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Mindfulness at work: Assessing the impact of practising mindfulness in the workplace on engagement, wellbeing, happiness and positivity

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***Mindfulness at work: Assessing the impact
of practising mindfulness in the workplace on
engagement, wellbeing, happiness and positivity.***

*This thesis is presented in partial fulfilment of the degree of
Master of Public Health*

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Contents

1. Abstract.....	1
2. Introduction	2
3. Literature review.....	4
4. Method	13
5. Results.....	17
6. Data Analysis.....	17
7. Discussion.....	21
8. Conclusion and recommendations.....	24
References.....	26
Appendices	
1. Information form	32
2. Informed Consent for Participants	33
3. 3. Measurement tools... ..	34
3.1 Mindfulness Awareness Attention Scale.....	34
3.2 Engagement Work Wellbeing Survey.....	37
3.3 Positivity Modified Differential Emotions Scale.....	38
3.4 The Subjective Happiness Scale.....	39
3.5 The Warwick Edinburgh Mental Wellbeing Scale.....	40
Tables & figures	
<i>Table 1: Definitions of Mindfulness.....</i>	<i>4</i>
<i>Table 2: Summary of common outcomes across studies.....</i>	<i>8</i>
<i>Table 3: Multivariate Tests - Pillar's Trace.....</i>	<i>18</i>
<i>Table 4: Participants major life events.....</i>	<i>23</i>
<i>Figure 1: Study concept map.....</i>	<i>15</i>
<i>Figure 2: Random allocation to 2 groups, measured across 18 weeks.....</i>	<i>16</i>
<i>Figures 3: Gender group 1.....</i>	<i>17</i>
<i>Figure 4: Gender group 2.....</i>	<i>17</i>
<i>Figure 5: Age range, group 1.....</i>	<i>17</i>
<i>Figure 6: Age range, group 2.....</i>	<i>17</i>

<i>Figure 7: Comparison of group wellbeing</i>	<i>19</i>
<i>Figure 8: Comparison of group happiness.....</i>	<i>20</i>
<i>Figure 9: Comparison of group positivity.....</i>	<i>20</i>
<i>Figure 10: Comparison of group engagement</i>	<i>21</i>
<i>Figure 11: Comparison of group mindfulness.....</i>	<i>21</i>

1. Abstract

Aim: The purpose of this study carried out in Perth, Western Australia was to examine the effect of mindfulness training on workers in a university setting, by assessing the impact of mindfulness training on their sense of wellbeing, happiness, positivity and level of engagement in their jobs.

Method: Participants (n = 54) were recruited through the Edith Cowan University staff Health and Wellness Program, *Live Life Longer* and randomly allocated into two groups of 27. Both groups were invited to take part in 6 weeks of mindfulness training with staggered starts, group 2 began once group 1 had completed the training. There were no exclusion criteria. The training was adapted from the Mindfulness Based Stress Reduction program, and was delivered for one hour each week. The program included a 4-hour retreat on the penultimate Saturday. Quantitative testing was carried out at six week intervals: (T1) at baseline before either group received training; (T2) after group 1 finished the training and group 2 was about to commence; (T3) immediately after group 2 had completed which was a 6 week follow-up for group 1; and (T4) 6 weeks later as a follow up for both groups.

Results: The program suffered from high drop-out, with less than half of the original cohort (n=25) participating in four or more sessions of the 6-week program. This is likely to have impacted upon the statistical power of the study and no statistically significant differences were observed between groups: Wellbeing ($F(1) = 2.142, p = 0.157$); Happiness ($F(1) = 1.152, p = .294$); Positivity ($F(1) = .625, p = .437$); Engagement ($F(1) = 2.380, p = .137$) and Mindfulness ($F(1) = .790, p = .383$).

Conclusion: This study did not show any significant differences in the variables of: wellbeing, happiness, positivity or engagement in work. However other studies have shown significant benefits for organisations and employees in mindfulness interventions in the workplace. A small sample size was a limitation of this study. To validate results and be able to generalise findings larger longitudinal studies should be carried out. Retention rate was an issue in this study and in future, strategies need to be employed to ensure sustainability of the training program and reduce attrition rate. Other modes of delivery of intervention such as using an online platform may increase participation rates. Being able to carry out mindfulness training at convenient times may be more attractive to employees

2. Introduction

Previous research indicates that employees who perform better at work are usually healthier and have stronger work relationships (Lyubomirsky et al., 2005; Page & Vella-Broderick, 2012). Positive emotions have also been linked to both business and personal success (Frederickson, 2009). Add to this the costs associated to workplace stress and related injuries and a strong business case emerges to identify evidence-based health interventions to help improve the mental health of workers.

Studies conducted in clinical and community settings suggest that learning to live 'mindfully', has both physical and mental health benefits (Baer, 2003; Broderick, 2005; Shapiro et al., 2006; Shepherd & Cardon, 2009; Weinstein et al., 2009).

When this 'mindfulness at work' study commenced in 2014 there was little evidence in the workplace setting regarding the impact of mindfulness training on staff wellbeing and work engagement (Dane & Brummel, 2013; Hulsheger et al., 2013; Glomb et al., 2011). However, in the past 3 years this has grown and studies are showing that it may be an effective method for improving staff wellbeing. (Koncz et al., 2016, Malinowski & Lim 2015). Yet there are also studies similar to this one that have found no conclusive results (van Berkel et al., 2014; van Dongen, 2016).

2.1 Statement of problem

According to Safe Work Australia (2013) mental stress costs businesses \$10 billion per year due to loss of productivity and absence. In addition, the 'presenteeism' or working when sick cost, when employees are at work but not fully engaged, thus impacting negatively on an organisation's productivity levels (Medibank 2011). Presenteeism could be due to a number of causes: poor physical or mental health, home-life stressors and alcohol or drug abuse. In 2009/10 business auditors KPMG carried out economic modelling of the cost of 'presenteeism' to the Australian economy and estimated it to be \$34.1 billion with an average, 6.5 working days lost per employee per year as a result of this (Medibank 2011).

There is also evidence that shows that psychological distress is often co-morbid with other health conditions (Moussavi et al., 2007; Demyttenaere et al., 2006; Benton et al., 2007; Chapman et al., 2005). This is a major health burden on society when combined with the costs associated with workplace stress and related injuries.

2.2 Significance of the study

A large proportion of our lives are spent at work, therefore the workplace is an ideal setting for a public health intervention. Finding ways to help employees be more focused is of benefit to both organisations and individuals.

One potential solution to alleviate psychological distress is to introduce 'mindfulness' training into the workplace. Mindfulness has been defined as "the awareness that arises from paying attention in a particular way: on purpose in the present moment and non-judgmentally" (Kabat-Zinn, 2013). It is "about being aware of what's going on in our body and our mind and paying attention to our life – to the external world as well as the internal world" (McKenzie & Hassed, 2012, p22). Put simply, it is the practice of knowing where our attention is and being able to choose where to direct it (McKenzie & Hassed, 2012).

According to McKenzie (2013) "Mindfulness can help us to transform our working lives into something that really fulfils us, rather than merely something we have to do or that we are paid to do" (p11). There is a growing body of empirical evidence that validates the effectiveness of mindfulness-based interventions.

This study carried out in Perth, Western Australia examined the effect of mindfulness training on workers and assessed the impact of the training intervention on their sense of wellbeing, happiness, positivity and level of engagement in their jobs.

2.3 Research aims and hypotheses

The aim of this research was to investigate the effect of mindfulness training in the workplace at Edith Cowan University (ECU) in Western Australia. More specifically: if mindfulness training was provided to staff in the workplace would it improve individual engagement in work and increase a sense of wellbeing, positivity and happiness?

