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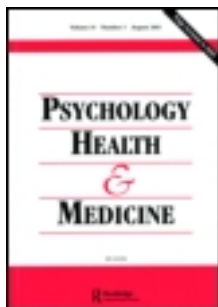
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Evaluating the effectiveness of enhancing resilience in human service professionals using a retreat-based Mindfulness with Metta Training Program: A randomised control trial

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This paper explores the feasibility of a brief Mindfulness with Metta Training Program (MMTP), targeting the enhancement of mindfulness and self-compassion in a retreat format, as a means of increasing resilience in human services professionals. In this randomised control trial, 44 human services professionals were randomly allocated either to a MMTP retreat group or to a control group. Following the MMTP intervention, no significant differences between the retreat and control groups were found on resilience, mindfulness and self-compassion variables. However, significant improvements were observed over time for the retreat group for mindfulness and self-compassion at one and four months and for resilience at four-months post MMTP intervention. The results of this pilot study show that MMTP in a retreat format is a promising method of increasing resilience, mindfulness and self-compassion in human services professionals.

Keywords: resilience; metta; mindfulness; self-compassion

Human service professionals working with socially disadvantaged young people in care and their carers experience high levels of stress, which depletes resilience. While a provision for optimal functioning is resilience, compassion towards oneself and others is fundamental in maintaining optimal functioning in human service professionals (Neff & Pommier, 2012). Mindfulness and loving-kindness (metta) meditation practice is associated with increases in resilience and self-compassion (Baer, 2010). Within the past three decades, resilience research has received significant attention in both organisational and clinical settings (Jeffs, Tregunno, MacMillan, & Espin, 2009).

Resilience defined as competence to cope and adapt in the face of adversity and to bounce back when stressors become overwhelming is considered a significant protective factor against instances of compassion fatigue, burnout and mental and physical illness (Thomas & Otis, 2010). Despite many studies on the characteristics associated with resilience, to date there is no research on interventions that promote resilience in human service professionals. The current study will evaluate the efficacy of a Mindfulness with Metta Training Programme (MMTP), which targets mindfulness and self-compassion as a pathway to foster resilience in a sample of human services professionals.

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Mindfulness, both within the field of psychology and medicine, has grown substantially over the past two decades as a skill to enhance adaptive coping to stressful events (Shapiro, Astin, Cordova, & Bishop, 2005). As mindfulness allows for present moment awareness while letting go of the past and future, it promotes a sense of non-attachment and the ability to let go of the ego, therefore, demonstrating the potential to foster resilience (Shapiro, Carlson, Astin, & Freedman, 2006).

Self-compassion involves responding to personal shortcomings, failures and inadequacies with kindness, caring and a non-judgmental attitude. Neff (2003) defines self-compassion as comprising of three primary components: self-kindness, a sense of common humanity and mindfulness. Self-kindness has been defined as being caring and understanding with oneself instead of being overly self-critical, common humanity as recognising or acknowledging that all humans fail and make mistakes and the mindfulness component as involving present moment awareness and promoting equanimity, or a balanced view of experience and the self. Viewed in this light, increases in self-compassion have the capacity to change the manner, or process, in which individuals make self-evaluations. Self-evaluations that are more caring and non-judgmental rather than self-critical are more likely to promote resilience when negative events are experienced.

Increases in self-compassion in health care professionals are demonstrated with mindfulness-based interventions (Baer, 2010). For example, in a sample of health care professionals, Shapiro, Astin, Bishop, and Cordova (2005) found that those who participated in an eight-week Mindfulness-based Stress Reduction (MBSR) programme reported significant increases in self-compassion when compared to a control group. These results from this preliminary study indicate that a mindfulness-based programme is feasible to implement with human service professionals in a workplace setting to promote self-compassion.

However, a limitation of Shapiro et al's (2005) study was that 44% of the intervention group ($n=8$) did not complete the intervention. The dropout rates for MBSR interventions are typically less than 20% (Shapiro, Schwartz, & Bonner, 1998). All participants in this study who ceased involvement indicated that withdrawal was due to lack of time and increased responsibilities rather than disinterest or dissatisfaction with the intervention. This result suggests that brief interventions with fewer time commitments may be required for busy professionals working in stressful conditions. The current study addresses this issue by providing a brief mindfulness intervention over the course of a 2.5-day residential retreat with follow-up booster sessions spaced over a period of months.

