesis were grounded in the insight gathered from the former two, making use of the benefits that can be gained from mixed methods in using the combination of methods to better understand a phenomenon. Lastly, the first two studies in particular contribute to existing literature by providing an in depth understanding of the practice which is currently lacking, and upon which other studies can base the design of their interventions or programmes.

The positive outcomes of what LKM impacts on, as well as being able to identify how LKM may be impacting on broader wellbeing, allows us to suggest where and with which samples LKM would be useful to engage with. For instance, an application of the practice could be for maintain and increasing wellbeing on an ongoing basis. Positive Psychology Interventions (PPIs), look specifically at how we can increase positive feeling and behaviours (Sin & Lyubomirsky, 2009). Both mindfulness and loving kindness meditation are discussed in relation to positive psychology interventions, as being ways of improving wellbeing (Hefferon & Boniwell, 2011), and Lomas, Hefferon and Ivtzan (2014) highlight LKM as a possible PPI, based on its links to positive emotion and improved

relationships, found in studies such as Fredrickson *et al.,* (2008). The findings in this thesis provide support for the use of LKM as a PPI; the benefits seen as a result of face to face sitting group based practice, as well as those benefits observed as a result of online programmes, suggest that LKM, when practised in a similar way to that which is reflective of real world practice, is of benefit.

In addition, LKM may be useful in areas where relationships with the self and others are currently lacking, and where an improvement would be of benefit to that population such as health care professionals where compassionate burnout is common. This population may benefit from LKM practice given the improvements seen in self-compassion scores, as well as the links this has with overall wellbeing.

Future studies could build on some of the method based limitations that were raised across the thesis. These include exploring the impact of LKM in relation to different active control groups, or wait-list control groups. This would allow for differences between the meditation itself, and other forms of self-care to be established.

Additionally, longer studies which explore existing programmes would be of benefit, to assess the impact of the practice as it is currently being engaged with. This would strengthen the argument that the practice could be engaged with by the general public, as a way of improving wellbeing. The evaluation of existing programmes used in study three of this thesis was beneficial in understanding the impact of the practice as it is being engaged with on a daily basis by many members of the general public. Further exploration of the effectiveness of existing programmes, helps further our understanding of what impact meditation may be having on the general public who engage with meditation in a variety of ways.

Lastly, as one of the main aspects of the practice seemed to be a connection, with oneself and others, future research could look at this aspect using more behavioural measures. This would indicate whether

the changes that were seen here for example, are extended into how people behave, and whether LKM has an impact on this.

8.4. Conclusion

The overall aims of the thesis were to understand LKM as a practice, which included what the practice is from a practitioner viewpoint, and how it may be engaged with on a day to day basis, as well as identifying and evaluating the effects of LKM. To meet these aims, a mixed methods approach was used to gain a well-rounded impression of the different elements of the practice. Four studies were employed, two that were more qualitative in focus, designed to gain depth of understanding, followed by two that were more quantitative, to explore the impacts of LKM practice as it is engaged with by existing practitioners.

In relation to the two overarching aims of the thesis, the practice of LKM is complex, and is best understood as a way of living that anyone can adopt and engage with. While there is no clear term that can help describe the practice, the core concept of LKM seems to be connectedness. This element helped define the practice and how practitioners viewed it as different from other practices, and was also found to be a differentiating factor when explored experimentally. Additionally, engaging with the practice can help support and improve wellbeing, which was evidenced across the four studies. The contribution of this thesis is in providing a basis for how we understand the practice, from which researchers can base their research designs if they wish to include teaching LKM as a part of it. The thesis also adds to the understanding of the impact of the practice in more ecologically valid settings than have been used in previous research. The findings support for the use of the practice for ongoing wellbeing, with possible applications of the practice being in areas where the self-compassion and relational side of the practice would be of benefit.

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Appendices

Appendix 1: Ethics applications and approval letters

1.1. Ethics application for overall project at proposal stage

All studies will be carried out in accordance with the British Psychological Society's (2009) Ethical guidelines for Psychological research. Detailed below is a summary of ethical guidelines that will apply to the whole research project; different aspects will apply for the different sections of the project and as such, ethical approval will be applied for before each stage of the research.

Data Collection	Ethical procedures
Recruitment and Consent	When participation involves recruiting via a meditation institute or group, consent will first be obtained from the leader or manger before members are asked to take part in the research. For the latter parts of the research project, participation may also be gained from students at the university of Northampton, and as such, consent will be gained from the University before doing so. Where participants are being recruited elsewhere, they will typically be responding to an advert, after which point they will be informed of the study via the information sheet before meeting and signing the consent form before beginning the study. On an individual basis, participants will be given an information sheet detailing the aims of the study, the approximate length of time it will take them, why they have been asked; whether they are of a certain demographic, e.g. because they practice a

	certain type of meditation. The information sheet will also detail participants'' right to withdraw at any point before, during or following the study, and how their data will be stored and used, and for how long it will be held onto following their participation. After this, participants' will then be given a consent form to sign, after ensuring that they have had the opportunity to ask any questions they may have about the study and the period following this.
Tape recordings	Participants in the qualitative stage of the research project will be made aware on their version of the information sheet, that the researcher would like to audio record the interview to enable them to transcribe the content. They will be given a tick box on the consent form which will allow them to give additional consent for whether they mind having the interview taped or not. If they do not consent to having the interview audio recorded, they can still take part in the study, and the researcher will hand-write notes instead.
Storage	Data protection will be in accordance with the data Protection Act (1998). Data will be stored securely by the researcher using one folder for any paper copies of questionnaires etc, which will be kept in a locked drawer or locker, and by using a folder on the researcher's laptop which is password protected and is only used by the researcher. Participants will be made aware in the information sheet about how, where and the length of time in which their data will be stored, whether electronically or on paper.
Data Analysis and Reporting	All participants will be given a participant number which will correspond to their data, consent form, and the study they took part in so that their details can be easily found and destroyed if necessary. No names will be used throughout the project, and pseudonyms will be used in the qualitative stage of the research project to further protect participants' identities.
Identification of researcher	The researcher will identify themselves to participants and any institutions or meditation groups by presenting their PhD research student

	card, and other ID will be available if participants would like to see it, e.g. driving license to verify the student card. Where consent has been gained from an organisation prior to recruiting participants, a written copy of this (if available), will also be printed and shown to the participants if they request to see it
Participants	Participants will be recruited in a number of ways, depending on the stage of research. Where participants are required to have had experience in meditation, they will be recruited by contacting meditation centres and organisations in the first instance. Written contact and consent will be obtained from the managers or leaders of these organisations, before asking them to either ask their group, or to put an advert up in the centre. When participants are required to be novices, or for the control groups, participants will be recruited via adverts or direct contact from the researcher. Permission from the organisations in which adverts will be placed will be obtained. Participants will all be over 18 and some will be required to have meditation experience and as such will be chosen, whereas the rest of the stages of research, where experience is not required will be obtained through opportunity sampling. No incentive will be offered, but the stage of research where participants are being taught types of meditation may see the benefits of this as being an incentive to take part, although participants will be randomly assigned to groups in this stage, so will be made aware of the fact that they may not be taught a type of meditation.
Rights, safety and wellbeing of participant and researcher	A risk assessment will be carried out prior to every stage of the research to ensure that any necessary arrangements are made or measures are employed to overcome to avoid any harm to the participant and researcher. For example, the things that may be included in the risk assessment may be assessing the interview schedule for any potentially upsetting