The objective was to assess if an adapted shortened version of the Mindfulness Based Stress Reduction (MBSR) program would improve levels of work engagement and provide an increased sense of wellbeing, positivity and happiness at work. It was hypothesised that:

- H1:** staff who participated in a 6-week Mindfulness Based Stress Reduction program at work would experience an increase in 5 dependent variables (mindfulness, work engagement, sense of wellbeing, happiness and positivity) compared to staff with no training.
- H2:** improvements in these variables would be sustained post intervention, measured at 6 and 12 weeks.

3. LITERATURE REVIEW

3.1 What is mindfulness?

With its roots in the East, Professor Jon Kabat-Zinn was one of the first to bring mindfulness to the West developing a Mindfulness Based Stress Reduction (MBSR) program to manage chronic pain. His definition is: "Paying attention in a particular way: on purpose, in the present moment and nonjudgmentally," Kabat-Zinn, (2013).

An overview of a range of definitions both in academia and from its roots in Buddhism are detailed below (Dane 2011).

Table1: Definitions of Mindfulness

Source	Domain	Definition of Mindfulness
Brown, Ryan and Creswell (2007, p12)	Academia	"A receptive attention to and awareness of present moment events and experience."
M. Epstein (1995, p96)	Academia	"Bare attention in which moment to moment awareness of changing objects of perception is cultivated."
Hanh (1976, p. 11)	Buddhism	"Keeping one's consciousness alive to the present reality."
Harvey (2000, p.38)	Academia	"A state of keen awareness of mental and physical phenomena as they arise within and around (oneself)."
Herndon (2008, p.32)	Academia	"Being attentively present to what is happening in the here and now."
Kabat-Zinn (2005,p.4)	Academia and medical practice	"Paying attention in a particular way: on purpose, in the present moment and nonjudgmentally."
Lau et al. (2006, p.1447)	Academia	"A mode, or state-like quality, that is maintained only when attention to experience is intentionally cultivated with an open, nonjudgmental orientation to experience."
Nyanaponika (1972, p.5)	Buddhism	"The clear and single minded awareness of what actually happens to us and in us at the successive moments of perception."
Rosch (2007, p.259)	Academia	"A simple mental factor that can be present or absent in a moment of consciousness. It means to adhere, in that moment, to the object of consciousness with a clear mental focus."
Thondup (1996,p.48)	Buddhism and academia	"Giving full attention to the present without worries about the past or future."
Weick and Sutcliffe (2006, p.518)	Academia	"Eastern mindfulness means having the ability to hang on to current objects, to remember them and not to lose sight of them through distraction, wandering attention, associative thinking, explaining away or rejection."

Source: Dane 2011

In addition to this Wallace (2006) defined it as “a practise that requires concentration and the focusing of attention; of continually directing attention to a familiar object.”

Being focused and nonjudgmental are useful skills to have in a work setting to be able to concentrate on the task at hand and not judge colleagues or self, harshly or unfairly. Mindfulness also involves cultivating an attitude of kindness and compassion especially during moments of difficulty and these are inevitable to arise on the job and in daily life inside and outside of work (Lomas et al., 2017; Koncz et al, 2016).

There are a wide number of definitions however many studies fail to identify mindfulness as a state, trait, intervention or practice (Jamieson and Tuckey, 2016). In their systematic review of 40 studies in the workplace, Jamieson and Tuckey identified a common flaw that the mindfulness concept is not defined and would lead to confusion in study replication. McKenzie and Hassed (2012) define it simply as “the practice of paying attention: knowing where our attention is and being able to choose where to direct it... Being aware of what’s going on in our body and our mind and paying attention to our life – to the external world as well as the internal world” (pg 22). The definition for meditation by McKenzie and Hassed is the one used in this *Mindfulness at Work* study.

3.2 Definitions of other variables used in this study: work engagement, wellbeing, happiness and positivity

- **Work engagement** is defined as “a positive, fulfilling work-related state of mind that is characterised by vigor, dedication and absorption” (Schaufeli et al., 2006) where vigor relates to “high levels of energy and mental resilience”; dedication is “being strongly involved in one’s work and experiencing a sense of significance, enthusiasm, inspiration, pride and challenge,” and absorbed staff are “fully concentrated and happily engrossed in work” (p702). It has been shown that engaged workers are more creative, more productive, more willing to go the extra mile and less likely to leave the job (Bakker & Demerouti 2008; Christian et al., 2011; Salanova et al., 2005).
- **Wellbeing:** in 2001, the World Health Organization (WHO) described mental health as “a state of wellbeing which allows individuals to realise their abilities, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their community” (World Health Organization 2001).
- **Happiness:** Cropanzano & Wright (2001) suggest that happiness is a subjective judgment of when a person is experiencing substantially more positive emotion than

negative. Research with identical and fraternal twins suggests that there is a 'set point' for happiness (Lykken and Tellegan 1996). Happiness researcher, Lyubomirski agrees that this set point is a baseline or potential for happiness to which we will return, even after major setbacks or triumphs. (Lyubomirski, 2007). Note: It is Lyubomirski's Subjective Happiness Scale used in this study to assess if happiness levels alter post mindfulness intervention.

- **Positivity:** comprises the positive emotions of joy, gratitude, serenity, interest, hope, pride, amusement, inspiration, awe and love. Fredrickson (2009) has shown that regularly experiencing these emotions can help create an 'upward spiral'; the broaden and build theory.

3.3 Mindfulness: non-work related settings

There have been many studies carried out in clinical and community settings (Baer, 2003; Broderick, 2005, Shapiro et al., 2006; Shepherd & Cardon 2009; Weinsten et al., 2009) and mindfulness has been shown to have an impact on both physical and mental health benefits: managing chronic pain (Kabat-Zinn, 2013); anxiety and depression (Brown and Ryan, 2003; Segal, Williams & Teasdale, 2002) and coping with distress and disability in everyday life (Grossman et al., 2004). Prazak et al., (2012) also observed in a sample of 506 undergraduate students in the US that those who measured high mindfulness had better cardiovascular and psychological health.

A variety of different types of mindfulness interventions have been used. Kabat-Zinn developed one of the first, the Mindfulness-Based Stress Reduction (MBSR) program for Boston medical patients in a Stress Reduction Clinic. MBSR is a structured 8-10 week program involving more than 26 class hours and 45+ recommended minutes of daily meditation practice, mindful yoga and incorporating mindfulness into daily life (Kabat-Zinn, 2013).

Mindfulness-based Cognitive Therapy has also been used successfully in treating depression. In April 1992, co-developers of McBCT Segal, William and Teasdale explained: "The simple act of recognising your thoughts as thoughts can free you from the distorted reality they often create and free you from and allow for more clear-sightedness and a greater sense of manageability in life" (Segal, William and Teasdale, 2002).

3.4 Mindfulness in the workplace

The workplace is a potentially valuable setting for the promotion of good health and wellbeing (Lomas et al., 2017; Koncz et al, 2016; Malinowski & Lim 2015; Karanika-Murray & Weyman, 2013; Black, 2008; and Egan et al., 2007).

Since the initial proposal for this study was developed in 2014 there is now a growing body of research around mindfulness interventions in the workplace. When searching 'mindfulness' in Medline and PsychInfo databases in September 2017 almost three times the amount of publications were found (14,746) compared to November 2013 (5,500). When filtered to include 'work*' this reduced to 3,223 across the two databases specifically involving workplace settings and when filtered as peer reviewed down by more than half to 1,436, however substantially more than in 2014 when there were only 218.

To ensure key literature was not missed the search was widened to include Web of Science, a multidisciplinary database: 8,889 titles in the topic of mindfulness were identified and 1,469 when filtered by work*.

Jamieson and Tuckey (2016) from The University of South Australia conducted a systematic review of 40 studies of mindfulness in the workplace and concluded there is sufficient evidence of a relationship between mindfulness interventions and improvements in employee health and wellbeing.

This finding was supported by a further systematic review by researchers in London, Barcelona and Germany (Lomas et al, 2017) where 153 papers were reviewed with 12,571 participants. The authors concluded that mindfulness based interventions had a generally positive impact upon most health outcome measures (detailed in table 2 overleaf). Of these 112 were intervention studies, with a total of 5,755 participants and 41 non-intervention studies.

