

# MINDFULNESS IN THE WORKPLACE

Pauline Kent & Sarah McGuire

Sligo University Hospital



May 2017

## Acknowledgements

The authors of this report would like to acknowledge all those who contributed:

- Dr. Paula Martin, MICGP
- Sligo University Hospital Management and Staff (SUH)
- Health Promotion and Improvement , HSE West (HPI)
- Sligo Institute of Technology

## Abbreviations

SUH: Sligo University Hospital

HWB: Health & Wellbeing

HI: Healthy Ireland

HSE: Health Service Executive

NSP: National Service Plan

HIIP: Healthy Ireland Implementation Plan

MBSR: Mindfulness Based Stress Reduction

MAAS: Mindfulness Attention Awareness Scale

SPSS: Statistical Package for the Social Sciences

## Executive Summary

Healthy Ireland (HI) 2013-2025 is Ireland's national framework for health and wellbeing (HWB) and strives towards a more inclusive approach to health governance by looking beyond the health service itself to include every sector in society and the people themselves. The Health Service Executives (HSE) National Service Plan (NSP) supports the implementation of the actions outlined in the HI Framework and aims to take action on staff health and wellbeing by developing and implementing a Healthy Workplace Policy in addition to creating supportive initiatives to encourage and support staff to take control over their own HWB (HSE, 2015). In addition the Health Service National Implementation plan 2015-2017 was launched to support the corporate vision of a "high quality health service valued by all". There were three strategic priorities identified one of which is staff HWB. In viewing the actions proposed in the Healthy Ireland Implementation Plan (HIIP), action number 4.9 positive mental health is directed at staff HWB. Action no. 4.9.2 states that there is a need to expand mindfulness and stress management training for staff.

Stress in the workplace is one of the most prevalent and persistent issues that affect workers and is linked to employee absenteeism, diminished productivity, staff turnover, medical care expenses, short and long-term disability, accidents and legal costs (Limm et al, 2011). There is growing evidence to support the implementation of workplace wellbeing programmes that assist staff in stress management and anxiety. The aim of this study was to incorporate a mixed method research design to investigate the impact of Mindfulness Based Stress Reduction (MBSR) training on staff working in an acute hospital setting.

A sample of 17(n=17) participated in the eight week mindfulness course. Mindfulness was measured using pre and post Mindfulness Attention Awareness Scale (MAAS). Participants successfully completed and returned the pre and post forms. A paired samples t-test was conducted on the pre and post MAAS and a statistically significant increase was observed ( $p=0.02$ ). An attendance record demonstrated that 11(n=11) out of the 17(n=17) participants achieved full attendance with only 1(n=1) drop out. An evaluation form completed by 13(n=13)

participants indicated that 9(n=9) of the participants “strongly agreed” that the training was effective in enhancing stress management.

The focus group participants reported that they felt they experienced increased ability to manage stress and reflected on how mindful they had become. Participants highlighted how this programme also had a positive impact on their work and home life stating that it resulted in them being more productive furthermore they would recommend the course to their colleagues.

It is evident from the research findings that MBSR training can have an impact on both stress management and mindfulness of employees working in an acute hospital setting. A key recommendation for future research would be to recruit a larger sample size to help increase the overall credibility of the findings.

## Table of Contents

Acknowledgements .....	2
Abbreviations .....	3
Executive Summary .....	4
1. Background .....	8
1.1 Framework & Action Plans.....	8
1.2 Stress in the Workplace .....	10
1.3 Employee Health & Wellbeing .....	11
2. A Review of the Literature .....	14
2.1 Presenteeism in the Workplace .....	14
2.2 Stress among Health Care Professionals .....	15
2.3 Mindfulness in the Workplace .....	16
2.4 Effectiveness of Mindfulness in the Workplace .....	16
2.5 Modifying Mindfulness Programmes to suit the Workplace Setting	17
2.6 Assessing the Effectiveness of Online Mindfulness Programmes	18
2.7 Mindfulness Programme Sustainability .....	20
2.8 Purpose of Current Study .....	21
3. Aims and Objectives .....	22
4. Methodology.....	23
4.1 Study Sample.....	23
4.2 Recruitment .....	23
4.3 Mixed Method Research .....	23
4.4 Intervention .....	24
4.5 Instruments .....	26
4.6 Ethical Considerations .....	26
5. Data Analysis .....	28
5.1 Quantitative Data .....	28
5.2 Qualitative Data .....	?
6. Discussion .....	35
7. Conclusions and Recommendations .....	38

<b>7.1 Limitations.....</b>	<b>38</b>
<b>8. References .....</b>	<b>39</b>
<b>Appendices .....</b>	<b>44</b>
<b>Abstract .....</b>	<b>60</b>

# 1. Background

## 1.1. Frameworks and Action Plans

Healthy Ireland 2013-2025 is Ireland’s national framework for health and wellbeing with its vision to have “a healthy Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, where wellbeing is valued and supported at every level of society and is everyone’s responsibility” (Department of Health, 2013). Healthy Ireland strives towards a more inclusive approach to health governance by looking beyond the health service itself to include every sector in society. The framework has four underpinning goals to achieve a ‘healthier Ireland’:

---

**To increase the proportion of Irish people who are healthy at all stages of life**

**Reducing health inequalities**

**Protect the public from threats to health and wellbeing**

**Create an environment where every individual and sector of society can play its part in achieving a healthy Ireland (Department of Health, 2013)**

---

In order to achieve the above goals and overall vision, a HI Implementation Plan was developed for the Saolta University Healthcare group 2015-2017. This plan provides a valuable opportunity to increase the health and wellbeing of staff, patients and wider community. Saolta group includes counties Sligo, Leitrim, Donegal, Roscommon, Mayo and Galway (SUHCG, 2014). The employees of the Saolta University healthcare group are seen as central to the implementation plan both in terms of actions that are taken for the staff themselves and also for the implementation of the plan to improve the quality of care delivered to patients. In line with the above goals of the Healthy Ireland Framework the Saolta implementation plan has formed its own goals for staff:



- 
- 1. To support staff to improve their health and wellbeing**
  - 2. To raise staff awareness of health inequalities and ensure relevant data is recorded and utilized in planning services.**
  - 3. To protect both staff and patients from infectious diseases and other threats to health and wellbeing.**
  - 4. To ensure every member of staff understand their role in implementing the healthy Ireland goals. (SUHCG, 2014)**
- 

The Health Service Executive (HSE) has set out a National Service Plan (NSP) 2016 to support in the implementation of the actions outlined in the Healthy Ireland Framework (HSE, 2015). This plan sets out the type and volume of health and social services which will be provided by the HSE over the course of the year within the funding which was allocated by the government. Healthy Ireland in the Health Service National Implementation plan 2015-2017 was launched to help achieve the corporate vision plan of a “high quality health service valued by all”. There were three clear strategic priorities identified where action is required:

---

**System Reform: To ensure that the reforms underway are being delivered which support a better health system.**

---

**Reducing Chronic disease: Chronic diseases are one of the biggest risks to service provision and population health.**

---

**Staff Health & Wellbeing: To ensure a resilient and healthy workforce. (HSE, 2015)**

---

As observed staff are deemed as being central to the implementation of the actions whether it is receiving support themselves or delivering support to patients. The NSP, 2016 aims to take action on staff health and wellbeing by developing and implementing a Healthy workplace policy in addition to creating supportive initiatives that will both encourage and support staff to take control

over their own health and wellbeing by engaging in a healthier lifestyle (HSE, 2015). Referring again to the Healthy Ireland Implementation Plan looking at the actions proposed, action number 4.9 on positive mental health is directed at staff health and wellbeing (SUHCG, 2014). Action 4.9.1 states that there is a need to promote awareness of the supportive information that is available to staff on positive mental health, stress, addiction and other mental health issues. In addition action no. 4.9.2 states that there is a need to expand mindfulness and stress management training for staff (SUHCG, 2014).

## 1.2 Stress in the Workplace

There is a growing concern for the adverse effects that work-related stress can have on an individual's health. The World Health Organisation (WHO), 2004 define work related stress as "the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope". The Irish Congress of Trade Union as cited by Clarke, 2001, identified some of the most common causes of stress, some of which include lack of time to complete a job correctly, lack of a clear job description, lack of recognition, no clear procedure to report complaints and unpleasant or hazardous working conditions. In reviewing the burden of occupational stress in Ireland according to the Irish Congress of Trade Unions of those who work in the voluntary sector 90% find their job stressful (Clarke, 2001). Moreover people who work in the health service (82%) and teachers (88%) reported high stress levels with those who work in construction reporting the lowest level of stress at 63% (Clarke, 2001).