Metta, or loving-kindness meditation, has been described as a mind-training practice utilised to increase feelings of warmth and caring for the self and others (Hofmann, Grossman, & Hinton, 2011). While mindfulness meditation is primarily cognitive in nature, loving-kindness meditation incorporates more emotional aspects of experience and is intended to promote affective balance (May et al., 2011). Loving-kindness meditation has been demonstrated to increase self-compassion (Shapiro, Brown, & Biegel, 2007), and to increase positive affect and mood (Fredrickson, Cohn, Coffey, Pekk, & Finkel, 2008).

Fredrickson's (1998) broaden and build theory of positive emotions posits that recurrent experiences of positive emotions allow individuals to build a range consequential personal resources. Fredrickson argues that the experience of positive emotions momentarily broadens the scope of an individual's attention and thinking. This broadened outlook, or widened perspective, leads to the development of personal resources, such as resilience. In 2008, Fredrickson and colleagues conducted a randomised control

trial (intervention vs. control group) to test the build component of this theory, using a loving-kindness meditation intervention. The results consistent with the broaden and build theory showed that the loving-kindness meditation intervention led to increases in a range of positive emotions and increases in resilience, self-acceptance, and mindfulness, compared to the control group, which were maintained at 15 months follow-up regardless of whether or not the participants continued meditating (Cohn & Fredrickson, 2010).

While the above-mentioned studies involved interventions lasting a number of weeks, research by Hutcherson, Seppela, and Gross (2008) found that participants who received a brief seven-minute training session in loving-kindness meditation reported significant improvements in feelings towards others and the self, compared to a control group. This finding provides support for the use of loving-kindness meditation in a brief intervention format as utilised in the present study. While the presented findings are preliminary and need to be interpreted with caution, loving-kindness meditation shows promise as an intervention, particularly when used in combination with other treatment strategies (Hofmann et al., 2011).

The current study utilised a brief MMTP, incorporating aspects of mindfulness practice with loving-kindness meditation, and cognitive therapy to increase mindfulness, self-compassion and resilience in human service professionals. To the authors' knowledge, the effects of such an intervention in a retreat setting have not been previously investigated. This research is meaningful in that mindfulness interventions are typically of a longer duration. A brief intervention requires less time and financial resources while allowing for greater flexibility to suit the busy lives of professionals.

In the present study, we conducted a pilot study of the programme to obtain information on the feasibility of the efficacy and implementation of the programme as retreat-based training with human service professionals. This pilot study was a randomised-controlled-trial comparing a mindfulness with metta training group to a control group. In accordance with the limited available literature, we hypothesised that MMTP retreat group would report significantly greater improvements in resilience, mindfulness and self-compassion between baseline (pre retreat) and immediately after the intervention (post retreat), relative to the control group. We also predicted that these outcomes would be maintained at one-month and four-month follow-up.

Method

Participants

Forty-four human services professionals recruited from a not-for-profit community organisation participated in this study. The Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998) was used to screen all participants for current mood disorders, post-traumatic stress disorder, psychotic disorders and alcohol dependence and abuse. None of the participants met the exclusion criteria and were randomly assigned to either the MMTP or the control group. The participants ranged from 22 to 61 in years of age ($M=40.7$, $SD=12.28$). The sample was comprised of 40 females (91%) and 4 males (9%). Due to reported time pressures and absence due to annual leave, not all participants completed the questionnaires at all measurement points. Sixteen participants in the retreat group completed all time measurements. Twenty participants from the control group completed both baseline and post-intervention measures and no control group participants completed the one-month follow-up measurement.

Interventions

The MMTP group attended a two and a half day retreat followed by booster sessions at one and four months. The MMTP were required to complete self-report measures of resilience, mindfulness and self-compassion at baseline (pre-retreat), post-retreat, one-month and four-month follow-up. The control group received nil intervention. The control group were offered an opportunity to attend a four-hour mindfulness seminar one month following the retreat group intervention. The control group were required to the same self-report measures at baseline (pre retreat), post and one month following the completion of the retreat group intervention before attending a four-hour seminar on mindfulness. However, only four participants from the control group attended the seminar; therefore, data was not collected from the control group. The intervention and measurement procedures are outlined in Figure 1.

The Mindfulness with Metta Training Programme involved a two and a half day residential retreat consisting of periods of silence and training in mindfulness and metta skills and cognitive therapy strategies to increase mindfulness and self-compassion. Please see Table 1 for an overview of content of the training programme. The retreat was conducted over a weekend in a facility in southern Queensland, Australia. Teaching and research literature suggests that mindfulness-based interventions be conducted over a period of at least six weeks to allow participants to receive support during possible difficulties (McGown, Reibel, & Micozzi, 2010). Therefore, the current study employed two booster sessions over a 12-week period to offer support to retreat group participants. The booster sessions were four hours in length and included a review and practice of mindfulness, metta and cognitive strategies taught at the retreat.