Table 2: Impact of mindfulness based interventions on health outcomes

Outcome	Number of studies assessing	Improvement related to mindfulness intervention	No change in relation to mindfulness intervention	Worsening related to mindfulness intervention	Association (benign) with mindfulness in non-intervention studies
Anxiety	25	17	5	1	2
Burnout	57	33	11	3	10
Compassion & empathy	40	24	10	2	4
Depression	30	13	5	1	4
Distress & anger	35	28	4	0	4
Emotional intelligence & regulation	40	23	3	0	10
Health	29	19	3	3	4
Job performance	60	37	6	0	17
Mindfulness & awareness	76	60	6	4	6
Relationships	23	16	0	0	7
Resilience	9	6	3	0	0
Stress & strain	83	55	15	5	8
Well-being	66	40	10	2	14

Source: Lomas et al (2017)

Hyland et al. (2015) support the view that mindfulness is of benefit in the workplace. They provide five main reasons why organisations should consider mindfulness interventions for their staff: to manage stress; improve the development of leaders; enhance engagement, reduce burnout and to cope with change. Hyland also asserts there is good reason to believe that mindful employees are more engaged, productive, and effective,

Krishnakumar and Robinson (2015) found that part-time employees were less prone to hostile feelings in the workplace if they practised mindfulness. Bond and Bunce (2003) found that employees' willingness to accept their thoughts and emotions predicted better mental health and work performance a year later.

A further study examining engagement at work for physicians (West et al. (2014) found that mindfulness programs increased empowerment and engagement at work compared with a control group, and that this benefit was sustained a year later.

A mindfulness pilot study conducted at Sydney University by Koncz et al (2016) tested a 6-week program called "The Stress Release Program (SRP)", developed by Monash University, Melbourne, which is now also available as an online resource. Significant improvements were found in employee wellbeing and engagement with a reduction in workplace distress, thus it was suggested that mindfulness may be an effective wellness program for staff and students in universities. SRP has also been shown to improve student

psychological wellbeing at Monash University for 148 students prior to exams (Hassed et al, 2009) and is now embedded in core curriculum for medical and allied health students.

Mindfulness training may: “improve relationships at work through better self-regulation of undesirable responses to negative work events.” (Long and Christian, 2015). Teper and Inzlicht (2014) suggest that mindfulness can improve employee’s reactions to constructive criticism, helping them to accept feedback more readily with less emotional reactivity. Fiol and O’Connor (2003) also report that better decision making may result from mindfulness practice.

Mindfulness has also been shown to have a positive effect on job performance, wellbeing and job satisfaction and reduce the intention to leave an organisation. A study of service workers and managers in the American restaurant industry found a positive relationship between workplace mindfulness and job performance and a negative relationship to turnover intention (Dane & Brummel, 2013). Reb, Narayan and Chaturvedi (2012) also found in two studies that supervisors who completed mindfulness training demonstrated increased awareness and attention impacting on employee wellbeing and job satisfaction.

Mindfulness contributes to performance by improving cognitive flexibility and alertness (Moore & Malinowski, 2009; Zeidan et al., 2010) and guarding against distractions and performance blunders (Herndon, 2008). Studies in the Netherlands and Belgium around emotional regulation and exhaustion have also suggested that mindfulness promotes job satisfaction and helps prevent burnout (Hulsheger et al., 2013).

Significant associations have also been found between various measures of well-being and measures of job-related performance (Cropanzano et al., 2003; Robbins et al., 2012). Glomb et al., (2011) suggest that mindfulness is linked to better workplace functioning.

Eberth and Sedlmeier’s meta-analysis of 39 studies (2012) showed that mindfulness training is associated with fewer negative and more positive ‘emotional tone’. Further meta-analysis, show a moderate effect size for anxiety and depression (Goyal et al., 2014; Chiesa, 2009). Hafenbrack et al (2013) also found that mindfulness practice improved the ability to resist cognitive bias.

In the military mindfulness has also been found to boost working memory (Jha et al., 2010) documented the benefits of mindfulness meditation among a military group who participated in an eight-week mindfulness training, a non-meditating military group and a group of non-meditating civilians. The non-meditating military group had decreased working memory

capacity over time, whereas working memory capacity among non-meditating civilians was stable across time. Within the meditating military group, however, working memory capacity increased with meditation practice.

3.5 Positivity and engagement in the workplace (variables used in this study)

Increasingly studies are focusing not only on the 'negative' absence of illness; but on more positive aspects of wellbeing and functioning (Lomas et al, 2017). Positive psychology, the scientific study of human strength and optimal functioning (Seligman & Csikszentmihalyi, 2000) is a method organisations are using to improve workplace wellbeing. This has grown significantly as a discipline since the beginning of this century (Schaufeli et al., 2006). A central philosophy of positive psychology is to focus on what is working well rather than failures as this is thought to encourage good health and wellbeing. Seligman conducted research in the workplace in 2006 and found that employees practicing mindfulness had better sales performance than those who did not. Seligman noted that the worst performing employees were those who were pessimistic. He further suggested that through mindfulness training pessimism can be altered as it discourages ruminative thinking.

The World Health Organization (WHO) definition of 'health' stresses the positive aspects of mental health, defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization, 2011).

Positive emotions such as: love, joy, gratitude, serenity and hope have been linked to business and personal success (Frederickson, 2009). Managers with greater positivity were found to be more accurate and careful in making decisions and more effective interpersonally (Staw & Barsade, 1993).

In their study of 299 workers in the United Kingdom, Malinowski & Lim (2015) confirmed that self-reported mindfulness predicts work engagement and general well-being. It increased positive affect, hope, and optimism amongst workers and their findings suggested that: "non-reactivity and non-judging are important mindfulness skills in the workplace."

Frederickson has proposed the 'broaden and build' theory of positive emotions and together with Losada developed the 3:1 ratio of positive thoughts to negative for optimal happiness (Frederickson, 2009). They found that people who had 3 times as many positive thoughts to a negative thought had better outcomes in life.

Lyubomirsky suggests that 50% of anyone's happiness level is determined genetically and cannot change, a further 10% relates to life circumstances—for example whether we are rich

or poor—however 40% is in an individual's scope to affect through 'intentional activity' (Lyubomirski, 2007).

Happy employees are generally healthier, perform better at work and have better work relationships (Lyubomirsky et al. 2005, Page & Vella-Broderick, 2012). Positive emotions such as love, joy, gratitude, serenity and hope have also been linked to both business and personal success (Frederickson 2009).

3.6 Mindfulness may not be ALL positive in the workplace

As discussed previously studies do support the hypothesis that mindfulness training has the potential to improve performance in the workplace. However, some studies including this one, have shown no effect and have not been conclusive: (van Dongen et al., 2016; van Berkel et al, 2014; Roeser et al., 2013; Wolever et al., 2012).

In the Netherlands Van Dongen et al. (2016) carried out a randomised control trial of an 8-week mindfulness based intervention called Mindful 'Vitality in Practice' VIP and concluded it was not cost effective for the organisation. After 12 months, a significant but not clinically relevant adverse effect on work engagement was found. There were no significant differences in job satisfaction, general vitality and work ability. Probabilities of cost-effectiveness were low and the intervention did not have a positive financial return to the employer. One reason cited was the lack of participant engagement in homework, a majority (55%) attended more than three quarters of the sessions however only 8% were compliant in the homework and when followed up 12 months later didn't integrate mindfulness into their daily work life. The intervention was their own version of mindfulness training which included e-coaching, fruit, lunch walking routes, and a buddy system.

Van Berkel and colleagues (2014), also from the same pool of participants in two Dutch research institutes, found no effect when looking at the effectiveness of the Mindful VIP program in vigorous physical activity, sedentary behaviour at work and fruit intake after 6 or 12 months. A follow up study by Van Berkel also found no significant differences in self-reported mental health or work engagement between the mindfulness intervention and control group after 6- and 12-months.