Being exposed to stress for a prolonged period of time can have both a negative emotional and physical impact on an individual (Wolever et al., 2012).

Research suggests that people who suffer from chronic work related stress can result in the individuals engaging in behaviours that can accelerate the development of chronic diseases such as cardiovascular disease (Kivimaki et al., 2002).

Stress is also responsible for social and psychiatric disorders such as depression, anxiety, sleep deprivation and psychosis (Jennings, 2008).

The loss of productivity and insurance claims as a result of occupational stress led to European employers having to pay up to 10% of Gross National Product (Clarke, 2001). The adverse effects of stress on the health and wellbeing of employees and employers in addition to the financial impact may encourage companies, organisations, agencies etc to offer workplace health and wellbeing programs. Such programmes in the workplace have proven to be a popular and a cost effective way to reduce the risk of chronic illnesses associated with stress (van der Klink et al, 2001). There is a need to demonstrate both effectiveness and viability of mindfulness workplace stress reduction programmes to employers as primary prevention.

The Health Service Executive's (HSE) regional health forum observed stress related referrals to occupational health for the first quarter of 2016 focusing on Sligo, Leitrim and South Donegal. It is evident from the reports that a majority of referrals where stress was identified were work related. The Sligo figures demonstrated that a majority of the referrals were made by management whereby the employee's stress was directly related to work (19/33) with 4 employees referring themselves. Similarly in Donegal a majority of work related stress referrals were made by management (15/46).

### 1.3 Employee Health & Wellbeing

The HSE adheres to the guidelines for the health and wellbeing of their employees like any other organization which is responsible for their employee's wellbeing. It is a duty to abide by the goals and actions that are set out in the NSP. In addition a Guidance Document for Hospitals Health and Wellbeing Standards was developed in 2014 to ensure that both management and staff understood the role they play in applying the standards for the promotion and protection of the health and wellbeing of their client's (HSE, 2014). The document clearly outlines the steps that are required to meet the health and wellbeing standards. The guidance document refers to governance and policy stating that the hospital must allocate resources to ensure effective implementation of health promotion activities and policies (HSE, 2014). In addition to ensuring continuous improvement, the hospitals

are required to identify a lead for Health and Wellbeing Standards within the hospital to ensure that staff, stakeholders and patients are actively involved in the development and implementation of policies and activities to meet the Health and Wellbeing Standards (HSE, 2014).

Under the Health, Safety and Welfare at work Act 2005 stress is highlighted as a hazard (HAS, 2005). Therefore stress must be assessed and managed like any other physical hazard that occurs in the workplace. Employers have a statutory obligation to identify stress hazards that exist in the workplace and eliminate them as appropriate. In viewing interventions to manage occupational stress we identified two evidence based programmes locally relating to the management of stress. Dr. Jim White a consultant clinical psychologist developed 'Stress Control' a cognitive behavioural therapy class in an attempt to help people prevent stress from becoming an issue and stopping it from being an issue (White, 1986). This course also included other elements such as mindfulness and positive psychology. Saolta recognized this programme as one of the key deliverables for 2016 due to its renowned success in improving stress management. MBSR is another course aimed at mindfulness and *stress management*. *MBSR* was developed by Jon Kabat-Zinn in 1979 at the University of Massachusetts Medical Centre's outpatient stress reduction clinic (Kabat-Zinn, 2003). Mindfulness which is derived from Buddhist practice has received a surge of attention in recent years. Mindfulness has many broad definitions, however for the purpose of this paper Kabat-Zinn's, 2003 definition of mindfulness will be utilized whereby he defines mindfulness as "the awareness that emerges through paying attention, on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment".

The actions outlined in both the NSP 2016 and the Saolta Implementation plan form the basis for the following research paper. Action 4.9.2 relating to positive mental health for staff in the Saolta Implementation plan paved the way to introduce mindfulness based stress reduction training to staff of SUH in an attempt to increase mindfulness levels of staff and assist in the management of stress (SUHCG, 2014). This research focused on mindfulness in the workplace exploring both national and international evidence of effectiveness. However, having used

various databases such as Medline, CINAHL, PUBMED, PscylInfo and Cochrane it became apparent that little national evidence exists regarding the impact of MBSR training on mindfulness and stress.

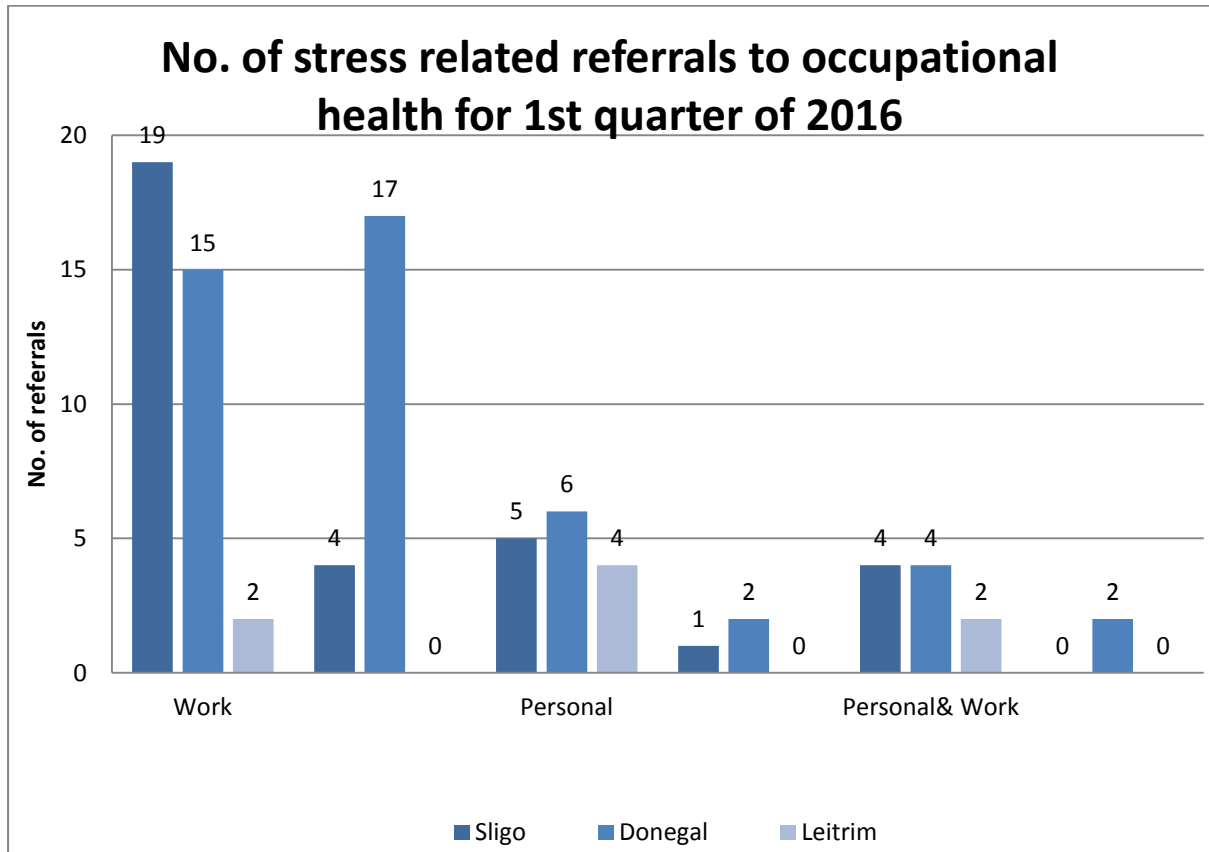


Figure 1 Referrals to occupational health for 1<sup>st</sup> quarter of 2016

## 2. A Review of the Literature

Stress in the workplace is one of the most prevalent and persistent issues that affect workers and the cause can be multifaceted. One study investigated stress levels, health behaviours and quality of life of employees who joined a wellness centre (Clark et al., 2011). A survey which included a series of questions relating to current health status and health behaviours was distributed to employees. The findings demonstrated that 2147 of the employees were highly stressed. Employees with high stress levels reported having statistically significant poorer health than employees with low stress levels, greater fatigue and lower quality of life. In relation to joining the wellness centre employees with high stress levels reported that they were less active, had poor nutritional habits, and lacked confidence in their ability to be active. In addition the employees who had high stress levels also reported having numerous health problems such as high cholesterol, obesity, high blood sugar and high blood pressure (Clark et al., 2011). This study highlights the adverse effects stress can have on an individual's physical and psychological well being. It is evident that there is a need to identify the causes of stress among employees and to treat the effects of stress.