Measures

The Resilience Scale (RS-14; Wagnild & Young, 1993) is a 14-item scale developed to measure an individual's ability to cope effectively when faced with adversity. The scale is based on five characteristics that form the conceptual foundation of resilience: perseverance (the ability to keep going despite setbacks), equanimity (keeping a balanced perspective), meaningfulness (realising that life has a purpose), self-reliance (recognising personal strengths and drawing on previous successes) and existential aloneness (realising that each person is unique and must face some experiences alone). A total score is obtained by summing the items. A review of the studies that utilised the Resilience Scale, Wagnild (2009) reported that internal consistency was high in 11 of 12 studies with Cronbach's alphas ranging from .85 to .94.

The Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006) assesses the general tendency to be mindful in everyday life. The FFMQ has demonstrated adequate to good internal consistency in samples of meditators and non-meditators (Baer et al., 2008).

The Self-Compassion Scale (SCS; Neff, 2003) was developed to measure the construct of self-compassion. The SCS has demonstrated good internal consistency and test-retest reliability over a three week interval (Neff, 2003).

Design

The present study employed both a between subjects and within subjects design. The between subjects design included one independent variable (IV) and four dependent variables (DV). A randomisation process was utilised, resulting in an IV with two levels:

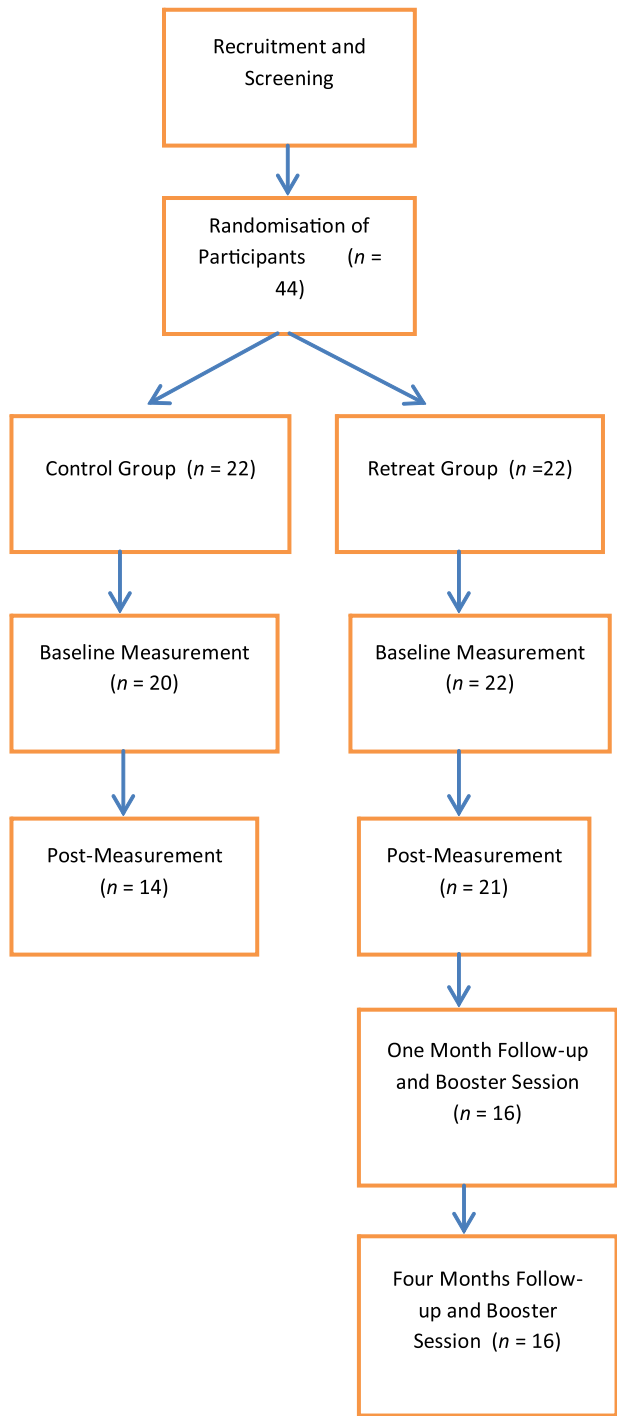


Figure 1. Schedule of intervention and measurement for retreat and control groups.