Longer cohort studies are required to assess if the results achieved in short 8 to 10 week studies are maintained over time. Participants reported feeling "revitalised," "fresh," "energetic," and "peaceful" after the mindfulness sessions in the van Dongen study, whereas they indicated that this effect did not last in the 12 month follow up.

While Roeser et al. (2013) in a study of teachers in Canada and the US did find mindfulness training useful in managing stress and feelings of burnout, they found no significant difference in terms of sickness absence and although teachers reported feeling subjectively less stressed the biological indicators of stress did not show statistically significant differences.

In terms of productivity, Wolever et al. (2012) found no significant difference in employees between the mindfulness, yoga, and control groups following the Mindfulness at Work 12-week intervention. These findings suggest that mindfulness interventions may not improve staff absenteeism or work productivity.

Whilst research around mindfulness in the workplace has increased in the last few years it is still in its infancy and many researchers have called for more studies that might demonstrate the potential positive impact mindfulness training could have in workplaces (Lomas et al., 2017; Koncz et al., 2016; Dane and Brummel, 2013; Hulsheger et al., 2013; Wolever et al., 2012; Glomb 2011).

A number of recommendations have also been identified to improve study design and to guide organisations considering implementing a mindfulness program for staff (Jamieson & Tuckey, 2016; Lomas et al., 2017). Issues with the research design and recommendations for future direction were identified by Lomas et al., (2017) who argued a lot of work still needs to be done to substantiate the positive findings: non consistency in scales used to measure mindfulness (10 different tools were used across 157 studies); not breaking down mindfulness to different components i.e. non judging; awareness; observing; a need to widen the occupations that have been studied as the majority are in healthcare and less in the corporate setting.

Others also believe a lack of empirical evidence on the impact of mindfulness training on staff wellbeing and work engagement still exists (Dane & Brummel, 2013; Hulsheger et al., 2013, Glomb et al., 2011). Existing evidence has also not been systematically integrated into workplace functioning (Good et al., 2016).

The evidence remains equivocal in the value of mindfulness in the workplace, further studies are required to assess the efficacy of running these types of programs and assist organisations in implementing interventions.

4. METHOD

After obtaining approval from the ECU Human Research Ethics Committee a randomised control trial was conducted among staff at ECU, Perth, Western Australia during Semester 2, 2014.

The study incorporated a cross-over design with staggered start dates. The first group started training 6-weeks prior to the second group, which was essentially the control group. Quantitative testing was carried out at six week intervals: (T1) at baseline before either group received training; (T2) after group 1 finished the training and group 2 was about to commence; (T3) immediately once group 2 had finished the training and at 6-week follow-up for group 1; and (T4) 6 weeks later providing data for a 12 and 6-week follow-up, for groups 1 and 2 respectively.

Intervention: The mindfulness intervention was an adapted version of the original MBSR program, developed by Dr Jon Kabat-Zinn. To be more practical in the work setting it was implemented over a 6-week period through face to face workshops presented once per week for 1 hour instead of the traditional 8 weeks at 2.5 hours per session. Tasks were given to participants as 'homework' to be practised daily. A half day retreat (4 hours) was held on the penultimate weekend of the intervention.

Participants (n = 54) were recruited through the ECU staff Health and Wellness Program, *Live Life Longer* and randomly allocated into two groups of 27. Both groups were invited to take part in 6 weeks of mindfulness training with staggered starts. Group 2 began once group 1 had completed the training. There were no exclusion criteria. All ECU staff were eligible to take part, including full-time, part-time and casual staff.

Procedure: As depicted in figure 2, an information session about the mindfulness intervention was attended by 70 staff. A total of 54 participants were recruited and after they completed an informed consent form, they were provided with an internet link to the online pre-intervention surveys that measured aspects such as work engagement, mindfulness, wellbeing, happiness and positivity. The study concept was to assess if mindfulness would improve levels of engagement, wellbeing happiness and positivity (figure 1).

Ethical and risk considerations: Confidentiality of data was assured to participants from the outset. Informed consent was requested from all participants and everyone was advised they could withdraw from the study at any time. The study was also bound by moral

principles of non-maleficence and beneficence and Edith Cowan University's ethical regulations.

Materials: The following self-reported measurement tools were administered through online Qualtrics software (tools attached in appendix): Quantitative testing was carried out as depicted in Figure 2.

- **Mindfulness** – The Mindfulness Alert Awareness Scale (MAAS) (appendix 3 (i)) (Brown & Ryan 2003) is one of the most commonly used tools to measure mindfulness across a range of settings using a 6-point Likert scale. It includes 15 items that provide a basis for making empirical comparisons between mindfulness and other work-related consciousness such as 'mind wandering' (Mrazek et al., 2012).
- **Work engagement** – The Utrecht Work Engagement Scale (UWES) (appendix 3 (ii)) comprises 17 items in a self-report questionnaire covering three dimensions of engagement: vigor, dedication and absorption (Schaufeli et al., 2006). In this study the shortened 9-item scale which has better construct validity, as reported in a 3-year longitudinal study (n=2,555) was utilised (Seppala et al. 2009).
- **Positivity** – The modified Differential Emotions Scale (appendix 3 (iii)), also known as the Positivity Ratio, developed by Fredrickson and Losada (2009) comprises 20 items, of which 10 are positive emotions and 10 negative.
- **Happiness** – The Subjective Happiness Scale (SHS) (appendix 3 (iv)) developed by Lyubomirsky (1997) is a 4-item measure developed and validated in 14 studies with a total of 2,732 participants with high internal consistency, good reliability and construct validity. (Lyubomirsky & Lepper, 1999).
- **Wellbeing** – The Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (appendix 3 (v)) consists of 14 items covering: "hedonic and eudemonic aspects of mental health including positive affect (feelings of optimism, cheerfulness, and relaxation), satisfying interpersonal relationships and positive functioning (energy, clear thinking, self-acceptance, personal development, competence and autonomy)". The WEMWBS provides a wide conception of wellbeing in a short form and has been extensively tested for validity. Studies suggest that it has good face validity, content validity, internal consistency and reliability (Tennant et al., 2007).

- **Demographics** – Several questions were included to collect data on age, gender, level of education, income and marital status, if academic or professional staff and prior experience with mindfulness-type training was also included.