### 2.1 Presenteeism in the Workplace

Callen et al., 2013 conducted a study looking at health risk factors associated with presenteeism in the workplace. Presenteeism is defined by Dew et al., 2005 as “a concept used to describe the phenomenon of working through illness and injury”. Presenteeism describes the act of an employee coming to work despite having an illness that would justify an absence which has a significant impact on employee's productivity. In attempting to identify the factors related to presenteesim Callen et al., 2013 developed a conceptual model including stress, weight, blood pressure, cholesterol, blood glucose, exercise and diet as all these factors can influence whether or not an employee presents for work . A health assessment survey (The Personal Wellness Profile) was completed by 1798 employees. This instrument consisted of various multiple choice questions relating to the factors

mentioned above. In relation to stress, variables were created for employees to report whether or not they experienced stress at work, at home or as a result of finances (Callen et al., 2013). The study's findings demonstrated that a total of 84.1% of employees experience stress at work, 83.33% experience stress at home and a further 31.37% stated that they experience financial stress. From analysis it was unveiled that stress was the only factor positively associated with presenteeism. The study found that employees who experience such stress significantly increase the number of expected days of lost productivity due to mental and physical health (Callen et al., 2013). This study reiterates that stress among employees should not be underestimated. The findings also provide sufficient evidence for employers and occupational health care professionals to develop stress management interventions. In conclusion however the authors stated that future research is needed to assess the cost effectiveness of stress reduction interventions for employees (Callen et al., 2013).

## 2.2 Stress Among Health Care Professionals

In reviewing stress in a health care setting, a cross sectional epidemiological study was conducted by Al-Makhaita et al., 2015. This study consisted of 17 primary health care centers. The aim was to assess the prevalence of work related stress among nurses working in primary and secondary health care organizations in Dammam, Eastern Saudi Arabia. There were a total of 637 nurses included in the study who completed a self-administered questionnaire which included 31 work related stress questions. The study's findings demonstrated that the overall prevalence of work related stress was 45.5% with 43.1% accounting for nurses who work in primary care levels and 46.2% accounting for nurses who work in secondary care levels (Al-Makhaita et al., 2015). In nurses who work in primary health care level there was significant statistical associations found between work related stress and being married and having three or more children. Furthermore the occurrence of work related stress among nurses in secondary level health care was statistically associated with the younger age category , being married, Saudi nationality, working in surgical department, work shifts and having a bachelor's

degree (Al-Makhaita et al., 2015). Such findings highlight how stressful a profession nursing can be with nurses being exposed to many stress provoking factors.

### **2.3 Mindfulness in the Workplace**

There is growing evidence to support the implementation of workplace wellbeing programmes that assist staff in stress management and anxiety. The evidence also supports the development of coping skills that help to reduce chronic illness associated with stress and reduce utilization of health care in treating stress related illness (Rahe et al., 2002). Meditation is the main method in which mindfulness is cultivated (Kabat-Zinn, 2003). MSBR is not strictly for use in a workplace setting as it can be used as a model in a wide variety of settings for the purposes of stress reduction (Kabat-Zinn 2003). MSBR was originally introduced as an eight week patient centred and evidenced based mindfulness program which consists of weekly 2.5 hour workshops and one day retreat. Throughout the course participants practice formal mindfulness techniques. Mindfulness training has been found to induce improvements in mental health measures such as anxiety, quality of life, coping abilities and depression (Ludwig and Kabat-Zinn, 2008). The main aim of the MBSR training is to support employees to develop greater self awareness and self care skills, responding rather than reacting to stress. Employees learn to step back from stressful situations rather than engaging in habitual negative thoughts and worrying behaviour that escalate the stressful situation. Employees learn to develop their own inner resources to take better care of themselves.

### **2.4 Effectiveness of Mindfulness in the Workplace in Relation to Stress**

Evidence suggests that MBSR has positive impacts on health and well-being among many diverse populations. Grossman et al., 2004, conducted a comprehensive meta-analysis which consisted of 20 published and unpublished studies which looked at a wide range of clinical populations in addition to non-clinical. The findings demonstrated that MBSR consistently resulted in improvements among a broad range of populations inducing improvements in anxiety, coping ability and



quality of life measures which concur with Ludwig and Kabat-Zinn, 2008. Furthermore, Chiesa & Serretti, 2009 conducted a meta-analysis looking at the benefits of MBSR in reducing stress among healthy individuals which included the analysis of ten trials. The main objective of this study was to assess the effects of MBSR in reducing stress in non-clinical populations due to the vast amount of research that had been done in patients who are mentally or physically ill. The findings of the meta-analysis demonstrated that when compared to waiting list treatment MBSR had significantly positive results in reducing stress among healthy individuals (Chiesa & Serretti, 2009). However, the authors suggested that further research was required to evaluate if the effects of MBSR were sustainable.

A study conducted by Walach et al., 2007 demonstrated the integration of MBSR training in a diverse setting whereby the study was carried out in a call centre in Germany. It had been found that employees who work in call centers experience significantly more stress than any other work environment with call centre employees displaying mild (39.4%) to severe (8.3%) symptoms of psychological distress (Charbotel et al., 2009). Walach et al., 2007 assessed the effectiveness of MBSR in a call centre which involved gathering both quantitative data via a coping and wellbeing survey and qualitative data via interviews to compare the MBSR group to a control group. The findings demonstrated that employees at the call centre increased their use of strategies aimed at coping with stress. There were significant differences identified among the MBSR group in post treatment compared to the control group. One key finding obtained from conducting interviews with the employees of the MBSR group was that participants coped better with stress and were less likely to experience immediate panic and react automatically when confronted with a problem at work (Walach et al., 2007). However the small sample size of 27 participants is the one major draw-back of this informative study.

## **2.5 Modifying Mindfulness Programmes to meet the Needs of the Workplace Setting**

Virgili, 2013 conducted a meta-analysis of mindfulness intervention studies related to working adults. The aim of the research was to assess how effective mindfulness based interventions were in reducing stress. The meta-analysis consisted of a total

of 1,139 participants and included 19 controlled and uncontrolled studies. The studies' research findings highlighted that brief mindfulness interventions developed for settings such as a work place were as effective as the originally developed 8 Week mindfulness intervention. The findings indicate that mindfulness programmes adapted to a workplace setting can be effective in reducing stress among employees. However, these findings are to be taken with caution given that there is little evidence available on the effectiveness of mindfulness based interventions in a workplace setting compared to other occupational interventions aimed at reducing stress such as yoga and relaxation training (Virgili, 2013).

## **2.6 Assessing the Effectiveness of Online Mindfulness Programmes**

In viewing the mindfulness interventions at a macro level as opposed to confining research to a health care setting Wolever et al., 2012 conducted one of the largest studies on mindfulness in the workplace whereby the study assessed the feasibility of two mind-body workplace health and wellbeing programmes in reducing stress. Wolever et al., 2012 conducted a randomised controlled trial to compare a therapeutic yoga based programme to a mindfulness program as well as comparing two different delivery systems for mindfulness, online versus in-person programmes. This study involved 23 employee volunteers who were randomized into a therapeutic yoga stress reduction programme, the mindfulness stress reduction programmes (online versus in-person) or a control group who received the same assessments but were not given any intervention to help with reducing stress. The studies' findings demonstrated that when compared with the control group; both mind-body interventions induced statistically significant reductions in participant's perceived stress and sleep disturbances. Both the delivery systems for the mindfulness interventions gave similar results, however it was found that even though attendance rates at the online programme were lower, there appeared to be greater engagement among the online mindfulness group. All in all, this study indicated that mind-body programmes are effective in reducing stress of employees in addition to demonstrating the practicality of introducing a work place stress reduction programme for a short period of time. By ensuring ease of access, by dedicating one hour of employee's lunchtime to the intervention over 12 weeks and ease of physical access by having options available for classes on-site

or having virtual classes that could be accessed by computer in the workplace in addition to having interventions that were flexible and could be delivered online, in a group setting or in person it helped minimize any barriers to engaging fully in the intervention (Wolever et al., 2012).