	or personal questions, so that the researcher is prepared to skip over these if necessary. The venue of the interviews will also be assessed for the researchers and participants safety.
Method of interview	The methods used will vary across the stages of research. The first stage of research will involve a semi-structured, short interview, for which an interview schedule will be drawn up for ethical approval before use. For the second stage, Q-sorts methodology will be used, in which a number of statements will be collected and participants will be asked to sort them into a pre-arranged shape, giving the statements a number or rating. There will also be a chance to provide feedback or justifications for these choices after the sorting process, which will be in the form of open ended questions. The third stage will involve teaching participants different types of meditation, and assessing a number of cognitive and social tests which will be repeated at the end of the teaching program, and once again after 5/6 months if participants are available.
Interviews	The researcher will undertake the interviews and will audio record the sessions which will then be transcribed by the researcher. The participants will be informed that this will happen, and will also be informed of how long the audio recordings and transcriptions will be kept
Confidentiality and Anonymity	Participants' identities will be kept anonymous through giving each of them a participant number which will be linked to their original data sheets, or transcriptions, or their data in SPSS, depending on the stage of research. Their data and transcriptions will be anonymised; data through finding overall results, and transcriptions through the use of pseudonyms. All hard copies of data will be destroyed once analysis has been done on the stage of data but electronic copies, e.g. SPSS files and electronic transcriptions will be kept until the research project is complete in case of additional analysis.

	Participants will be made aware of the length of time in which their data will be kept, and how it will be stored. In the case of databases being made with contact details for participants, these will be destroyed once all data has been collected for that stage of research
Issues arising from the activity	Should psychological harm arise from any stage of the research, the researcher will stop the interview or testing, depending on the stage of research, and will advise that the participant contacts the university counselling service. However, no psychological harm should arise from the research project
Feedback	Each participant will be given contact details of the researcher via the debrief sheet. This will detail the aims of the study, the email address of the researcher and the date by which they can withdraw their data and how this can be done. IF they require overall findings of the study, they will be informed that they can be given overall findings, not specific ones, and from which date this information will be available if they wish to contact the researcher

1.2. Ethics application for study 1

Dear David,

Please find attached documentation for consideration by the Ethics Board at the next meeting (11th April 2013). These are the materials for Stage 1 of the research; a series of qualitative interviews with people who practice Loving Kindness Meditation on a regular basis. This includes an information sheet, a consent form and the interview protocol.

The Ethics Board granted ethical approval in principle based on the submission at the last meeting date; 14th February. Below, I have detailed how ethical principles will be considered for Stage 1 in particular.

Recruitment and identification of researcher

- Recruitment will be via a meditation institute or group, or through word of mouth and contacts. Consent will first be obtained from the leader or manager before members are approached to be asked to take part in the research.

- Participants will all be over 18 and will be required to have meditation experience and as such will be directly chosen to take part.

- The researcher will identify themselves to participants and any institutions or meditation groups by presenting their PhD research student card. Other ID will be available if participants would like to see it, e.g. driving license to verify the identity on the student card.

Consent

- Where consent has been gained from an organisation prior to recruiting participants, a written copy of this (if available), will be printed and shown to the participants if they request to see it.

- Participants will be given an information sheet to ensure fully informed consent, which will also detail withdrawal processes and how the data will be used and stored. Participants will be given a consent form following this.

Recordings

- Participants will be made aware on their version of the information sheet, that the researcher would like to audio record the interview to enable them to transcribe the content. They will be given a tick box on the consent form which will allow them to give additional consent for whether they mind having the interview taped or not. If they do not consent to having the interview audio recorded, the interview process will not proceed.

- Participants will be made aware, before giving consent, of the processes by which the recording will be stored, what it will be used for, and for how long it will exist.

Potential Harm

- The interview schedule will be assessed for any potentially upsetting or personal questions, so that the researcher is prepared to skip over these if necessary. Participants will be aware that they do not need to answer any questions they do not feel comfortable answering.

- Although no adverse reactions to practicing LKM have been reported, there is the possibility that harm may arise from the feelings that the practice encourages and directs to others; participants may not feel comfortable or able to extend feelings of love and compassion towards others or people they dislike. As such, if any participant raises this as an issue, they will be asked if they are happy to continue or not, and if not, will be allowed to withdraw from the study, and will be provided with the contact details for the counselling service at the University of Northampton, should they require it.

Confidentiality

- All hard copies of data will be destroyed once analysis has been completed but electronic copies of the transcripts and audio files will be kept securely until the research project is complete in case of additional analysis. Participants will be made aware of the length of time in which their data will be kept, and how it will be stored. In addition, all original data will be kept securely and will only be seen by the researcher, with anonymised versions possibly being seen by the supervisory team.

Anonymity

- Participants' identities will be kept anonymous through giving each of them a pseudonym which will be linked to their original consent forms, audio files and transcripts.

Data protection

- Data protection will be in accordance with the data Protection Act (1998); data will be stored securely by the researcher using one folder for any paper copies of transcripts (if required), which will be kept in a locked drawer or locker, and by using an encrypted folder on the researcher's laptop which is password protected and is only used by the researcher. This will be made clear on the information sheet given before the interview begins.

- Participants will be made aware in the information sheet about how, where and the length of time in which their data will be stored.

- The audio player will be stored securely, alongside the paper copies of any transcripts. The electronic version of the transcripts and audio files will be kept securely on the researcher's laptop which is password protected, and if transcripts are printed, they will be kept in a secure folder when transferred and within a locked drawer or locker when being stored.

Debrief

- Each participant will be given contact details of the researcher within the information sheet which they will take away with them. This will detail the email address of the researcher and the date by which they can withdraw their data and how this can be done. Participants will be informed that they can be given overall findings of the study, and from which date this information will be available if they wish to contact the researcher.

Withdrawal procedures

- Participants will be made aware of their right to withdraw from the study at any point prior to consenting to take part in the study (via the information sheet), once they have begun the study (verbally from researcher), and following the study (details provided in the information sheet).

1.3. Ethics application for study 2

Dear David,

Please find below the documentation for consideration by the Ethics Board at the next meeting (28th May 2014). These are the materials for Stage 2 of the research; a Q-methodology study with Loving Kindness Meditation practitioners with a range of levels of experience with the practice. This will be an online study and recruitment is anticipated to be mostly via email. The documents attached at the end of this email include:

- Information sheet; this is likely to be sent via email, but can also be printed out and given to contacts I meet face to face. (see appendix 1)
- Consent form; this will be sent/printed out and participants will be required to fill it in and send it back before gaining access to the online study. (see appendix 2)
- Debrief information; this will be presented on the last page of the online programme. (see appendix 3)
- Statements; the final set of statements will be 42 as this is in line with the forced normal distribution shape. The list attached in appendix 4 is subject to change based on pilot testing. (see appendix 4)
- Additional questions that will be asked alongside the Q sorting process. (see appendix 5)

The Ethics Board granted ethical approval in principle for this project based on the submission at the meeting dated 14th February 2013. Below, I have detailed how ethical principles will be considered for Stage 2 in particular.

Recruitment

- Recruitment will be via meditation institutes and groups, or through word of mouth and contacts. Consent will first be obtained from the leader or manager before members are approached to be asked to take part in the research. In addition some contacts made during the first stage of research who were not suitable for the interviews agreed to be recontacted for this study.

- Most if not all of the contact will be done via email due to the online nature of the study.

- Participants will be asked to confirm that they are over 18 before they take part (via the consent form) and will be required to have experience with Loving Kindness Meditation. A range of experience types is hoped for and will be purposely sampled in the latter stages of the study if an experience level has not been attained.