Figure 1: Study concept map

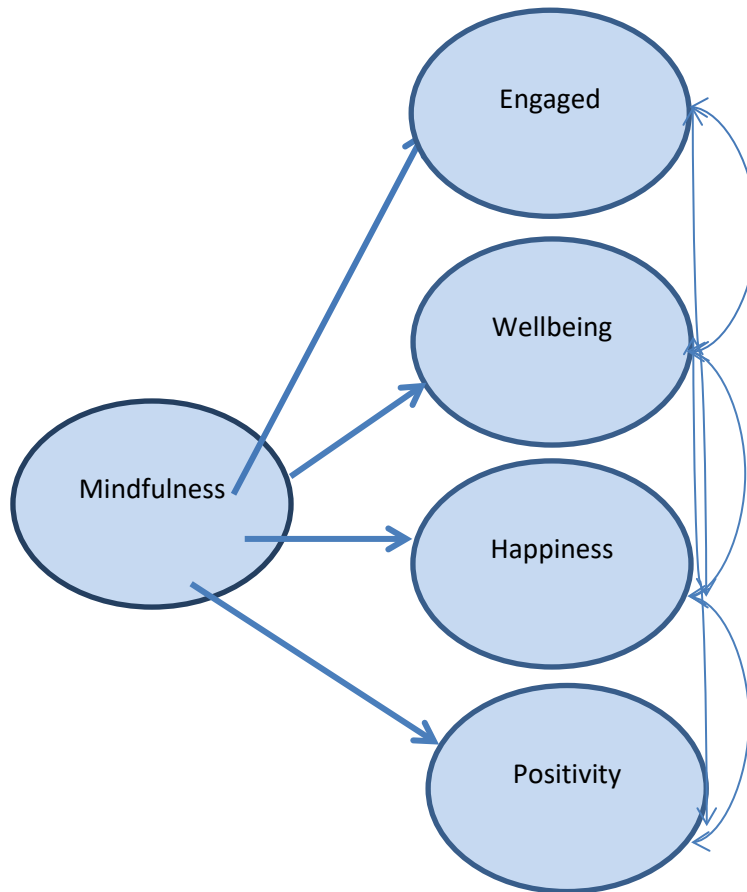
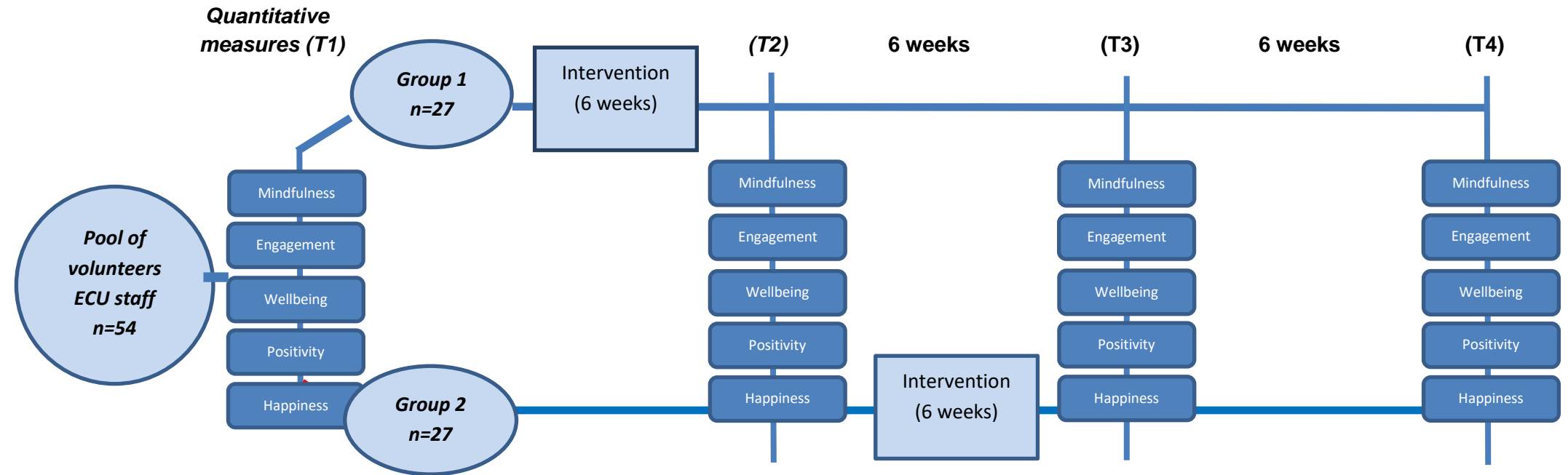


Figure 2: Random allocation to 2 groups, measured across 18 weeks



5. RESULTS

Demographics

Participants (n= 54) were randomly allocated to the program. There were double the number of males in group 2. The age range was comparable across the two groups.

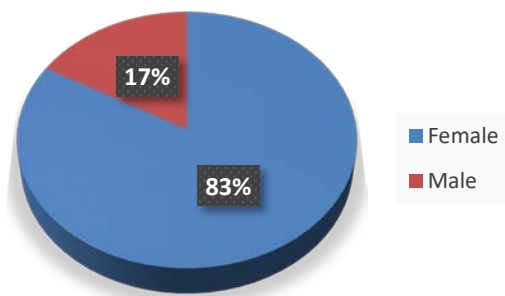


Figure 3: Gender group 1

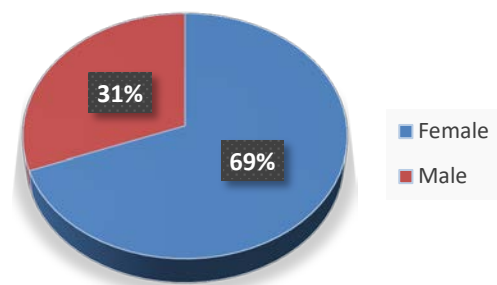


Figure 4: Gender group 2

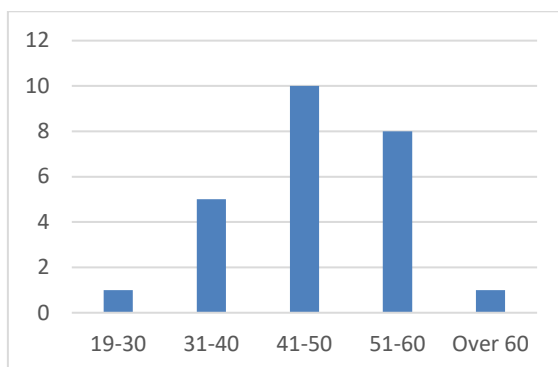


Figure 5: Age range group 1

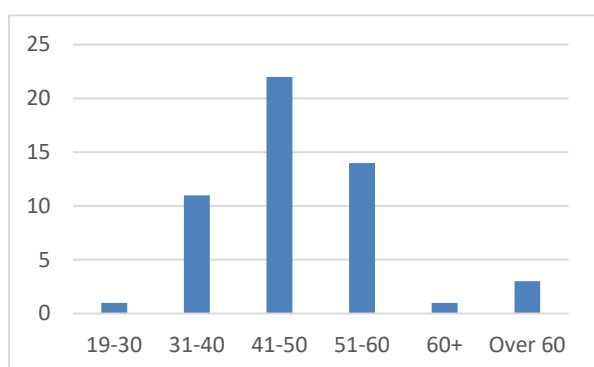


Figure 6: Age range group 2

6. DATA ANALYSIS

The analysis of research results are presented in Table 3 below and Figures 3 to 11 in this section and in section 5.

As there was more than one variable, changes in scores across the two groups for the variables: wellbeing, happiness, positivity, mindfulness and work engagement were assessed with a repeated measures multivariate analysis of variance (MANOVA) using (SPSS 22 for windows, SPSS, Inc., Chicago, IL, USA).

The General Linear Model (GLM) repeated measures procedure was used to analyse all variables. Table 3 below shows the combined results.

Table 3: Multivariate Tests^a test - Pillai's Trace

Effect	Test	Value	F	Hypothesis df	Sig.
Within subjects					
Wellbeing	Pillai's Trace	0.519	7.557	3.000	0.001*
Happiness	Pillai's Trace	0.388	4.429	3.000	0.015*
Positivity	Pillai's Trace	0.435	5.388	3.000	0.007*
Engaged	Pillai's Trace	0.169	1.426	3.000	0.263
Mindfulness	Pillai's Trace	0.497	6.925	3.000	0.002*
Between group					
Wellbeing	Pillai's Trace	0.063	.467	3.000	0.709
Happiness	Pillai's Trace	0.141	1.152	3.000	0.352
Positivity	Pillai's Trace	0.435	5.388	3.000	0.129
Engaged	Pillai's Trace	0.044	.323	3.000	0.809
Mindfulness	Pillai's Trace	0.214	1.909	3.000	0.159
Within-between group interactions					
Wellbeing			2.142	1.000	0.157
Happiness			1.152	1.000	0.294
Positivity			0.625	1.000	0.437
Engaged			2.380	1.000	0.137
Mindfulness			0.790	1.000	0.383

a. Design: Intercept + Group Within Subjects Design * p<.05

If significant within-subject differences were detected between T1 and T2 for group 1 and T2 and T3 for group 2, then the first hypothesis would have been supported. It would have been further strengthened by statistically significant between-subject differences between group 1 and 2 at T2. This was not the case.

The second hypothesis would have been supported if significant within-subject differences were detected between T1 and T3, and T1 and T4, for group 1 and between T1 and T3, and T1 and T4 for group 2. However, no significant within-subject differences were observed for either group.