A study conducted by Aikens et al., 2014 examined whether a shortened MBSR intervention was as effective as the original 8 week MBSR intervention in reducing employee stress and improve wellbeing. In an attempt to increase participant commitment, the mindfulness intervention was carried out online, as one potential weakness of MBSR training is that it requires great commitment and requires participants to attend 25-30 hours of teacher led training with an additional 45 minutes of practice at home daily. Aikens et al., 2014 created a specific MBSR training for the workplace which only required 25% of the time commitment associated with the original MBSR training. A total of 89 participants were recruited for the purpose of the study and randomly assigned into either an online mindfulness programme or a wait-list control group. The findings of the study demonstrated that when compared to the control group the mindfulness group displayed statistically significant decreases in perceived stress in addition to an increase in mindfulness, vigor and resiliency. This provided significant evidence for the effectiveness of using an online platform in delivering mindfulness interventions (Aikens et al., 2014). The findings concur with Virgili, 2013 in that mindfulness programmes that are adapted to the workplace setting can be equally effective as the original mindfulness programme. It could also be suggested that Aikens et al., 2014 conduct the same study using the original MBSR training and compare both to assess whether online training is better than in-person training or vice versa. However, a similar comparison has already been made by Barak et al., 2008 in a comprehensive review and meta-analysis consisting of 92 studies looking at online psychotherapeutic interventions versus in-person interventions. The findings concluded that no difference exists between the effectiveness of in-person versus online interventions (Barak et al., 2008). It is key to bear in mind that this study looked at all psychotherapeutic interventions online and was not isolated to MBSR interventions.

## 2.7 Mindfulness Programme Sustainability

A further randomized controlled trial was conducted by Huang et al., 2015 to establish the effectiveness of mindfulness based interventions in a workplace for employees who already had poor mental health. A total of 144 participants were included in the study where they were randomized into the intervention group or the control group. This study involved taking measurements at five different time points during the 8 week intervention: pre-intervention(T1), mid-intervention(T2), completion of intervention(T3), four weeks after completion(T4) and finally, eight weeks after completion of the intervention(T5) (Huang et al., 2015). The findings demonstrated that on completion of the intervention at time point three(T3) compared to the control group those in the intervention group reported significantly lower rates of perceived stress, fatigue and psychological distress with the effects being sustained at time points four and five (Huang et al., 2015). This study was successful in gauging the effectiveness of mindfulness based interventions in improving mental health but failed to gauge the effectiveness of mindfulness based interventions in reducing job strain.

Research that had been conducted in a healthcare setting, Bazarko et al., 2013 assessed the effectiveness of MBSR among nurses employed in a corporate setting. This study differed from the original MBSR training as it delivered a new model of MBSR which replaces six of the eight teacher lead in-person training with telephonic sessions (tMBSR). This consisted of meeting with the MBSR instructor for a full day, in-person, retreat at the beginning of the intervention followed by six 1.5 hours teleconference calls, access to the instructor via email between the sessions and one full day retreat on conclusion of the 8 week intervention. In total the sample consisted of 36 nurses from a health care organization (Bazarko et al., 2013). The findings indicated that from baseline to the end of the MBSR intervention at 8 weeks significant improvements were noted in participant's general health and decreases in stress and work burnout were documented. During a four month follow up it was found that improvements noted at 8 weeks were sustained and that those who continued the MBSR practices following completion of the programme experienced better outcomes than those who did not continue the practices (Bazarko et al., 2013). These findings agree with Huang et al., 2015

in that mindfulness programmes have been found to have sustainable effects. These findings may have key implications for workplaces in that MBSR could pave the way for MBSR to be integrated into workplaces where on-site programmes may be inaccessible and inconvenient to employees and employers. The findings correlated with Aikens et al., 2014 and Wolever et al., 2012 in that MBSR interventions can be tailored to a working environment whilst still ensuring effectiveness.

## **2.8 Purpose of Current Study**

Large Multi- national corporates such as Google, Aetna, General Mills and Gamble have successfully introduced mindfulness based interventions into the work place (Arunas, 2015). This is in response to the extensive research that has been conducted over the past 15 years which provides significant evidence to suggest that mindfulness based programmes can decrease stress and stress related illness which in turn reduce health care costs and increase employee productivity (Arunas, 2015). The rationale for this study aimed to strengthen the existing research by evaluating the effectiveness of MBSR training among staff members at Sligo University Hospital (SUH), Ireland. While this study focused on MBSR in a healthcare setting it is applicable to all other settings as the issue of stress in the workplace is well documented. SUH sought to deliver this programme in order to meet the health and wellbeing needs of staff in accordance with HSE service plan 2016, which states that supporting initiatives should be implemented to support and encourage staff to take control over their own health and wellbeing to live healthier life.

### 3. Aims & Objectives

---

**Aim of the study:**

The primary aim of this study is to determine the effectiveness of introducing mindfulness based stress reduction training in increasing the overall mindfulness of staff at SUH.

**Objectives:**

- To measure baseline mindfulness levels of SUH staff by distributing mindfulness attention awareness scale (MAAS) pre assessment forms to recruited participants. This is an evidence based tool which is renowned for its validity in assessing an individual's mindfulness (Brown & Ryan, 2003).
- To increase the mindfulness of SUH staff through delivering a MBSR course facilitated by a certified mindfulness instructor.
- To compare self-administered pre and post mindfulness assessment forms to evaluate the effectiveness of the MBSR training and compare baseline mindfulness levels to post intervention mindfulness levels.
- To assess if there is a change in the level of mindfulness among staff of SUH as a result of the intervention.
- Facilitate a focus group to evaluate the transferability and sustainability of the skills learned in the MBSR training in participant's work and home practice in addition to elaborating on quantitative data obtained via MAAS.

## 4. Methodology

### 4.1 Study Sample

A sample of 17 subjects from various disciplines in SUH was invited to participate in MBSR training. This involved the 17 subjects attending MBSR training delivered over an eight week period.

### 4.2 Recruitment

Participants were recruited via an email that was circulated to all staff. In addition posters were displayed throughout the hospital promoting the course. Each participant received an information leaflet outlining the programme and commitment required.

### 4.3 Mixed Method Research

This study used an explanatory mixed method design to investigate if MBSR training influenced stress management and mindfulness levels among staff of SUH. Mixed method research is defined as:

---

**“The type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches**

**(e.g ., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the purposes of breadth and depth of understanding and corroboration” (Johnson et al., 2007, p 123)**

Using a mixed method design strengthens the study and increases the validity of the data obtained in ways that using a single study design fail to accomplish (Creswell & Clark, 2007). In addition mixed method research helps to offset any weaknesses that are associated with quantitative and qualitative research

(Creswell & Clark, 2007). For this study an explanatory design was incorporated as the qualitative data obtained from facilitating the focus group helped to build upon or strengthened the previously obtained quantitative data from the pre and post Mindfulness Attention Awareness Scale (MAAS) forms (Creswell & Clark, 2007). The first phase of the research involved collecting quantitative data and the second phase involved collecting qualitative data with a greater emphasis placed on the quantitative data obtained (Creswell & Clark, 2007).

For this study quantitative data was obtained via pre and post MBSR training MAAS forms. Qualitative data 5(n=5) of the 17(n=17) subjects who participated in the MBSR training agreed to participate in a focus group discussion where they were given an opportunity to discuss their subjective experience of the intervention in addition to providing feedback on how the MBSR training impacted on themselves at home/at work. The focus group allowed for a series of open-ended questions aimed at different aspects of the MBSR training which allowed for the subjects to elicit in-depth, detailed feedback exploring their experience of participating in the training and if it had any effect be it negative or positive.

The focus group was audio recorded via a Dictaphone, transcribed verbatim and added to the dataset. In order to analyze the data Braun and Clarke's (2006) model for theoretical thematic analysis was used as opposed to using inductive thematic analysis as the questions included in the focus group discussion were directed at specific research questions (Braun & Clarke, 2006).

As mentioned the focus group allowed for open-ended questions, however the researcher held a particular focus during the coding process when searching for themes which had specific relevance to the research question.