Consent

- Where consent has been gained from an organisation prior to recruiting participants, a written copy of this (if available) will be sent to the participants should they request this.

- Following reviewing an information sheet, participants will be sent a consent form which they will be required to fill in before being given the link to the online survey. The details in the information sheet will ensure fully informed consent, and will also detail withdrawal processes and how the data will be used and stored.

Deception

- There will be no element of deception involved

Potential Harm

- Due to the nature of the topic; Loving Kindness Meditation, its definition and understanding of this, there should be no distress experienced by participants as a result of the study. The statements have however been assessed for anything that could possibly be upsetting or harmful and the list in the appendices will be pilot tested and as such will further highlight any statements that could be potential upsetting. Participants will be aware that they do not need to answer any of the additional questions they do not feel comfortable answering via details in the information sheet, and that they can withdraw their data at any point during and after the process.

Confidentiality

- All data will be electronic, with the sorted statements being downloaded as a set once complete. These will be kept encrypted on the researchers home and work computers only. Participants are asked to state whether they are happy for their anonymised data to be kept for future analysis and sharing with other researchers in the information sheet. If they do not wish for their data to be kept this will be deleted after completion of the PhD. Participants are made aware of data storage and length of time in the information sheet.

Anonymity

- Participants' identities will be kept anonymous through providing them with a participant number for the purposes of identifying each persons sorted statements.

Data protection

- Data protection will be in accordance with the data Protection Act (1998); data will be stored securely by the researcher using an encrypted folder on the researcher's work and personal computers. This will be made clear in the information sheet. In addition, participants will be made aware in the information sheet about how, where and the length of time in which their data will be stored.

Debrief

- Each participant will be given contact details of the researcher within the information sheet which they will be given an electronic or hard copy of. This will detail the email address of the researcher and the date by which they can withdraw their data and how this can be done.

- In addition, the last page of the survey will act as a debrief and will detail withdrawal processes and how to contact the researcher.

Withdrawal procedures

- Participants will be made aware of their right to withdraw from the study at any point prior to consenting to take part in the study (via the information sheet), once they have begun the study (on the first introductory pages of the online survey) and following the study (details provided in the information sheet and debrief on the last page of the survey).

1.4. Ethics application for study 3

THE UNIVERSITY OF NORTHAMPTON School of Social Sciences	Research Ethics Form for staff projects

Tick one box:	☐ Externally funded project	☐ UoN funded project	☒ Other
Title of project:	Exploring the effects of Loving Kindness Meditation		
Name of researcher(s):	Ms Kimberley Sheffield; Professor Chris Roe; Dr Alasdair Gordon-Finlayson		

		Yes	No	N/A
1	Will you describe the main research procedure to participants in advance, so that they are informed what to expect?	☒	☐	☐
2	Will you tell participants that their participation is voluntary?	☒	☐	☐
3	Will you obtain written consent from participants? (please include the consent form with your ethics submission)	☒	☐	☐
4	If the research is observational, will you ask participants for their consent to being observed.	☐	☐	☒
5	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
6	With questionnaires/interviews, will you give	☒	☐	☐

	participants the option of omitting questions they do not want to answer?			
7	Will you tell participants that their data will be treated with full confidentiality and that, if published, it should not be identifiable as theirs?	☒	☐	☐
8	Will you debrief participants at the end of their participation (i.e. give them a brief explanation of the study)?	☒	☐	☐

If you have ticked **No** to any of questions 1-8, please give a full explanation on page 2

9	Will your project involve deliberately misleading participants in any way?	☐	☒	☐
10	Is there any realistic risk of any participants experiencing either physical or psychological distress or discomfort?	☐	☒	☐

If you have ticked **yes** to question 9 or 10, please give a full explanation on page 2 and indicate how this will be dealt with

11	Does your project involve work with animals?		☐	☒	☐
12	Do participants fall into any of the following special groups? If they do, please outline on page 2 how you will take account of their needs.	Schoolchildren (under 18 years of age)	☐	☒	☐
		People with learning or communication difficulties	☐	☒	☐
		Patients	☐	☒	☐

	N.B. Any research involving the NHS **MUST** gain appropriate LREC ethical clearance **Note that you may also need to obtain satisfactory Criminal Records Bureau (CRB) clearance**				
		People in custody	☐	☒	☐
		People engaged in illegal activities (e.g. drug-taking)	☐	☒	☐

Please provide **full details** of your project below (if insufficient detail is provided and the precise nature of the study is unclear then the Ethics panel will not be able to approve the project and your form will be returned)
What is the purpose of the project and its academic rationale? Meditation practices can take a number of forms, from focused attention, where focus is on objects such as the breath, through to open monitoring, where thoughts and feelings are observed in a nonreactive way (Jindal, Gupta & Das, 2013). Much research attention has been devoted to specific forms such as Mindfulness Meditation, particularly as applied in clinical settings in the form of Mindfulness Based Cognitive Therapy (MBCT) and Mindfulness Based Stress Reduction (MBSR). These interventions have been found to have found positive effects on physical and psychological wellbeing (Irving, Dobkin & Park, 2009), and could be particularly effective in helping with anxiety and mood disorders (Hoffman, Sawyer, Wit & Oh, 2010). These findings provide a prima facie case to look for similar effects with other forms of meditation that have been relatively neglected to date.

We would argue that Loving Kindness Meditation (LKM) is a particular promising candidate for wellbeing benefits (May et al., 2011; Salzburg, 1995). The practice asks the practitioner to direct feelings of kindness towards the self, before extending this out to loved ones, strangers, enemies and the world (Thondup, 2009). This can be done in a sequential manner, beginning with those for whom it is easier to develop feelings of loving kindness (Thera, 2011). To induce such feelings phrases are recited such as, "May I live in safety, May I be happy, May I be healthy, May I live with ease" (Feldman, Greeson & Senville, 2010). The practice is intended to have a direct impact on the practitioner's sense of self and their understanding of their connection to others.

Research on LKM has mainly focused on the consequences of the practice for affective learning and positive emotions (cf. Hunsinger, Livingston, & Isbell, 2012), and findings do suggest that LKM can increase empathy (Császár, 2012), positivity towards strangers (Hutcherson, Seppala & gross, 2008), and increase positive association with neutral stimuli (Hunsinger Livingston & Isbell, 2012). In addition, applications in clinical settings suggest an increase in positive emotions in participants who have schizophrenia (Johnson et al., 2011) and that LKM has potential to be used alongside more traditional treatments (Hoffman, Grossman & Hinton, 2011). The practice had applications in working on the self with a sample of high risk youths (Schussel & Miller, 2013) and qualitative research with trainee psychological therapists suggested an increased awareness of themselves and how they related to others (Boellinghaus, Jones & Hutton, 2013). Research has therefore provided broad support for the benefits of the practice, but more is needed to understand the nature and scope of these impacts.

An opportunity has arisen to explore the effects of this practice over a longer period of time. This consists of including some scales measuring empathy, self compassion and satisfaction with life to assess the effects of an online meditation programme spanning 100 days. These measures have been chosen due to the focus of the meditation practice, and are measures which have been used previously in work on loving kindness meditation and related practices. The programme will consist of 25 days of Loving Kindness Meditation, and 25 days of compassion, equanimity and joyfulness meditations thereafter. Together these make up the Brahmavihara, which are a set of Buddhist meditations. The programme is being run by Wildmind; an online Buddhist meditation website who offer free meditation programmes, asking only for donations to cover costs (http://www.wildmind.org/). The organiser of the 100 days of LKM has been

contacted in regards to including some measures of effect at the beginning, during and end of the meditation programme, and has confirmed that he is happy for the research to go ahead.