Table 1. Overview of content of MMTP.

Sitting number/h	Content
One/2.5 h	<ul style="list-style-type: none">• Education on the retreat process, guidelines and schedule
Two/1 h	<ul style="list-style-type: none">• Introduction to mindfulness with metta based experiential exercises
Three/2.5 h	<ul style="list-style-type: none">• Mindfulness with metta based experiential exercises• Introduce multi-factorial causes of disturbing emotions including cognitive therapy model• Introduce mindfulness with metta as a way to raising awareness of body sensations and thoughts when emotions become disturbing in challenging situations using mindfulness and metta based experiential exercises
Four/2.5 h	<ul style="list-style-type: none">• Introduce and practice skills in metta mindful awareness tools to integrate and apply mindfulness and cognitive therapy strategies to skillfully respond rather than react to disturbing emotions and thoughts in challenging situations
Five/1 h	<ul style="list-style-type: none">• Practice mastering skills in the application of mindfulness with metta awareness tools
Six/1 h	<ul style="list-style-type: none">• Mindfulness with metta based experiential exercises
Seven/2.5 h	<ul style="list-style-type: none">• Mindfulness with metta based experiential exercises

the Mindfulness with Metta Training Programme retreat group and the control group. The DVs were resilience, as measured by the Resilience Scale; mindfulness, as measured by the Five Facet Mindfulness Questionnaire, and self-compassion, as measured by the Self Compassion Scale. To ascertain group differences, the means of the retreat and control groups were compared on each DV, both before and after the Mindfulness with Metta Training Programme. The study also employed a within subjects, repeated measures design with the retreat group. The IV was time (pre-intervention, post-intervention, one-month follow up and four-month follow up) and the DVs were the above-listed variables and instruments. Group means were examined at these four measurement points to evaluate the changes in the DVs within the retreat group over time.

Results

Prior to analyses, the data was screened and assumptions were met. At pre-intervention, no significant differences between the retreat and control groups were observed. An independent samples *t*-test was conducted to determine whether significant differences were observed between the retreat and control groups following the intervention. Due to the small sample size and subsequent low statistical power, a separate repeated measures ANOVA was conducted for each dependent measure to explore the changes within the retreat group over time. To decrease the likelihood of Type I error, a Bonferroni correction was utilised. All tests in these analyses were considered significant at the Bonferroni adjusted $\alpha = .017$ ($.05/3 = .017$). Raw data was entered and analysed using SPSS version 18.0. Three participants were not included in the analysis as they were identified as extreme outliers, and six participants from the control group did not complete measures post retreat.

Independent samples *t*-tests were utilised to test the hypothesis that the retreat group ($n = 21$) would report significant improvements in resilience, mindfulness and self-compassion compared to the control group ($n = 14$) post retreat. No significant differences between the retreat and control groups on the dependent measures of resilience, $t(33) = .23$, $p = .82$, mindfulness, $t(33) = -.76$, $p = .453$, and self-compassion, $t(33) = -.86$, $p = .396$, were observed post retreat.

To examine the hypothesis that the retreat group would demonstrate increases in resilience, mindfulness and self-compassion following the intervention and at one-month and four-month post-intervention follow-up, separate repeated measures ANOVA was conducted for each dependent measure. Only participants ($n = 16$) who completed measures at all four points of data collection were included in the analysis. Results indicated that reported levels of resilience significantly changed over time, $F(3,45) = 4.09$, $p = .012$, partial $\eta^2 = .21$. Pairwise comparisons showed that pre-retreat levels of resilience were not significantly different to those reported immediately post retreat and at one-month follow-up. However, resilience scores at four-month follow-up ($M = 82.88$, $SE = 3.11$) were significantly higher than those at pre retreat ($M = 78.5$, $SE = 3.25$) at $p = .008$.

The results also showed at post retreat, the retreat group reported significant increases in mindfulness; $F(3,45) = 11.48$, $p < .001$, partial $\eta^2 = .43$. Pairwise comparisons revealed that the retreat group reported significant improvements at one-month follow-up ($M = 144.38$, $SE = 5.46$) and four-month follow-up ($M = 144.5$, $SE = 5.79$) compared to pre-retreat levels of mindfulness ($M = 131.5$, $SE = 5.5$), both at $p = .001$. Significant changes in reported levels of self-compassion could be observed over time; $F(3,45) = 5.69$, $p = .002$, partial $\eta^2 = .28$. Utilising pairwise comparisons, pre-retreat

levels of self-compassion were not significantly different to measurements taken immediately post retreat. However, reported levels of self-compassion at one-month follow-up ($M = 93.69$, $SE = 3.75$) and four-month follow-up ($M = 94.38$, $SE = 4.48$) were significantly higher than those reported at pre retreat ($M = 86.63$, $SE = 4.06$) at $p = .001$ and $p = .01$, respectively.