#### **4.4 Intervention**

Subjects were invited to attend a pre course orientation session which provided participants with detailed information on level of commitment and home practice. This was followed by six two and half hour workshop sessions over a period of six weeks in addition to a full day retreat. At the start of the eight week course subjects were asked to complete a self-administered pre MAAS form. The training



course was delivered by a certified mindfulness instructor who introduced the subjects to the concept of mindfulness and mindfulness practices. The weekly workshops included guided instruction in mindfulness meditation practices. Participants engaged in gentle stretching and mindful yoga. Group discussions aimed at working more skillfully with stress and developing awareness in all aspects of their lives. In addition to the workshop session subjects were invited to participate in a full day retreat of mindfulness ensure commitment subjects were asked to complete daily home assignments practice. To including integrating mindfulness into their workplace setting. On completion of the six workshop sessions and the full day retreat participants were asked to complete a self-administered MBSR evaluation form which consisted of both open and closed questions using a Likert scale. This was used to assess whether the course was successful in helping the participants to be more mindful, manage stress more effectively and use the tools and techniques in their everyday lives. (Appendix C)

### **Intervention Duration**

- The intervention commenced on the 28<sup>th</sup> January - 12<sup>th</sup> March 2016.
- Focus group 3 months post intervention.
- Evaluation and report compiled between April and September 2016.

### **Intervention Delivery**

- Programme was delivered over a period of 6 weeks with 2.5 hour workshops plus one full day retreat.
- The workshops were delivered by a health care professional certified as a mindfulness instructor.

## **Intervention Funding**

The funding for this initiative was from Health Promotion and Improvement Health and Wellbeing Division, the Nurse Practice development unit SUH and participants also contributed a nominal fee towards cost.

## **4.5 Instruments**

### **Mindfulness Attention Awareness Scale (MAAS) (Appendix A)**

MAAS is an evidence based tool for measuring mindfulness. It is a 15 item scale “which assesses individual differences in the frequency of mindful states over time” and “is focused on the presence or absence of attention to and awareness of what is occurring in the present” (Brown & Ryan, 2003 p 824). Research has found that the specific form of attention and awareness associated with mindfulness ensure that the higher scores obtained on the MAAS make it a valid predictor of wellbeing. The MAAS consist of 15 statements whereby respondents use a Likert Scale ranging from 1(almost always) to 6 (almost never) to indicate how often they have the experience which is described in each of the 15 statements. The higher the score obtained the higher the mindfulness level of the respondent (Brown & Ryan, 2003).

## **4.6 Ethical Consideration**

Informed consent was obtained whereby all participants were asked to provide a signature of consent (see appendix B). Subjects were informed and made aware of the purpose of the study, how the information they provided would be analysed and who would have access to the information throughout the duration of the study. In addition confidentiality and anonymity was confirmed. Participants were also notified that they could withdraw from the MBSR training and the focus group discussion at any time without any follow up.

To ensure participant confidentiality the quantitative data which was obtained via the MAAS pre and post forms, an identifier code was given to each subject whereby their name would never be disclosed throughout the duration of the study. When conducting the focus group participants were notified in advance that direct quotes may be taken and included in the final report when discussing results and that again they would be given a specific identification code where their details would remain anonymous at all times.

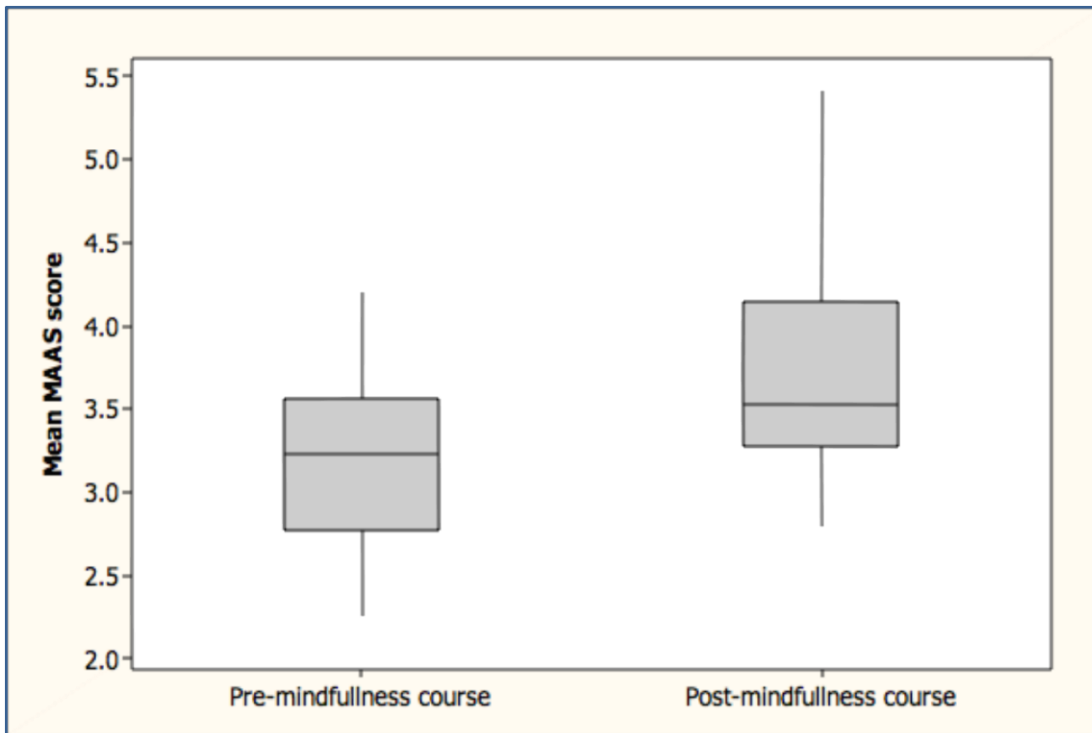
## 5. Data Analysis

### 5.1 Quantitative Data

#### MAAS

For the purpose of this study the results were analyzed using Statistical Package for the Social Sciences version 22 (SPSS). Paired t-tests were used to compare pre and post training course scores on the Mindfulness Attention Awareness Scale (MAAS). 17(n=17) staff members completed the pre training course MAAS. 14(n=14) of the participants completed and returned the post training course MAAS form.

A paired-samples t-test was conducted to evaluate the impact of MBSR training on participant's mindfulness scores. The results demonstrated that there was a statistically significant difference between pre ( $M=3.201$ ,  $SD=0.575$ ) and post ( $M=3.769$ ,  $SD=.715$ ,  $t(13) = 2.65$ ,  $p = 0.02$ ) mean MAAS scores with a mean increase of 0.5.



**Figure One**

Paired T-Test and CI: MAAS post, MAAS pre

Paired T for MAAS post - MAAS pre

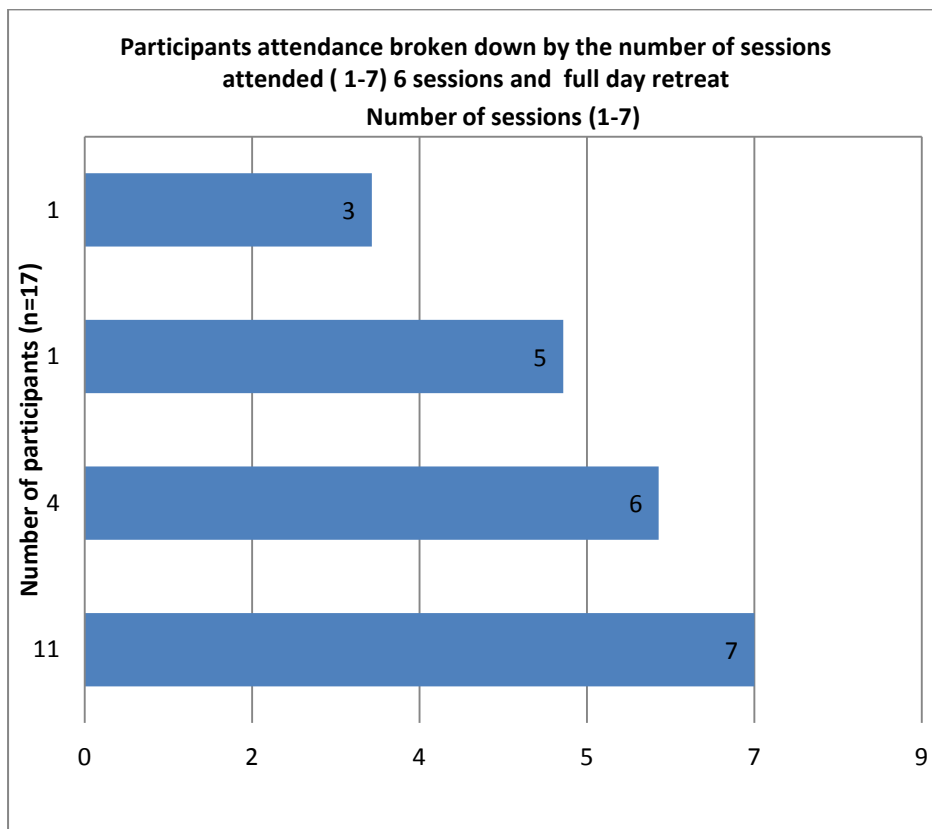
	N	Mean	StDev	SE Mean
MAAS post	14	3.769	0.715	0.191
MAAS pre	14	3.201	0.575	0.154
Difference	14	0.567	0.801	0.214