The purpose of this piece of research therefore, is to explore the effects of these types of meditation, in particular that of the Loving Kindness section, over time to add to knowledge in this area where very little research has been conducted. Participants who are taking part in the online programme will be sent an invitation to take part in the research by the organiser of the programme. Within this initial email will be information normally included on an information sheet (see appendix 1). Once participants are happy with the information provided, they can then click on the link to take them to the online survey which has been created through Bristol Online Surveys. They will first be taken to a consent form page which will require them to answer yes to all questions before being taken to the actual questionnaire (see appendices 2-3). Screen shots of the online page as well as full scales in text format have been provided (see appendix 4).

How will participants be recruited? Who will they be (i.e. number, age, and gender)? Outline any particular inclusion/exclusion criteria.

The number of participants currently signed up to the online programme is 1100, and the email will be sent to all. As such, a range of ages and both genders will be represented.

There will not be any exclusion criteria, but participants will asked to only take part if they are 18 or above and will be required to confirm this in the consent form, as well as being asked for their age later on within the demographic questions.

Details of the informed consent process and debriefing arrangements

Participants will be invited to take part via email, and will be fully informed of the processes involved. This will be done via the information given in the original email (see appendix 1), which will detail ethical considerations including withdrawal of data, and confidentiality and anonymity. They will also be told that the surveys will be online and that they will be required to set up their own identification number. It is also stressed that participants do not have to take part in the research in order to engage with the meditation programme. Participants will be required to answer yes to each question on the consent form which is

presented before the main questions section, and it is made clear that by answering yes, they are consenting to take part in the study. Following completion, participants will be thanked and reminded of withdrawal processes.

Description of the method (please include details of the design, any apparatus/materials– N.B. a copy of all materials should be included with your ethics submission)

Participants taking part in the online meditation programme entitled '100 days of Loving Kindness Meditation' will be invited to take part by email. This will be written by the research team and will be sent to participants by the organisers (see appendix 1 for an example). This will include information that would be included in an information sheet as well as a link to the online questionnaire. Should they wish to take part in the study following reading the information provided the link will take them to an online consent form (details given in appendix 2 below). Participants will be aware that selecting yes to all questions will mean that they consent to taking part in the study.

The online questionnaire consists of one page for the consent form, followed by one page of demographic questions, including age, gender, where they live and past experience with spiritual practice. The scales used include The Satisfaction with Life Scale (Diener et al 1985), a Self-Compassion Scale (Neff, 2003) and the subscales of Perspective Taking, Empathic Concern and Personal Distress subscales of the Interpersonal Reactivity Index (Davis, 1980), which has been used in research to measure empathy. For each question participants will be given the option of selecting 'do not wish to answer' should they wish to leave any questions out. Participants will then be asked if they would mind being contacted for follow up interviews; if they wish to do so, they can enter their email address, but this is completely optional. We anticipate that the questionnaires should take around 15 minutes to complete. Once the questionnaires are complete, participants will be thanked and reminded of withdrawal procedures. They will also have the original email from the organisers, which will have all the information about the study as well as the information sheet within it, to refer to at any time.

Following the completion of the 25 days of Loving Kindness, participants will be invited to fill in the same set of questionnaires again. This is to explore the effects of the loving kindness meditation section of the overall programme. Participants

do not have to take part in this, and will be reminded of withdrawal procedures here.

Lastly, following completion of the 100 day programme, participants will once again be invited to take part in the filling in the same set of questionnaires. At this stage, there will also be a question asking them if they would like to reflect on the experience. This will be an open ended text box, and will allow for some qualitative data to be collected. Analysis may be done on this data, depending on the depth of the comments. Follow up interviews may be conducted on those who give their permission, but this would be dependent on willingness of participants, availability, as many may be international participants as well as how much feedback is gained from the reflection comments allowed for in the final survey.

Where will this research be conducted? What steps have been taken or will be taken to ensure appropriate permissions are obtained?

The research will be conducted entirely online through the online survey, hosted by Bristol Online Surveys. Any contact will be made via email, with the contact email of Kimberley.sheffield@northampton.ac.uk being provided for any queries or withdrawal needs.

We have obtained permission from the organiser of the meditation programme to conduct research to go alongside the meditation programme.

Please describe how you will maintain confidentiality and/or anonymity within this research

Participants will be asked to give an identification number or word that is memorable to them, which will form their participant number. This will ensure that they will remember their number when it comes to filling in the follow up survey should they wish to; a randomly allocated number would be difficult to remember given the long period of the programme. The only personal information asked for is age, gender and location.

Data will be stored confidentially and securely; only the research team will have access to encrypted files and will likely remain on one computer as 'raw' data.

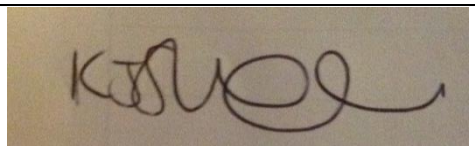
During the follow up survey, in addition to the survey items, participants will be able to enter text, describing their experience. Should they wish to fill this in, a

pseudonym will be used if any of the data is analysed or used. The analysis of this qualitative section would depend on numbers of people filling it in and the depth of their comments.

Please describe any other particular ethical issues raised by the project and how these will be dealt with

No specific ethical issues should be raised by this research; we are asking participants to take part in surveys before, during and after a programme of online meditation sessions. We are ensuring full anonymity and confidentiality as detailed above. Participants may choose an identifying name or number as their participation number. There should be little to no coercion as we explicitly point out that taking part in the survey does not in any way impact on whether they can take part in the meditation programme or not. The questions being asked are validated scales which have been used within research of this topic before, and are not of a sensitive nature (copies of the questions have been included in the appendices). Withdrawal processes are made clear through the information sheet and should participants wish to skip any questions while filling out the survey, there is an option for them to do so.

I am familiar with the University of Northampton's *Ethics Code and Procedures* (available from www.northampton.ac.uk/download/244/ethics-codes-and-procedures) and with relevant professional guidelines for ethical practices in research, and have ensured that this project adheres to them.

Name (caps)	Signature	Date:
KIMBERLEY SHEFFIELD		29/1/14

1.5. Ethics application for study 4

Dear David,

Please find below the documentation for consideration by the Ethics Board at the next meeting (6th November 2014). These are the materials for Stage 3 of my PhD which was granted ethical approval in principle at the meeting dated 14th February 2013. The study comprises 10 weeks of meditation with students, measuring change in the measures presented below. The documents below include:

- Overview of the project (see below).
- Ethical considerations for this experiment in particular (see below).
- Information sheet; given to students wishing to take part in the study prior to signing up to the programme. This will likely be distributed in both hard and electronic form depending on how the researcher is contacted by the student (see appendix 1).
- Consent form; this will be sent/printed out and participants will be required to fill it in and send it back before gaining access to the online study (see appendix 2).
- Scales; the selection of these is to assess the change over time as a result of the meditation programmes, but are also designed to be specific to outcomes that may be more relevant for a student population such as perceived stress and attention as measured by the Stroop task (see appendix 3).
- Example meditation script; to give an idea of the content of the sessions (see appendix 4).
- Google form to record weekly practice (see appendix 5).
- Debrief information (see appendix 6).

Overview of the project

The aim of this piece of research is to 'examine the cognitive and affective effects of Loving Kindness Meditation (LKM) compared to other forms of meditation and a control group, in an experimental setting'. This will involve an experimental design with three groups; LKM, Mindfulness

and a wait-list control group. Participants will be randomly assigned to one of these groups. The experimental period will run from the second week of term; w/c 19 January 2015 for 10 weeks. There will be two sessions per meditation group per week to ensure that groups are kept quite small, with participants attending one session per week each.