At the second booster session and four-month post-intervention follow-up, qualitative data was collected from the retreat group regarding their frequency of formal practice and informal practice since the retreat. Formal meditation was defined as sitting meditation (with or without the meditation CD provided following the retreat), while informal meditation was defined as incorporating mindfulness into day-to-day activities (e.g., walking, eating). One participant reported formal mindfulness practice on a daily basis, 36% reported formal practice once or twice a week, 21% reported practicing once every two weeks and 36% reported formal mindfulness practice once a month or not at all. Participants were also asked to indicate which practices on the provided mindfulness meditation CD were most useful to them. Participants generally indicated their preference for the practices entitled “Connecting with the Breath” and “Metta Meditation”. The frequency of informal practice was higher than formal practice, with 50% of participants reporting that they incorporated informal mindfulness practices into their daily lives. Approximately 22% of participants indicated using informal mindfulness practices once or twice a week, while 28% reported using such practices once every two weeks to once a month. The most commonly cited informal practices included mindful walking, showering/bathing and housework.

Discussion

The results provide preliminary support for the effectiveness of a brief MMTP for increasing resilience, mindfulness and self-compassion with human services professionals in a retreat format. To the authors’ knowledge, this is the first study evaluating the impact of a brief MMTP delivered in a retreat format. The result that no significant differences between the groups, retreat vs. control, were found post retreat on levels of resilience, mindfulness and self-compassion may be explained by the timing of the post-measurement. As the retreat group was measured immediately after the intervention, they had not had time to practice and apply the skills learned over the course of the retreat. This result is similar to Fredrickson and colleagues (2008) who observed an initial decrease in positive emotions following a loving-kindness intervention. This supports the supposition that participants require time to adjust to a new meditative practice before benefits can be observed.

Accordingly, the MMTP retreat group reported significant increases in mindfulness and self-compassion following the intervention at one-month and four-month post retreat, and significant improvements in resilience at four-month follow-up. This finding indicates the possibility of a sleeper effect whereby resilience, enhanced by increased mindfulness and self-compassion, takes a longer period of time to develop. It is possible that, over time, with increased awareness of internal and external events and fewer harsh self-judgements, the participants gradually increased their ability to respond more skilfully and adaptively to stressful events.

The broaden and build theory (Fredrickson, 1998) postulates that recurrent experiences of positive emotions, and subsequent broadened outlook, allow individuals to build a range of personal resources. This finding is consistent with the broaden and build theory in that increases in resilience appear to have developed only after increases

in mindfulness and self-compassion. To explore which aspects of the intervention contributed most to the significant results, it is recommended that future research compare interventions with and without the cognitive therapy and mindfulness with metta components.

Following the intervention, few participants in the retreat group reported regular formal, or sitting, meditation practice; however, all participants indicated incorporating informal mindfulness practices into their daily lives. This suggests that formal, as well as informal, mindfulness practices are likely to benefit practitioners. Future research should attempt to compare the effects and benefits of formal and informal practice following an intervention.

Limitations

In terms of limitations of the study, attrition contributed to a small sample size and subsequent low statistical power, limiting the type of analyses that could be conducted, in particular long-term effects of the intervention. Although the results showed preliminary support for the efficacy of the MMTP programme, this was a small-scale study, which limits the generalisability of the findings. That stated, significant findings suggest that the brief MMTP shows promise as a resilience building strategy. Given the pilot nature of this study, we do not know if the participants would have benefited from a longer intervention. However, given the time pressures associated with the participants' work, their participation in a longer intervention did not seem feasible.

Conclusions

Given the high rate of burnout and compassion fatigue in the human services sector, MMTP appears to show promise for utility in this sector to enhance resilience, self-compassion and mindfulness. Future work will examine the efficacy of the MMCT with human services professionals in a randomised controlled trial using a 6 x weekly group format compared to a mindfulness training group and a control group with longitudinal follow-up to facilitate the sustainability of improvements and to further our understanding of how to positively influence resilience in human service professionals.

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