95% CI for mean difference: (0.105, 1.030)

T-Test of mean difference = 0 (vs not = 0): T-Value = 2.65 P-Value = 0.020

## Attendance Records

Figure 2 illustrates the attendance records of the MBSR training course including the one full day retreat. As shown 11(n=11) out of the 17(n=17) participant's achieved full attendance record, 3(n=3) participants missed 1 session, 1(n=1) participant missed 2 sessions and there was one drop out (n=1) midway through the course.



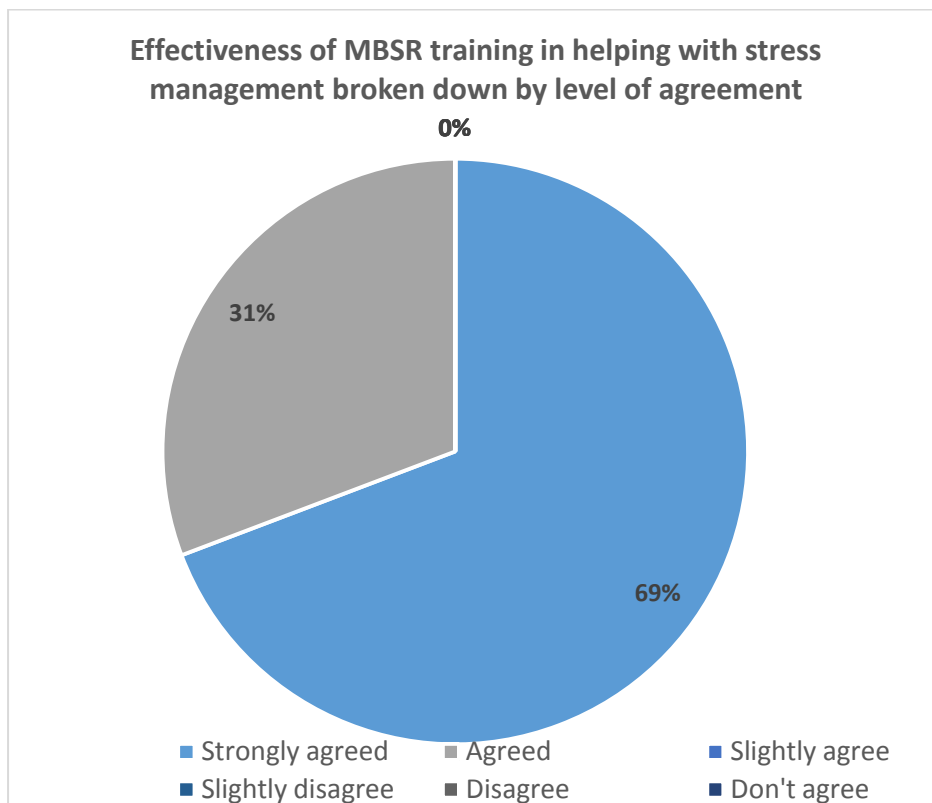
**Figure 2 - Attendance Records of MBSR Course**

## Course Evaluation Form

Participants were asked to complete a self-administered evaluation form reflecting on their experience of participating in the MBSR Programme. 13(n=13) participant's successfully completed the evaluation form. Figure 4 shows the participants level of agreement with the effectiveness of MBSR training in helping with stress management. The graph illustrates that a 69% of the participant's (n=9) "strongly agreed" with the statement with 31% of the participants (n=4) stating that they "agreed" with the statement.

Using a Likert scale participants were required to answer on the scale their agreement level with the course providing useful self-care tools. 85% (n=11) of respondents said they “strongly agree” and with 15% of the respondents (n=2) stating that they “agreed” with the statement. Participants were then asked for their opinion on whether the course was well presented and relevant to the course theme. 92% of the participants “strongly agreed” (n=12) with 8% stating that they “agreed” with the statement. Finally participants were asked their agreement level with whether or not they can integrate their new mindfulness tools into their personal and work life. The results demonstrated that 85% of the participant’s (n-11) “strongly agreed” with 15% of the respondents stating that they “agreed”.

*Figure 3 – Effectiveness of MBSR in helping with Stress Management*



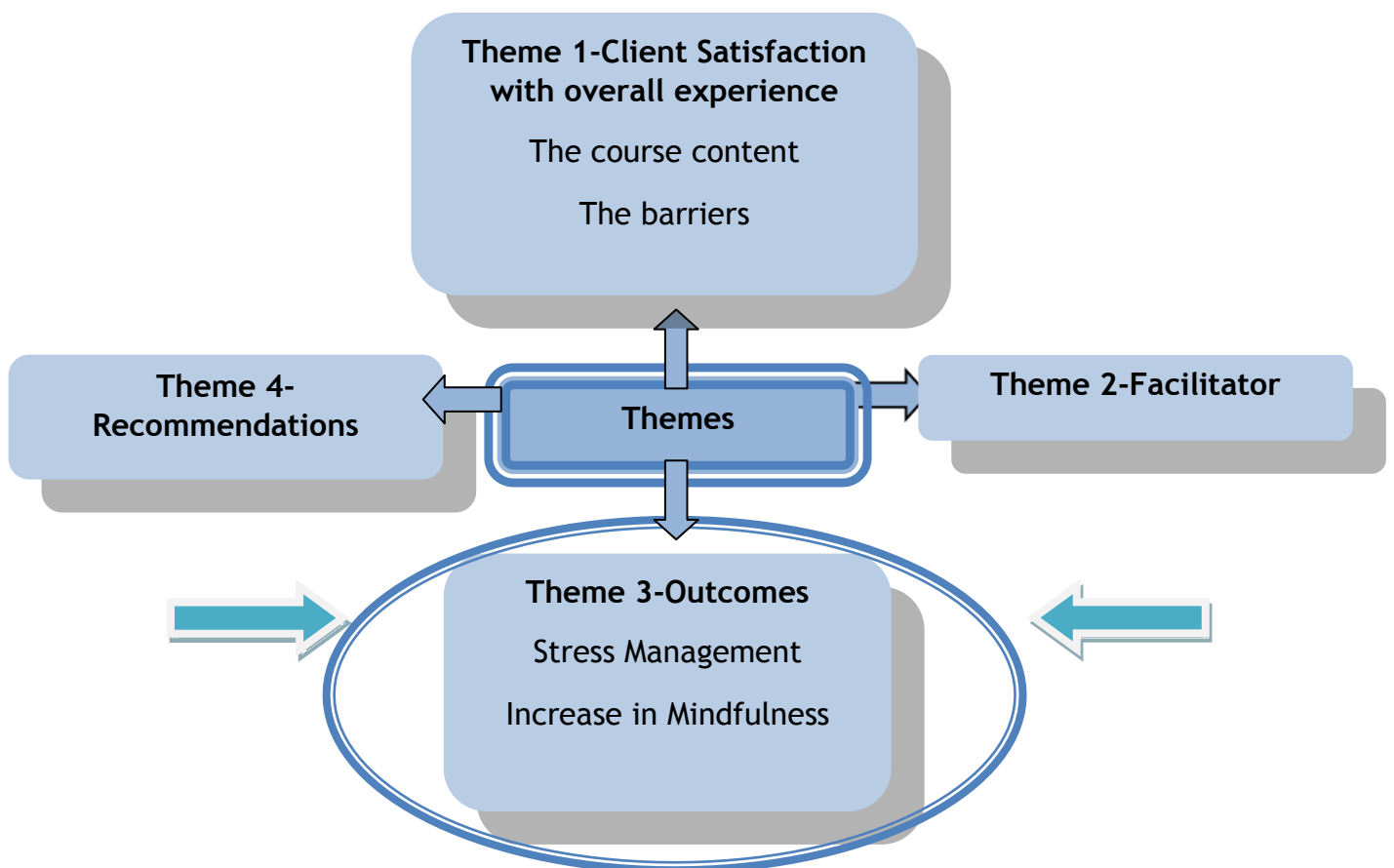
**Focus Group (See Appendix B)**

A focus group was conducted 3 months following the completion of the mindfulness course. The purpose of the focus group was to expand on the quantitative data.