Each session will run for around 45 minutes to allow for a short settling in and introduction/discussion section before a meditation session. In addition to the weekly sessions, participants will be asked to start a regular practice and to keep a log of this which will be recorded using 'google forms' which will record their information and send it to me to store. Participants will also be given an audio CD of guided meditations to support their personal practice. These recordings will be based on existing scripts similar to those used within the sessions, an example of which is provided in appendix 5. The aim of the sessions is to introduce students to either Mindfulness or Loving Kindness practice and to support their personal ongoing practice of this. The meditation will therefore be the main focus of the sessions.

Online scales will be administered at the start and at the end of the programme. They will also be sent out one month post-programme to assess longevity of the effects. Copies of these are available in appendix 4.

Ethical considerations

Recruitment

Recruitment will be primarily from Psychology students by making use of the participant pool. All Year 1 and Year 2 undergraduates in Psychology are required to be included in the participant pool as part of course requirements. They gain course credit for participating in a set number of studies but are free to select from a wide range of such studies, which are advertised to them on NILE, or can complete an alternative written assignment. In addition, the programme will be advertised more widely across the University. Consent will be sought from course leaders in

cases where adverts are to be used within schools, and consent will also be sought to make use of the University social media platforms to widen participation.

Consent

- Following review of an information sheet, participants will be sent/given a consent form which they need to fill in before they can commence the programme. The details in the information sheet will ensure fully informed consent, and will also detail withdrawal processes and how the data will be used and stored.

Deception

- There will be no deception involved in the study

Potential Harm

- There should be no harm caused to participants by taking part in the programme other than what would be anticipated at any other meditation group; for some people meditation can bring to the surface underlying feelings or emotions. In the case of participant stress, the procedure is often to let the participant know that they do not have to continue with the meditation session and to make them aware of contacts to get in touch with such as counselling services should they wish to. Meditation interventions and programmes that have been used within research have not highlighted this as a particular issue and reported reasons behind attrition when this occurs tend to be due to other reasons such as timing of the sessions not working out or other commitments taking over. I will however be looking out for any signs of distress and will have a contact list of University student support and counselling services available if necessary.
- In addition to the above, participants will be aware that they do not need to answer any of the questions in the initial and post-programme scales if they do not feel comfortable doing so. They will also be made aware of the withdrawal processes should they wish to do so.

Confidentiality

- Data from the scales will be electronic as they will be administered online. These files will be kept encrypted and secure on the researcher's computer.
- Participants are asked to state whether they are happy for their anonymised data to be kept for future analysis and sharing with other researchers in the information sheet. If they do not wish for their data to be kept this will be deleted after completion of the PhD. Participants are made aware of data storage and length of time in the information sheet.

Anonymity

- Participants' identities will be kept anonymous to people outside of the project through providing them with a participant number. This will also allow for linking individual participants to their data to remain anonymous and only know to the researcher.

Data protection

- Data protection will be in accordance with the data Protection Act (1998); data will be stored securely by the researcher using an encrypted folder on the researcher's work and personal computers. This will be made clear in the information sheet. In addition, participants will be made aware in the information sheet about how, where and the length of time in which their data will be stored.

Debrief

- Each participant will be verbally reminded of withdrawal processes throughout and at the end of the programme.

Withdrawal procedures

- Participants will be made aware of their right to withdraw from the study at any point prior to consenting to take part in the study (via the information sheet) and following the study.

1.6. Approval letter for studies 1, 2 and 4

University of Northampton

Kimberley Sheffield
Finchfield
Moulton Lane
Boughton
NN2 8RG

23rd May 2017

Dear Kimberley

I confirm that the University Research Ethics Committee considered the following submissions and gave approval for your project as follows:

16/04/2013	Full approval	A qualitative study of long-term practitioners' understandings of and experiences of LKM.
18/09/2014	Full approval	A Q-methodology study exploring practitioners' understanding and experience of LKM.
6/11/2014	Full approval	A study exploring the effects of LKM on wellbeing.

Should you require any further information or confirmation, please contact me.

Yours sincerely

David Watson
Postgraduate Research Manager
Officer – Research Ethics Committee

Park Campus
Boughton Green Road
Northampton
NN2 7AL

Avenue Campus
St George's Avenue
Northampton
NN2 6JD

Switchboard **01604 735500**
Study Enquiries **0300 303 2772**
Study Email **study@northampton.ac.uk**
Web **northampton.ac.uk**

A charity providing undergraduate and postgraduate degrees and diplomas
Vice Chancellor **Professor Nick Petford BSc PhD DSc FGS FRSA**

1.7. Approval letter for study 3

THE UNIVERSITY OF NORTHAMPTON

The University of Northampton
Park Campus
Boughton Green Road
Northampton
NN2 7AL

01604 892990
john.horton@northampton.ac.uk

Professor Chris Roe and Kimberley Sheffield,
Division of Psychology

January 31st 2014

Dear Professor Roe and Kimberley Sheffield,

Re. Research ethics application: *'A study exploring the effects of an existing, online LKM programme'*

As Research Ethics Lead within the School of Social Sciences at the University of Northampton, I am pleased to confirm that the above-named project has been reviewed and approved by the School Research Ethics Committee.

Full approval was granted on January 31st 2014. The project can therefore commence with immediate effect.

Best wishes,

J. Horton

Dr. John Horton
Associate Professor in Human Geography

Main switchboard 01604 735500
Study enquiries 0800 852 2332
Study email: study@northampton.ac.uk
Web: www.northampton.ac.uk

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Avenue Campus
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A charity providing undergraduate and postgraduate degrees and diplomas
Vice Chancellor Prof. Nick Petford BSc, PhD, DSc, FGS, AOM

Appendix 2: Documents for study 1: Interviews

2.1. Information sheet given to all participants in Stage 1 qualitative interviews

This information sheet has been produced to provide you with the key information you might need before deciding whether to take part in the study or not. Please feel free to ask any questions you may have.

Background: The research project is being carried out as part of a PhD through the University of Northampton. The overall aim is to explore Loving Kindness Meditation (LKM). These interviews are the first stage in the research, and aim to explore what LKM means to people who practice it, and the perceived effects of the practice.

Why you have been asked to take part*:* The aim of the research is to explore practitioners' experiences of LKM. Therefore, the sample will be made up of people who have a range of experience with different types of meditation and spiritual practice, but all of whom will have some experience with practicing LKM.

The interview process: It will be as much like a conversation as possible; I am interested in your experiences and how you view LKM, so although I will have a list of topics to cover, the interview will be as informal as possible

The interview will be recorded using an audio device so that it can be listened back to and transcribed for analysis purposes. The interview will be around 30 minutes in length.

You will be given a pseudonym so that your transcript remains anonymous throughout the process. Once the interview has concluded, the interview will be transcribed by the researcher and then will be analysed alongside other participant's transcripts. The audio file and fully anonymised transcripts will be kept securely following completion of the PhD for the purposes of revisiting the data as part of other related projects in the future.

There is a move towards sharing data between colleagues to further inform research and progress quicker by not having to repeat studies. If you do not want your anonymised transcripts to be shared, please tick the box ☐

Security of data: Your audio files and transcripts will be kept in files owned by the researcher in a locked drawer, and encrypted folders on the researcher's work and personal computers only.

Withdrawal of data: If you want to stop the interview at any point, or withdraw your data afterwards you can do so without providing a reason. You do not need to answer any questions you don't feel comfortable about answering during the process.