There were no statistically significant between-group differences for any of the four variables. Wellbeing ($F(1) = 2.142$, $p = 0.157$); Happiness ($F(1) = 1.152$, $p = .294$); Positivity ($F(1) = .625$, $p = .437$); Engagement ($F(1) = 2.380$, $p = .137$) and Mindfulness ($F(1) = .790$, $p = .383$).

As demonstrated in figure 7 the aggregated **wellbeing** scale (from 1 to 5) there was a statistically significant main effect over the four time points: Pillar's Trace = .519 ($F(3, 21) = 7.557$, $p = 0.001$) but no statistically significant interaction by group membership. This indicates that the observed changes over time are unlikely the result of the experimental manipulation. The significant differences between time points by main effect of happiness occurred between time-points 1 and 2 ($p = 0.002$) and 3 and 4 ($p = .014$) but not between 2 and 3 ($p = .892$).

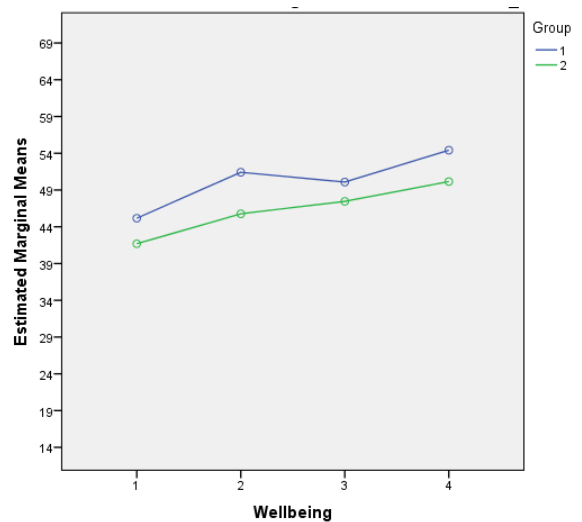


Figure 7: Comparison of group wellbeing

Both groups in follow-up were at a higher state of wellbeing at follow up T4, this may have been a common institution wide effect as this follow up occurred immediately after the end of year break in January 2015, when the whole university shuts down. This measurement also occurred during the summer so there may have been a seasonal effect, previous measurement points were in winter.

The **happiness** aggregated scale (from 1 to 7) also showed a statistically significant main effect over the four time points (figure 8): Pillar's Trace = .388 ($F(3, 21) = 4.429$, $p = 0.015$). However, there was no statistically significant interaction by group membership. The significant differences between time points by main effect of happiness were observed in the increase in scores between time-points T1 and T2 ($p = 0.014$) and the decrease between T3 and T4 ($p = .014$). No difference was observed between T2 and T3 ($p = .882$). The first group started at a slightly higher self-rated ranking of happiness, which increased following their training, however the group did not sustain this in the following 12 weeks. Group 2 also showed an increase after their training, and this trend continued over the first 6 weeks, however, they too did not sustain the levels 6 weeks later and happiness dropped to a lower level than that measured at the starting point.

This may have been due to returning to work at the start of the year increased stress preparing for semester 1.

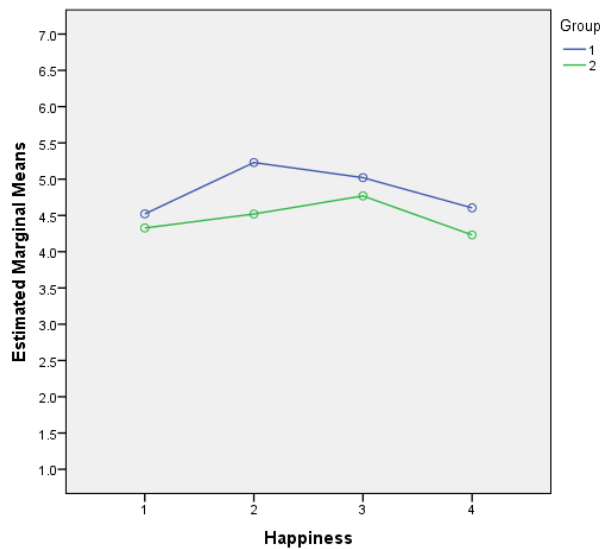


Figure 8: Comparison of group happiness

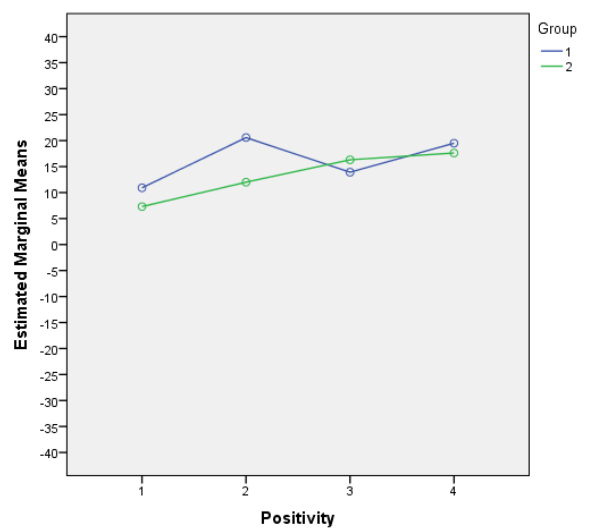


Figure 9: Comparison of group positivity

A statistically significant main effect occurred in the **positivity** scale over the four time points (figure 9): Pillar's Trace = .435 ($F(3, 21) = 5.388, p = 0.007$). Whilst there was no significant difference between groups, group 2 did have a significant effect in the positivity scale between T2 and T3 ($p = 0.016$), but there was no long-term effect.

Group 1 had a higher initial self-reported level of positivity as compared to group 2 prior to the intervention and positivity also increased immediately following the program. However, it dropped below the level of group 2, at T3 and then rose again 6 weeks later. Group 2 increased more steadily over time.

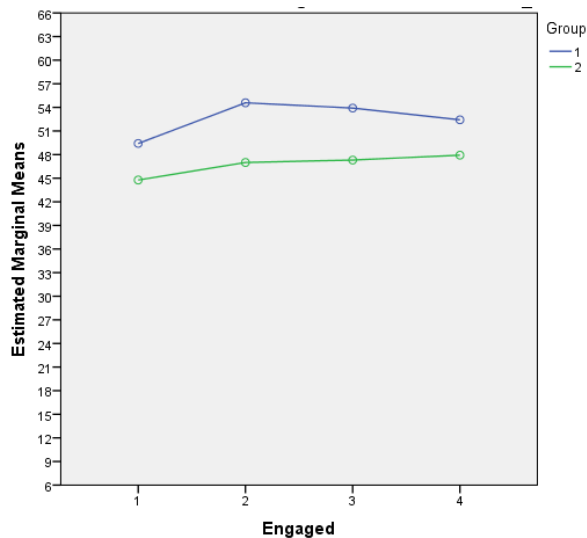


Figure 10: Comparison of group engagement

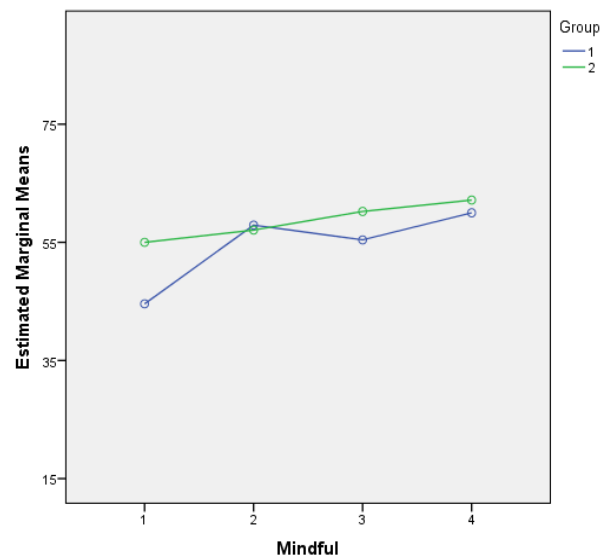


Figure 11: Comparison of group mindfulness

There was no significant difference and no interaction between groups for work **engagement** (figure 6.4): Pillars Trace = .169 $F(3, 21) = 1.426$, $p = .263$. $F(1) = 2.380$ $p = 0.137$.