Mixed methodologies using both qualitative and quantitative research has shown to enrich the findings.

The questions were prepared having a particular focus on the research question. The focus group questions were formed with the purpose of elaborating on the previously obtained quantitative data.

5(n=5) staff members participated in the focus group. Clearly defined research questions were used to focus on specific elements of the course that could not be discussed in detail using quantitative data alone (Braun & Clarke 2006). The thematic analysis veered away from an inductive approach and took on a more thematical approach. Thematic analysis of the participant's feedback and experience of the course led to the development of 4 key themes.





The above themes were identified for facilitating the focus group .For the purpose of this study only the themes with relevance to the overall impact the course had on the participants would be discussed. To view the rationale behind the development of the remaining themes please see appendix D.

### **Theme 3 - Outcomes**

Participants were invited to discuss the implications of taking the MBSR course. The overall feedback of the programme was unanimously positive. Two sub-themes were identified from the main theme: Stress management and an increase in mindfulness. Stress was identified as a common outcome among the participants with respondents stating that they felt more in control over stressful situations and perceived themselves as less stressed. In addition an increase in mindfulness was observed among the participants with all respondents indicating that they still engaged in mindfulness practices 3 months after completion of the course.

#### **Subtheme – Stress Management**

Participants were asked to discuss the implications of the programme. Firstly, participants felt they were better able to manage stress and were more in control when faced with a stressful situation. One respondent discussed how the course has helped her with managing stressful situations in work and that colleagues notice a difference in her behaviour when faced with a stressful situation.

*“I feel I am definitely more effective at managing stressful situations, even my thought processes are different, I think things through. I allocate time to thinking things through. I take my time and acknowledge the things I can control and cannot control. Even my work colleagues have noticed a difference in me at work where I would normally react differently.”*

#### **Subtheme – Increase in Mindfulness**

Participants also reflected on how mindful they have become and how important it is to be mindful. One respondent mentioned how she integrates her mindful practices into her home life when she is unable to sleep at night.

*“When I can’t sleep at night and I’m staring at the ceiling I feel I am now more mindful and relaxed, I don’t feel overwhelmed with all the thoughts in my head. In work every morning I park the car as far away from the entrance as I can so that when I walk into work I am more mindful”.*

Participants discussed how the programme had an impact on their work or home life. One participant discussed how being more mindful has had a knock on effect on her work life in that she now feels more productive in that she is no longer overwhelmed when faced with an issue. This indicates that mindfulness skills can be transferable and can be integrated into both participants work and home life.

In order to determine sustainability of the practices participants were asked whether or not they have used any of the mindful practices since the completion of the course. Most of the respondents spoke about breathing techniques and using these techniques in work. This indicates that the course was successful in ensuring the skills developed were sustainable.

From completing the mindfulness course some of the participants felt very passionate about being mindful with some respondents going as far as saying that being mindful is vital for your health.

## 6. Discussion

As discussed in the methodology this study adopted a mixed method design incorporating both quantitative and qualitative data. This allowed for the analysis of both objective measures from the quantitative data and subjective measures from the qualitative data. Both quantitative and qualitative data were analyzed separately with the qualitative data used primarily to enhance and expand upon the quantitative data. This process led to an enrichment of the data set and allowed for a more thorough assessment of the effects of the MBSR training.

- An increase in the level of mindfulness among staff of SUH who participated in the MBSR course.
- An increase in the management of stress and a decrease in perceived stress.
- Skills and practices learned in the MBSR course are transferable and sustainable.

The outcome of the programme reflected on whether or not the aims and objectives of the programme were met. The primary aim of the study was to determine the effectiveness of introducing mindfulness based stress reduction training in increasing the overall mindfulness of staff at SUH. To achieve this aim several objectives were identified: To compare self-administered pre and post mindfulness assessment forms. To evaluate the effectiveness of the MBSR training, to elaborate on quantitative data by facilitating a focus group to evaluate the transferability and sustainability of the skills learned. In reviewing the aforementioned objectives it became apparent that the overall aim of the study was met.

The data analysis of pre and post MAAS forms demonstrated that a MBSR training elicited a statistically significant increase in mean mindfulness scores ( $p=0.020$ ) (figure 2). The MAAS scale was used primarily to assess changes in mindfulness levels of participants by comparing baseline mindfulness measures to post training mindfulness levels. In linking the quantitative data from the pre and post MAAS scores with the focus group data there appears to be a strong association between both data types. The focus group data helped to elaborate upon the quantitative

data by providing a detailed description of how the MBSR course impacted on the participants.

***“Even my thought processes are different, I think things through. I allocate time to thinking things through. I take my time and acknowledge the things I can control and cannot control.”***

Being mindful was associated with being present in the moment and focussing on the now than rushing. Reviewing the data gathered the participants spoke about being more present in the moment and actually listening to the sounds around them and being mindful when doing so.

A common theme was how managing stress was one of the main outcomes of the MBSR training. The evaluation form included one question directly related to stress management. “Effectiveness of MBSR training in helping with stress management”. Figure 4 illustrates the participant’s level of agreement with this statement which indicates that MBSR training is effective in helping participants with stress management.

In viewing the quantitative data which concluded that participants felt they are more effective at managing stress it is assumed therefore that this had an impact on work/home. The focus group data confirmed this with one respondent identifying that she feels she is now more productive mentioning that she takes a step back from a stressful situation and avoids becoming overwhelmed or getting caught up in the heat of the moment.

These findings concur with Huang et al., 2015 in that participants are better able to manage stress and have lower rates of perceived stress. In addition the results correlate with Virgili, 2013 in that the original mindfulness programme can be adapted to a workplace setting and be effective at reducing stress.

The results indicated that MBSR training was successful in enhancing both stress management and mindfulness among staff of SUH. Using a mixed method design allowed the quantitative data to be augmented by the qualitative data and provide a clear picture of the overall impact MBSR has had on the participants. The evidence from this study justify the author’s opinion that having great access to

mindfulness programmes for staff will meet objective 4.9.2 Healthy Ireland Implementation Plan.

## 7. Conclusions and Recommendations

It is evident from the research findings that MBSR training can have an impact on both stress management and mindfulness of employees working in an acute hospital setting. The results concurred with the hypothesis that MBSR can enhance both stress management and mindfulness. The findings demonstrated a reduction in stress, a statistically significant increase in mindfulness among the participants.

### 7.1 Limitations

A number of limitations were identified :

- There is minimal Irish data on this topic and such lack of evidence impacts on our findings.
- The number of participants in the study sample were small resulting in limited statistical significance.

The sample consisted of female participants. As this was workplace wellbeing programme it is essential to ensure that the results can be generalised to those working in the hospital setting. For future research it would be proposed to include both male and female participants.

For future research it would be recommended to include a control intervention so that results of the mindfulness programme can be compared to the results of a different but similar workplace wellbeing programme. By including a control group it will further enhance the validity and credibility of the outcomes of the programme.