If you decide following the interview that you would like to withdraw your data from the study, this is fine. Just email the researcher on the address given below, quoting your participant number which you will find at the top of this page. If you do wish to do so, you can withdraw your data by the 30th September 2013. After this date, analysis will have begun on the transcripts.

Email address: Kimberley.Sheffield@northampton.ac.uk.

What next? If you are happy with the information you have been provided with, you will be asked to sign a consent form, and then the interview will begin.

After the interview. You will be given a chance to look over the transcript once it has been written. You will also be able to have feedback on the overall findings of the study from the researcher once analysis is complete; please keep this sheet or note down the email address so you can do so if you wish. If you have any further questions or think of anything you didn't mention during the interview, please let the researcher know.

2.2. Consent form that all participants were required to sign for the stage 1 qualitative interviews.

Please read the statements below carefully, tick the appropriate box, and sign at the bottom to give your consent

I have been informed of my right to withdraw from the study at any point, and how I can do so	Yes No
I am aware that my data will be anonymised through the use of a pseudonym	Yes No
I am aware that my data will be kept confidential and will only be used for the purposes which are laid out in the information sheet	Yes No
I have been given the opportunity to ask any questions	Yes No
I consent to taking part in the interview	Yes No
I consent to the interview being audio recorded	Yes No

Signed:……

Date:…….

2.3. Interview schedule for stage 1 qualitative interviews

Experience in meditation - Can you tell me a bit about your current practice…

- Assess current practice(s)
- Length of time they have been practicing in general
- Frequency with which they practice

'Journey' to practice

- What brought them to that practice – meditation or spiritual practice in general
- What has had an impact on changes/why has it remained the same

LKM in particular

- How did they hear about/get involved with LKM
- What was it that attracted them to the practice
- Were they already practising other things at the time
- Length and frequency of LKM practice
- **How they would describe LKM – and how do they 'label' it – metta/LKM/compassion meditation?**
  - What does the practice mean to them
  - What are its 'key' features/aspects

Perceived benefits of LKM

- Why do they practice LKM –
  - what does it add (if anything)
- What is their experience of practising LKM
- Any particular examples of specific benefits
- **Benefits in themselves**
  - Any observed changes in themselves
  - Any effect it has had on their relationships with others
  - Any observed effect on their perceptions of social connectedness and how they interact with strangers/whole world

The interaction between LKM and other meditation types and spiritual practice

- How does LKM fit in with the rest of their spiritual practice
- In terms of benefits, how does LKM 'compare' to the other practices

Anything else that hasn't been discussed that they would like to bring up

Appendix 3: Documents for study 2: Q study

3.1. Information sheet for Q study

This information sheet has been produced to provide you with the key information you might need before deciding whether to take part in the study or not. Please feel free to ask any questions you may have – kimberley.sheffield@northampton.ac.uk

Background: The research project is being carried out as part of a PhD through the University of Northampton. The overall aim is to explore Loving Kindness Meditation (LKM), with the aim of the current study being to understand more about LKM from a practitioner's point of view.

Why you have been asked to take part: As the aim is to explore practitioners' experiences of LKM, the sample will be made up of people who have a range of experience with different types of meditation and spiritual practice, but all of whom will have some experience with practicing LKM. This will range from very little experience to a lot of experience as I'm interested in practitioners' views of the practice across a range of experience levels.

What will I be expected to do:
You will be asked to take part in a 'Q' study. You will be directed to an online page, which will have some demographic questions to fill in as well as the Q section of the study. You will be taken to a page where you will be asked to sort a set of statements into a grid. This will range from most strongly agree to least strongly agree/most strongly disagree. There are no right or wrong placements; the sorting process is entirely subjective.
The statements will range from potential outcomes of the practice to different ways of defining the practice and how it can be practised. The statements are designed so that you will probably disagree with some and agree more with others, so please take your time when sorting and consider the placement of every statement in relation to the others.
You have as long as you like to fill in the grid, but please be aware that it will likely take around 30 minutes so try to find a time when you could do this in one sitting. You will also be given an opportunity at the end to reflect and note down anything you would like the researcher to know about the process and to comment on your placement if you wish.

You will be given a participant number for the purposes of analysis and withdrawal should you wish to do so. This allows for your identity to remain anonymous throughout the process.
The fully anonymised completed grids will be kept securely alongside the statistical analysis documents following completion of the PhD for the purposes of revisiting the data as part of other related projects in the future.
There is a move towards sharing data between colleagues to further inform research and progress quicker by not having to repeat studies. You will be given the opportunity to agree to sharing your data or not on the consent form.

Security of data: Once you have completed the online sorting process and answered the questions, this will be downloaded and kept in encrypted files on my work and personal computers only.

Withdrawal of data: If you want to stop the process at any point or withdraw your data afterwards you can do so without providing a reason. You do not need to answer any questions you don't feel comfortable about answering within the demographic question section but you won't be able to discard any of the sorting items. If you do not wish to include a statement or feel uncomfortable doing so, then please just exit the online programme and your data will not be saved.
If you decide after completing the grid and questions that you would like to withdraw your data from the study, this is fine. Just email me on the address given below, quoting your participant number which you will find at the top of this page. If you do wish to do so, you can withdraw your data by the 30th September 2014. After this date analysis will have begun.
Email address: Kimberley.Sheffield@northampton.ac.uk.

What next? If you are happy with the information you have been provided please contact me and I will direct you to the online page where you will be given further instructions. You can complete this at your convenience.

After the study. You will be able to have feedback on the overall findings of the study once analysis is complete; please keep this sheet or note down the email address so you can do so if you wish. If you have any further questions or think of anything you didn't mention during the sorting process, please do let me know.
Thank you very much for reading.

3.2. Consent form for Q study

Please read the statements below carefully, tick the appropriate box, and sign at the bottom to give your consent

I have been informed of my right to withdraw from the study at any point, and how I can do so	Yes No
I am aware that my data will be anonymised through the use of a participant number which relates to the completed grid	Yes No
I am aware that my data will be kept confidential and will only be used for the purposes which are laid out in the information sheet	Yes No
I have been given the opportunity to ask any questions	Yes No
I agree to my anonymised data being kept and shared with colleagues in the future	Yes No
I consent to taking part in the Q study	Yes No

Signed:……

Date:…….

3.3. Debrief text for Q study (presented on last page of online survey)

Thank you very much for taking part in the study; your participation is much appreciated. Should you wish to withdraw your data from the study, please email me on kimberley.sheffield@northampton.ac.uk, quoting your participant number (found on your information sheet) and requesting that

your data be removed. The deadline by which to do this is by the 30th September 2014.

Thank you once again, I hope you enjoyed the sorting process. If you do have any questions, please do not hesitate in contacting me.