A statistically significant overall improvement occurred in **mindfulness** (figure 11): Pillars Trace = 0.497 $F(3,21) = 6.925$, $p = 0.002$ but there was no significant difference between groups.

7. DISCUSSION

The aim of this study was to assess if mindfulness training provided to university staff in the workplace at ECU would improve individual's engagement in work and increase their sense of wellbeing, positivity and happiness.

Although research has suggested that mindfulness can be a useful resource for employee health and well-being (Koncz et al., 2016; Jamieson and Tuckey, 2016; Malinowski & Lim 2015) in this study no significant within-subject differences were observed for either group in any of the variables: wellbeing, engagement, positivity or happiness.

Although not statistically significant, well-being, positivity and to a lesser extent engagement, increased in both groups over the intervention period and the benefits were generally sustained. The results for happiness were unusual in that they were lower after

the intervention than before, however they did increase in both groups at some point during the study. These feelings may have been impacted on by other external factors. The inconclusiveness of the results could be attributed to the relative high dropout rate and small sample size.

The following limitations of this study were noted:

- **The study was statistically underpowered due to the dropout rate.** Less than half (n=25) participated in four or more sessions of the 6-week program: group 1 (n=12) and group 2 (n=13).
- **Conducting the intervention during work time may have been a constraint.** Several participants gave qualitative comments that doing the training after work may have been better. Staff may not have been able to concentrate if preoccupied with work issues and need to rush back to work. One strategy to potentially improve participation rate may be providing the intervention during working hours, which was not the case in this study. Also supported by the Netherlands study although as flagged by van Dongen this would lead to higher costs (van Dongen et al., 2016).
- **The duration of the course may have had an impact:** a shortened 6-week program rather than the full 8-week MBSR program may not have allowed enough time to improve wellbeing. Mindfulness training raises awareness of feelings which can be positive and negative.
- **Reduced length of each session:** the MBSR duration per session is 2.5hrs. This program reduced to 1 hour sessions to be more convenient for staff and was delivered during lunch breaks. As Langer and Moldoveanu (2000) note, mindfulness is a process requiring time and patience so if shortened benefits can be lost.
- **There could also have been a seasonal affect.** Happiness and wellbeing could have been impacted due to the final measures taking place just after the Christmas break. Both groups in follow-up reported a higher state of wellbeing at follow up T4.
- **Other confounding factors:** participants were asked if they had experienced a major life event in the 6 weeks prior to the intervention start date which may have had an impact on the results of wellbeing, happiness, positivity and engagement. As shown in Table 4: Group 1 had a higher percentage of major events with death, family and relationship issues, study worries and pregnancy, 59.2%, whilst only 22% of group 2 reported a major life event.

- A further limitation of this study was the lack of a clear definition of the concept of mindfulness i.e. whether a state, trait, intervention, and/or practice. Jamieson and Tuckey's (2016) recommendations for researchers following a systematic review of 40 studies in the workplace identified a common flaw that the mindfulness concept is not defined and would lead to confusion in study replication. More than half of the studies they reviewed defined mindfulness as a state (n=22) whilst 9 were missing any conceptualised definition and the others were either practice or intervention.

Table 4: Participants major life events

Group 1 (T2)	Group 2 (T3)
POTENTIALLY NEGATIVE IMPACT (n=16) <ul style="list-style-type: none"> • Death of family member x 4 • Family issues x 5 • Relationships issues x 2 • Health related self or family x 2 • Financial Issues x 1 • Pregnancy x 1 • Study worries x 1 	POTENTIALLY NEGATIVE IMPACT (n=6) <ul style="list-style-type: none"> • Death of family member x 3 • Family issues x 1 • Moved house and husband lost job x 1 • Health related self or family x 1
POTENTIALLY POSITIVE IMPACT (n=1) <ul style="list-style-type: none"> • Long service leave x 1 	POTENTIALLY POSITIVE IMPACT (n=1) <ul style="list-style-type: none"> • Attended conference very happy x 1

Future research also needs to address any potentially negative impacts of mindfulness training. If mindfulness trains staff to be less reactive and less affected by negative work events, does this then mean that staff will be more passive? Instead this could lead to staff adopting unhealthy patterns where staff accept abuse or mistreatment non-judgmentally instead of raising a grievance. (Good et al. 2016).

Consideration should be made in the length of each session and on the best time to run the intervention: after work or during lunch break? This study used an adapted version of the MBSR program reduced to only 1-hour sessions to make it easier for staff to fit into their work day. The original MBSR was 2.5hrs. The studies in the Netherlands also had no impact with a longer 90-minute weekly session and agreed that the duration and intensity of the training may have had an impact, not being sufficiently intensive to generate effects (van Berkel et al., 2014, van Dongen et al., 2016).

If during work time and staff find emotions are stirred up this may cause difficulties when returning to work in the afternoon. Several participants in this study suggested at the end of the day would be better: “may make it easier to attend as well as provide a good transition between work and home.”

There are also negative implications for organisations to consider in encouraging employees to practice mindfulness which have been raised by researchers. Ericson, Kjonstad, and Barstad (2014) suggested that as mindfulness encourages employees to be more true to their values, they may not be keen to take on additional duties to overburden themselves. Instead staff may take action to improve their work/life balance which may not be seen as beneficial to the organisation in the short term.

Studies in mindfulness vary widely in measurement tools. (Lomas et al., 2017). Rather than rely on self-reported data only, other methods of measurement should also be considered. Functional magnetic resonance imaging (fMRI) is a way to measure brain functioning and has been used successfully in assessing mindfulness. Zeidan et al. (2010) found that mindfulness training improved participants' visual-spatial processing and their performance; Brown et al. (2009) found only a difference in wellbeing with FMRI not with self-reported MAAS tool.

8. CONCLUSION AND RECOMMENDATIONS

This study did not show any statistically significant differences in the variables of: wellbeing, happiness, positivity or engagement in work. Other studies have shown significant benefits for organisations and employees following the implementation of mindfulness interventions in the workplace (Jamieson and Tuckey, 2016; Lomas et al, 2017; Koncz et al., 2016). However, just as with this study, others have found no effect (van Berkel et al., 2014; van Dongen, 2016).

Retention rate was an issue in this study and in future strategies need to be employed to ensure sustainability of the training program and reduce attrition rate. Other modes of delivery of intervention such as using an online platform may increase participation rates. Being able to carry out mindfulness training at convenient times may be more attractive to employees. Aikens et al., (2014) implemented an online program created specifically for the workplace with double the numbers of participants than recruited in this study and their findings were that mindfulness interventions were practical and effective in decreasing employee stress, and improved resiliency, vigour, and work engagement.

For future evaluations of mindfulness interventions considerations should be given to recruit larger samples to allow for attrition and still ensure that studies are adequately powered to detect reliable and significant effect sizes (Vollestad et al., 2015).

It is also necessary to investigate what factors will motivate staff to take a break at work when feel they are too busy, and to determine strategies to design targeted mindfulness training in order to optimise the effects of the training and to maximise sustainability and efficacy (Glomb et al., 2011).

There would also be some value in building in other measures, such as objective biomarkers of stress that do not rely solely on self-reported data, to avoid response bias.

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APPENDIX 1. Information form



Mindfulness at Work: The impact of practising mindfulness in the workplace on engagement, wellbeing, happiness and positivity.

Information Letter and Consent form for Participants

My name is Fiona Peters, HR Policy Adviser - Wellness and Benefits, at Edith Cowan University (ECU). I am also a Master of Public Health student at ECU and as part of my course I am conducting research to explore the effect of mindfulness training at work.