3.4. Final set of statements for Q study

1. Loving Kindness can be used as a secular practice
2. I practice Loving Kindness to maintain and/or improve my own wellbeing
3. I consider Loving Kindness Meditation to be a spiritual practice
4. I view Loving Kindness Meditation as being about training the mind
5. When I practice Loving Kindness Meditation I find the phrases 'May I be well, may I live with ease' etc. useful
6. When doing Loving Kindness Meditation I often bring images of people or their name to mind
7. It doesn't matter whether you use phrases or visualisations during the practice; whatever works for you
8. I personalise the traditional way of doing the Loving Kindness practice
9. I vary the focus of the practice depending on how I'm feeling that day or whether I have an issue with a particular person
10. Loving Kindness is like connecting with an energy that it always there in your heart
11. I practice Loving Kindness in all aspects of my life, not just during Meditation
12. You don't need to meditate on Loving Kindness, just trying to be a nicer person is enough
13. I only use Loving Kindness when I've had a bad day or negative encounter with someone
14. Loving Kindness is something I do on a regular daily or weekly basis
15. A few minutes of Loving Kindness per day is more beneficial than a few hours once a week
16. Loving Kindness Meditation has helped me realise that I deserve happiness as much as anyone else
17. Loving Kindness has allowed me to feel like I can be at home with myself
18. Loving Kindness has made me more compassionate
19. Loving Kindness has made me less judgemental of myself and others
20. Loving Kindness has improved how I relate to others and consequently my

relationships have changed

21. Loving Kindness has wider physiological and physical impacts e.g. on my immune functioning and helps ease pain
22. Loving Kindness has improved my cognitive abilities e.g. attention
23. Loving Kindness has helped me to see my emotions in a different way
24. I believe Loving Kindness can change default attitudes
25. Loving Kindness has made me a *better* person than I used to be
26. The feelings of Loving Kindness are the same as compassion
27. Loving Kindness is more like friendliness than love
28. Loving Kindness is extending love to everyone
29. Loving Kindness is a form of Mindfulness
30. There is little difference in the effects of Loving Kindness and other practices I engage with
31. Loving Kindness is purely a mental process
32. Loving Kindness has a physical element
33. I find Loving Kindness lacks force
34. Loving Kindness becomes easier over time
35. I find it difficult to send feelings of Loving Kindness to myself
36. I don't see the value in sending Loving Kindness to 'enemies'
37. Loving Kindness has had little effect on me
38. I see little value in Loving Kindness practice
39. If I don't practice Loving Kindness regularly I feel like the day gets off on the wrong foot and I waste time and make mistakes
40. I believe that you have to start by directing Loving Kindness to yourself before you can extend it to other people
41. I think directing feelings of Loving Kindness towards myself is more a formality
42. Loving Kindness practice is a fundamental part of me and my life

3.5. Factor array for Factor A

-4	-3	-2	-1	0	1	2	3	4
35	13	12	10	1	3	5	14	27
37	38	30	15	2	11	6	19	34
	41	31	21	4	16	7	32	
		33	22	8	18	20		
		36	26	9	23	25		
			28	17	24			
			39	40	29			
				42				

3.6. Factor array for Factor B

-4	-3	-2	-1	0	1	2	3	4
20	11	7	4	1	9	30	13	36
42	18	17	6	2	12	31	37	38
	25	23	8	3	15	33	41	
		24	10	5	22	35		
		34	14	16	26	39		
			19	28	27			
			21	32	29			
				40				

3.7. Factor array for Factor C

-4	-3	-2	-1	0	1	2	3	4
36	33	12	22	4	1	3	6	10
38	37	13	25	8	2	11	9	24
	41	30	26	14	5	16	29	
		31	27	15	7	21		
		39	32	18	17	40		
			35	23	19			
			42	28	20			
				34				

Appendix 4: Documents for Study 3: 100-days

4.1. Email sent to participants via Wildmind

A team of researchers from the University of Northampton, UK, have an interest in exploring the effects of meditation. They are conducting a piece of

research alongside Wildmind's 100-days of Loving Kindness Meditation programme. As you have signed up to the programme, you have been invited to take part in their study. If you are interested in knowing more, details have been included below.

Please note that the research is being run by a research team at the University of Northampton, and not by Wildmind, and as such, we would like to emphasise that you do not have to take part in the research in order to carry on with the meditation programme

This information sheet has been produced to provide you with the key information you might need before deciding whether to take part in the study or not. Please feel free to ask any questions you may have by contacting Kim Sheffield; Kimberley.sheffield@northampton.ac.uk

Background: This online survey is being carried out by Kim Sheffield, a PhD student and lecturer in Psychology at the University of Northampton and her supervisory team; Professor Chris Roe, Dr Graham Smith and Dr Alasdair Gordon-Finlayson. Kim's PhD is exploring the perceived benefits and impacts of Loving Kindness Meditation using interviews and experimental studies that combine subjective and objective measures. The PhD is being conducted within the Centre of Research for Anomalous and Psychological Processes (CSAPP). This is a well-established research group, within the Psychology department at Northampton University, and has a history of interest in research in the area of 'Transpersonal Psychology', under which research on contemplative practices would fall.
This survey is being conducted alongside the PhD research and the aim is to understand more about individuals who take part in Loving Kindness Meditation.

Why you have been asked to take part*:* Everyone who signed up for the '100-days of Loving Kindness' has been given the opportunity to participate in the survey. The research team would ideally like as many people as possible to fill in the questions online, so that we can contribute to the scientific evidence that describes the effects of this practice. However, we should like to stress that participation is completely voluntary and does not affect you involvement in the meditation programme. Please note that the questionnaire study may not be suitable to those of a vulnerable disposition.

Kim Sheffield will also be taking part in the 100-days of Loving Kindness, so if you have any general questions, please feel free to ask them on the discussion board, or if you wish, you can email her: Kimberley.sheffield@northampton.ac.uk

Please only take part if you are over 18.

The online survey: Because your data are given anonymously, we will ask you to think of a unique identifier (a number or word that has special meaning for you) so that we can compare your feelings at the beginning of the programme to those at the end. In addition, it will allow us to identify your set of answers if you decide to withdraw your data later on. Following this, you will be asked a few questions about yourself. The whole process should take around 15 minutes. There are no right or wrong answers, just answer the questions as honestly as you can.

After analysis has been conducted: You will be able to have feedback on the overall findings of the study from the researcher once analysis is complete. In addition, depending on the outcomes of the study and levels of participation, we may look to publish the findings in an academic journal and present findings at conferences. If this was the case, your individual data will not be identifiable, as the overall findings only will be presented. Not much research has been conducted to assess the effects of Loving Kindness Meditation, as such this research could help to add to knowledge of the practice and its effects.

Security of data: Your personal details will not be asked for and your anonymised data will be kept securely by the researcher. It will only be seen by the researcher and her PhD supervisors, and this will be in numerical form alongside your personal number or word, so no one will be able to identify you. In addition, if published, only summaries of overall analysis will be presented, no individual scores will be used.

Withdrawal of data: If you want to stop filling in the survey at any point, or withdraw your data afterwards you can do so without providing a reason. You do not need to answer any questions you don't feel comfortable about answering during the process.

If you decide following the survey that you would like to withdraw your data from the study, this is fine. Just email the researcher on the address given below, quoting

your personal identification number or word. If you do wish to do so, you can withdraw your data by the 31st May 2014. After this date, analysis will have begun. Email address: Kimberley.Sheffield@northampton.ac.uk.

Thank you for reading, if you wish to take part in the study, please click this link to be taken to the consent form section:
https://survey.northampton.ac.uk/lovingkindness2

NB if the link above does not work, please type the address into your browser, or contact kimberley.sheffield@northampton.ac.uk

4.2. Consent form

Please read the statements below carefully, and tick the appropriate box to give your consent

I have been informed of my right to withdraw from the study at any point, and how I can do so	Yes No
I am aware that my data will be anonymised through the use of a personalised identification number or word	Yes No
I am aware that my data will be kept confidential and will only be used for the purposes which are laid out in the information sheet	Yes No
I have been given the opportunity to ask any questions	Yes N
I consent to taking part in this online survey	Yes No

Appendix 5: Documents for Study 4: Wellbeing programme

5.1. Information sheet for novices

Participant number:

This information sheet has been produced to provide you with the key information you might need before deciding whether to take part in the study or not. Please feel free to ask any questions you may have.

Background: My name is Kimberley Sheffield, I'm a lecturer in Psychology and PhD student. The research project is being carried out as part of my PhD, through the University of Northampton. The overall aim is to explore Loving Kindness Meditation (LKM). This study aims to explore the effects of meditation on students over an eight-week period such as reducing levels of stress and increasing attention.
Why you have been asked to take part: Anyone who has not had any regular meditation or spiritual practice is eligible to take part in the eight-week programme. Therefore the sample will be made up of people who are 'novices' so don't worry if you are completely new to meditation, I will introduce the techniques and practices slowly and there will be plenty of time to ask questions.

Will this benefit me? The programmes are based on intervention programmes which have a huge evidence base to suggest a number of physical physiological and psychological benefits. These include some which may help in your studying such as a reduction in stress, increase in attention and concentration, increase in wellbeing and may improve difficult relationships you may have with yourself and others.
In addition, as some of you may be Psychology students this will give you first-hand experience of taking part in research which you may be learning about, and I'd be happy to answer any questions you have about the design and analysis processes.

What will be involved? The whole programme will last for eight-weeks, and at the very least this will require filling in an online survey and short online task at the start and end of the programme, attending a sitting group once a week for around 45 minutes, as well as some practice between sessions on an individual basis.

You will be randomly assigned to one of three groups; two of these are meditation based and the third is a study skills programme which will help you develop skills which will help with revision and effective learning. Regardless of the group you are assigned to, you will meet once a week as a group and either be learning meditation or study skills. Those of you who are assigned to the study skills group will be invited to attend two or three introductory meditation sessions **after the programme has finished** to give you an opportunity to learn meditation as well if you would like to.

What will happen to my data? If you would like to participate you will be given a participant number so that your data is anonymous. The data you give at the beginning of the process will be compared to data collected at the end of the process. The fully anonymised data will be kept securely following completion of the PhD should the opportunity to revisit the data as part of other related projects in the future arise. There is a move towards sharing data between colleagues to further inform research and progress quicker by not having to repeat studies. You will be able to indicate on the consent form whether you are happy to do so.

Security of data: Your data will be kept in encrypted folders on the researcher's work and personal computers only.

Withdrawal of data: If you want to stop the process at any point, or withdraw your data after the programme has finished you can do so without providing a reason. In addition, you do not need to answer any questions you don't feel comfortable about answering during the process.
If you decide following the programme that you would like to withdraw your data from the study that's fine; email the researcher using the address given below, quoting your participant number which you will find at the top of this page. You will have one week following the end of the programme to do so which is 30th March 2015. After this date, analysis will have begun on the data.
Email address: kimberley.Sheffield@northampton.ac.uk.

Other contacts: If you would like to contact one of my supervisors for any reason, please do so using the email addresses below:

Professor Chris Roe, Director of Studies: chris.roe@northampton.ac.uk
Dr Graham Smith, Supervisor: graham.smith@northampton.ac.uk

Rev Dr Alasdair Gordon-Finlayson, second supervisor: alasdair.gordon-finlayson@northampton.ac.uk

Thank you very much for reading, please do not hesitate in getting in touch should you have any questions or would like any additional information.

5.2. Consent form

Please read the statements below carefully, tick the appropriate box, and sign at the bottom to give your consent

I have been informed of my right to withdraw from the study at any point, and how I can do so	Yes No
I am aware that my data will be anonymised through the use of a participant number	Yes No
I am aware that my data will be kept confidential and will only be used for the purposes which are laid out in the information sheet	Yes No
I have been given the opportunity to ask any questions	Yes No
I consent to taking part in the study	Yes No

Signed:……

Date:…….

5.3. Example outline of the meditation session; Week 1 LKM group

- Introductions
  - Me
  - Students
- Programme structure;
  - LKM group – based on Buddhism, but these are secular classes. Essentially the wish for happiness for others and yourself, so you're focusing on the well wishes and the meaning, using phrases. This gets directed to different groups of people that we will cover across the sessions. We'll start with a loved one and the self. Can find it challenging, so don't worry, but do ask Qs if you want to.
  - 40-45 minutes per session every week, so be there by 10 past and leave by around 10 to the hour. 15-20 minutes of meditation per week in the sessions
  - Like a meditation group set up, so meeting every week as group for support
  - Scales – make sure these are done beforehand and then at the end as well
  - Every week will ask you to engage with the content of the session, I will send out a form to fill in – 1 minute of filling in – up to you how much you want to engage but be honest in your recording of this. Try to stick to the meditation we cover in the session, but do record it if you're interested in other forms.
  - I will email/CD some of the meditations – try to record but if not will just do some and send them round.
  - Any qs – please ask at the end

- Posture
  - Better to do it sitting unless health problems
  - Sitting in your seat bones if possible and upright but relaxed, hands in your lap and eyes closed or downwards

  Meditation

- Take a few deep breaths to settle yourself
- Just checking in with your body and how you feel in this moment, not trying to change it, just accepting it. Just letting your attention rest on your breath for a few moments, noticing the rise and fall.

- Then bringing to mind a loved one someone you find it easy to be happy for, or send well wishes to. get an image of this person, or a feeling of them, or their name
- When you have that person in mind, begin to repeat the phrases 'may you be happy, may you be safe, may you be healthy, may you live with ease' –you can pick one of these, say them with the breath, whichever feels comfortable for you
- ….
- Then yourself, giving yourself the time and space to accept these well wishes -we give out a lot, and don't take the time to focus on ourselves. And send the same wishes for happiness that we have for our loved ones to ourselves as well.
- Take a few deep breaths, come back to the room and how you're feeling, and take a few moments before opening your eyes.

Quick reflection if time

Reminder to do scales and I will send out additional scale to fill in before the next session and an audio file.

5.4. Example meditation script/notes from Week 1; MM group

- Intros
  - Me
  - Students

- Programme structure;
  - Mindfulness group – won't say too ,much about it, but attending to the breath/somewhere in your body/candle etc. not necessarily relaxation, focused attention, and a skill – these are secular classes
  - 40-45 minutes per session every week, so be there by 10 past and leave by around 10 to the hour. 15-20 minutes of meditation per week in the sessions
  - Like a meditation group set up, so meeting every week as group for support
  - Scales – make sure these are done beforehand and then at the end as well
  - Every week will ask you to engage with the content of the session, I will send out a form to fill in – 1 minute of filling in – up to you how much you want to engage

but be honest in your recording of this. Try to stick to the meditation we cover in the session, but do record it if you're interested in other forms.

- I will email/CD some of the meditations – try to record but if not will just do some and send them round.
- Any qs – please ask at the end

- Posture
  - Better to do it sitting unless health problems
  - Sitting in your seat bones if possible and upright but relaxed, hands in your lap and eyes closed or downwards

Meditation

- Body scan – literally scanning through the body, a good one to 'start' with, to help with attending to the moment. Can use the different areas of your body as anchor for coming back to with your attention.
- Take a few deep breaths to settle yourself
- Starting to check in with yourself and how you feel in this moment
- Focusing gently on your toes…how do they feel…cold/warm/can you feel the shoes/floor? Not trying to change anything, just noticing and feeling, just letting your attention rest there…
- Moving up to your foot…arch of your foot… etc etc. up the body

- Taking the time to juts let your attention rest on one thing at a time, if you get distracted, just bringing your attention back to the area of your body.

- And when you get to the top of your head, just trying to feel your whole body, all the slight movements your body makes at any one time, how it holds itself upright etc.

- And then open your eyes.

Quick reflection if time

Reminder to do scales and I will send out additional scale to fill in before the next session and an audio file.