To be eligible for this study you need to be employed at Edith Cowan University. As a participant you will be randomly allocated to take part in a free six-week mindfulness training program, which is part of the Staff Health and Wellness program. This will be held once a week lasting approximately 60 minutes and there will be a final 4 hour retreat on a Saturday. You will also be required to complete daily individual mindfulness meditation sessions of 10 minutes duration and record these in a manual diary, and copies will be collected each week. In addition, you will complete 5 online questionnaires at the beginning and at the end of the study which should take approximately only 20 minutes to complete. All data collected for the study shall remain strictly confidential and all personal identification will be removed for the purposes of data analysis and reporting. Free counselling is also available to all staff through the ECU employee assistance program.

Participation in the study is voluntary and you will be randomly selected to either take part in one of the two mindfulness training programs. The first starts on Wednesday 10 September 2014 and the second on Wednesday 22 October 2014. An important part of the study is completion of pre and post questionnaires. You will be asked to complete these on four occasions.

This study is being supervised by Associate Professor Jacques Oousthizen and Associate Professor Owen Carter, Edith Cowan University, who can be contacted via email at j.oosthuizen@ecu.edu.au and o.carter@ecu.edu.au. The research has been approved by the Human Research Ethics Committee at Edith Cowan University. You may withdraw from the study at any time by informing the researcher of your decision.

Should you have any concerns or complaints about the research project and wish to talk to an independent person, you may contact:

Research Ethics Officer, Edith Cowan University
270 Joondalup Drive, JOONDALUP, WA 6027
Phone: (08) 63042170 / Email: research.ethics@ecu.edu.au

If you are interested, and available to participate in the study, or if you have any further questions about the study please contact me on 08 6304 2040 or email f.peters@ecu.edu.au Thank you for your time in reading this information letter
Fiona Peters, Researcher

APPENDIX 2. Informed Consent for Participant



Mindfulness at Work: The impact of practising mindfulness in the workplace on engagement, wellbeing, happiness and positivity.

I have read and understood the content of the information letter about the study by Fiona Peters Masters' student, School of Exercise and Health Science, Edith Cowan University. I understand that participation is voluntary and I may withdraw from the study at any time. I have been given the opportunity to ask questions relating to the study.

I hereby give my consent to participate in the study.

Print Name:

Signature of Participant:

Date:

Signature of Researcher:

Date:

Contacts:

Fiona Peters (Researcher)	Supervisors: A/Prof. Jacques Oosthuizen	A/Prof Owen Carter
Edith Cowan University	Edith Cowan University	Edith Cowan University
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Appendix 3. Measurement tools

(i) **Mindful Awareness Attention Scale (MAAS)**

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

	1	2	3	4	5	6
	Almost Always	Very Frequently	Somewhat Frequently	Somewhat Infrequently	Very Infrequently	Almost Never

1. I could be experiencing some emotion and not be conscious of it later.

1 2 3 4 5 6

2. I break or spill things because of carelessness, not paying attention, or thinking of something else.

1 2 3 4 5 6

3. I find it difficult to stay focused on what's happening in the present.

1 2 3 4 5 6

4. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.

1 2 3 4 5 6

5. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.

1 2 3 4 5 6

6. I forget a person's name almost as soon as I've been told it for the first time.

1 2 3 4 5 6

7. It seems I am “running on automatic,” without much awareness of what I’m doing.

1 2 3 4 5 6

- 8 I rush through activities without being really attentive to them.

1 2 3 4 5 6

9. I get so focused on the goal I want to achieve that I lose touch with what I’m doing right now to get there.

1 2 3 4 5 6

10. I do jobs or tasks automatically, without being aware of what I’m doing.

1 2 3 4 5 6

11. I find myself listening to someone with one ear, doing something else at the same time.

1 2 3 4 5 6

12. I drive places on “automatic pilot” and then wonder why I went there.

1 2 3 4 5 6

13. I find myself preoccupied with the future or the past

1 2 3 4 5 6

14. I find myself doing things without paying attention.

1 2 3 4 5 6

15. I snack without being aware that I'm eating.

1 2 3 4 5 6

ENGAGEMENT

(ii) Work and Well-Being Survey (UWES)

The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

Never	Almost Never	Rarely	Sometimes	Often	Very Often	Always
0	1	2	3	4	5	6

- 1. At my work, I feel bursting with energy. (VI1)**
- 2 At my job, I feel strong and vigorous. (VI2)**
- 3. I am enthusiastic about my job. (DE2)**
- 4. My job inspires me. (DE3)**
- 5. When I get up in the morning, I feel like going to work. (VI3)**
- 6. I feel happy when I am working intensely. (AB3)**
- 7. I am proud of the work that I do. (DE4)**
- 8. I am immersed in my work. (AB4)**
- 9. I get carried away when I am working. (AB5)**

Source: Schaufeli and Bakker (2003).

Note: VI = Vigor scale; DE = Dedication scale; AB = Absorption scale.

POSITIVITY

(iii) Modified Differential Emotions Scale

Instructions: Please think back to how you have felt during the past 24 h.
Using the 0–4 scale below, indicate the greatest amount that you have experienced each of the following feelings.

Not 0	A little 1	Moderately 2	Quite a bit 3	Extremely 4
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- ___ 1. What is the most amused, fun-loving, or silly you felt?
- ___ 2. What is the most angry, irritated, or annoyed you felt?
- ___ 3. What is the most ashamed, humiliated, or disgraced you felt?
- ___ 4. What is the most awe, wonder, or amazement you felt?
- ___ 5. What is the most contemptuous, scornful, or disdainful you felt?
- ___ 6. What is the most disgust, distaste, or revulsion you felt?
- ___ 7. What is the most embarrassed, self-conscious, or blushing you felt?
- ___ 8. What is the most grateful, appreciative, or thankful you felt?
- ___ 9. What is the most guilty, repentant, or blameworthy you felt?
- ___ 10. What is the most hate, distrust, or suspicion you felt?
- ___ 11. What is the most hopeful, optimistic, or encouraged you felt?
- ___ 12. What is the most inspired, uplifted, or elevated you felt?
- ___ 13. What is the most interested, alert, or curious you felt?
- ___ 14. What is the most joyful, glad, or happy you felt?
- ___ 15. What is the most love, closeness, or trust you felt?
- ___ 16. What is the most proud, confident, or self-assured you felt?
- ___ 17. What is the most sad, downhearted, or unhappy you felt?
- ___ 18. What is the most scared, fearful, or afraid you felt?
- ___ 19. What is the most serene, content, or peaceful you felt?
- ___ 20. What is the most stressed, nervous, or overwhelmed you felt?

HAPPINESS

(iv) The Subjective Happiness Scale (SHS)

For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

1	2	3	4	5	6	7
not a very happy person						a very happy person

2. Compared with most of my peers, I consider myself:

1	2	3	4	5	6	7
less happy					more happy	

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

**Below are some statements about
feelings and thoughts.**

Please tick the box that best describes your experience of each over the last 2 weeks STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5
I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

Also several questions relating to demographics and experience in mindfulness and meditation and include satisfaction open ended questions

(eg. age, gender, have you meditated before? how many years have you been meditating?
 Have you heard of mindfulness before? Have you practised it? If so for how long?)

What were your expectations of the mindfulness course before you started?

Were your expectations met? Yes/No

What did you think of the facilitator? Excellent / Very good / good / average / poor / very poor

Was it easy to understand and learn? Yes ./ No

Was it a suitable venue? Yes / No

Prior to the training had you ever done any meditation or mindfulness? If so what and how often? Did you feel you learnt anything new?

Did you practice it at home? Yes/No How often?

Did you feel the training improved your sense of wellbeing? Yes/ No

Happiness? Yes/ No and positivity levels? Yes/No

What about your engagement at work? Yes / No

have you experienced stressful events during this period that may have affected your scores in the scales? Yes / No

If you are happy to comment, what happened?

Any other information you would like to share relating to the program?