## 8. References

- Aikens, Kimberly A.; Astin, John; Pelletier, Kenneth R.; Levanovich, Kristin; Baase, Catherine M.; Yeo Yung Park; Bodnar, Catherine M.. (2014). Mindfulness Goes to Work. *Journal of Occupational & Environmental Medicine*. 56 (7), p721-731.
- Al-Makhaita, H., Sabra, A., Hafez, A. (2015). Predictors of work-related stress among nurses working in primary and secondary health care levels in Dammam, Eastern Saudi Arabia. *Journal of Family and Community Medicine*. 21 (2), p79-84.
- Arunas, A. (2015). MINDFULNESS IN THE WORKPLACE BENEFITS AND STRATEGIES TO INTEGRATE MINDFULNESS-BASED PROGRAMS IN THE WORKPLACE. *Ontario Occupational Health Nurses Association*. 34 (2), p39-42. (Arunas, 2015)
- Barak, A., Hen, L., Boniel-Nissim, M., & Shapira, N. (2008). A comprehensive review and a meta-analysis of the effectiveness of internet-based psychotherapeutic interventions. *Journal of Technology in Human Services*. 26 (s), p109-160.
- Bazarko, D., Cate, R. A., Azocar, F., Kreitzer, M. J. (2013). The impact of an innovative mindfulness-based stress reduction program on the health and well-being of nurses employed in a corporate setting. *Journal of Workplace Behavioral Health*. 28 (2), p107-133.
- Braun, V. and Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2). pp. 77-101.
- Brown, K. W. & Ryan, R. M. (2003). The Benefits of Being Present: Mindfulness and Its Role in Psychological Well-Being. *Journal of Personality and Social Psychology*. 84 (4), p882-848.
- Callen, B., Lindley, E., Neiderhauser, V. (2013). Health risk factors associated with presenteeism in the workplace. *Journal of occupational and*

*environmental medicine/American College of Occupational and Environmental Medicine. 55 (11), p1312-1316.*

- Charbotel, B., Croidieu, S., Vohito, M., Guerin, A.-C., Renaud, L., Jaussaud, J., Bergeret, A. (2009). Working conditions in call-centers, the impact on employee health: A transversal study. Part II. *International Archives of Occupational and Environmental Health. 82 (6), p747-756.*
- Chiesa A., Serretti A. (2009). Mindfulness-based stress reduction for stress management in healthy people: A review and meta-analysis. *Journal of Alternative Complementary Medicine. 15 (5), p593-600.*
- Clark, M., Warren, B., Hagan, P., Johnson, B., Jenkins, S., Werneburg, B., Olsen, K. (2011). Stress level, health behaviors, and quality of life in employees joining a wellness center. *American Journal of Health Promotion. 26 (1), p21-25.*
- Clarke, J. (2001). Stress in the workplace. Available: <http://www.irishhealth.com/article.html?id=1241>. Last accessed 20/06/16.
- Creswell, J.W. and Plano Clark, V. (2007) *Designing and Conducting Mixed Methods Research*. Thousand Oaks, CA: Sage
- Department of Health. (2013). *A FRAMEWORK FOR IMPROVED HEALTH AND WELLBEING 2013 – 2025*. Available: <https://www.hse.ie/eng/services/publications/corporate/hieng.pdf>. Last accessed 24/05/16.
- Dew, K., Keefe, V., Small, K. (2005). ‘Choosing’ to work when sick: workplace presenteeism. *Social Science & Medicine. 60 (10), p2273-2282.*
- Gilboa S., Shirom A., Fried Y., Cooper C. (2008). A meta-analysis of work demand stressors and Job performance: Examining main and moderating effects. *Personnel Psychology. 61, p227-272.*
- Grossman P., Niemann L., Schmidt S., Walach H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research. 57 , p35-43.*



- Health Service Executive. (2014). *Guidance Document for Hospitals on Health and Wellbeing Standards*. Available: <https://www.hse.ie/eng/about/Who/qualityandpatientsafety/Standards/standardsguidance/qaadndocuments/GuidanceDocumentHospitals.pdf>. Last accessed 27/05/16.
- Health Service Executive. (2015). *National Service Plan 2016*. Available: <https://www.hse.ie/eng/services/publications/serviceplans/nsp16.pdf>. Last accessed 24/05/16.
- Huang, S., Li, R., Huang, F., Tang, F. (2015). The Potential for Mindfulness-Based Intervention in Workplace Mental Health Promotion: Results of a Randomized Controlled Trial. *Research Support*. 10 (9).
- Irving J. A., Dobkin P. L., Park J. (2009). Cultivating mindfulness in health care professionals: A review of empirical studies of mindfulness-based stress reduction (MBSR). *Complementary Therapies in Clinical Practice*. 15, p 61-66.
- Jennings, B. (2008). Work Stress and Burnout Among Nurses: Role of the Work Environment and Working Conditions. In: Hughes R. G. *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville: MD: Agency for Healthcare Research and Quality. p2-137, 2-158.
- Jim White. (1986). *Stress Control*. Available: <https://stresscontrol.org/course>. Last accessed 30/05/16.
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112-133.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*. 10 (n), p144-156.
- Kivimaki, M., Leino-Arjas, P., Luukkonen, R., Riihimaki, H., Vahtera, J., & Kirjonen, J. (2002). Work stress and risk of cardiovascular mortality: Prospective cohort study of industrial employees. *British Medical Journal*. p325, 857

- Klatt D. M., Buckworth J., Malarkey B. W. (2009). Effects of Low-Dose Mindfulness-Based Stress Reduction (MBSR-ld) on Working Adults. *Health Education & Behavior: the official publication of the Society for Public Health Education*. 36 (3), p601-14.
- Limm, H., Gundel, H., Heinmuller, M., Marten-Mittag, B., Nater, U. M., Siegrist, J., & Angerer, P. (2011). Stress management interventions in the workplace improve stress reactivity: A randomized controlled trial. *Occupational and Environmental Medicine*. 68, p126-133.
- Ludwig DS, Kabat-Zinn J. (2008). Mindfulness in medicine. *JAMA*. 300 (11), p1350-1352.
- Malarkey B. W., Jarjoura D., Klatt M. (2013). Workplace based mindfulness practice and inflammation: A randomized trial. *Brain, Behaviour and Immunity*. 27 (1), p145-154. (Malarkey et al., 2013)
- Rahe, R. H., Taylor, C. B., Tolles, R. L., Newhall, L. M., Veach, T. L., & Bryson, S. . (2002). A novel stress and coping workplace program reduces illness and healthcare utilization. *Psychosomatic Medicine*. 64 (n), p278-286.
- Saolta University Health Care Group. (2014). *Saolta University Health Care Group HEALTHY IRELAND IMPLEMENTATION PLAN 2015 - 2017*. Available: <http://www.hse.ie/eng/services/Campaigns/saoltaiplan.pdf>. Last accessed 24/05/16.
- Simon, G. (2015). Evaluation of a brief mindfulness-based intervention to reduce psychological distress in the workplace. *Mindfulness*. 6 (4), p836-847.
- The Health and Safety Authority. (2005). *Safety, Health and Welfare Act 2005 (No. 10 of 2005)*. Available: [http://www.hsa.ie/eng/Legislation/Acts/Safety\\_Health\\_and\\_Welfare\\_at\\_Work/](http://www.hsa.ie/eng/Legislation/Acts/Safety_Health_and_Welfare_at_Work/). Last accessed 25/05/16.

- The World Health Organisation. (2004). *WORK ORGANIZATION & STRESS*. Available:  
[http://www.who.int/occupational\\_health/publications/pwh3rev.pdf?ua=1](http://www.who.int/occupational_health/publications/pwh3rev.pdf?ua=1).  
Last accessed 30/05/16.
- van der Klink, J. J., Blonk, R. W., Schene, A. H., & van Dijk, F. J. (2001). The benefits of interventions for work-related stress. *American Journal of Public Health*. 91, p270-276.
- Virgili, M. (2013). Mindfulness-Based Interventions Reduce Psychological Distress in Working Adults: a Meta-Analysis of Intervention Studies. *Mindfulness*. 6 (2), p326-337.
- Walach, H., Nord, E., Zier, C., Dietz-Waschkowski, B., Kersig, S., & Schüpbach, H. (2007). Mindfulness based stress reduction as a method for personnel development: A pilot evaluation. *Journal of Stress Management*. 14 (2), p188-198.
- Wolever R. Q., Bobinet K. J., McCabe K., Mackenzie E. R., Fekete E., Kusnick C. A., Baime M. (2012). Effective and viable mind-body stress reduction in the workplace: A randomized controlled trial. *Journal of Occupational Health Psychology*. 17 (2), p246-258.

## Appendix A

### MINDFULNESS ATTENTION AWARENESS SCALE POST ASSESSMENT

**NAME:** \_\_\_\_\_ **MOBILE:** \_\_\_\_\_ **DEPARTMENT:** \_\_\_\_\_ **EMAIL:** \_\_\_\_\_

**Day-to-Day Experiences 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-Almost Always	2 - Very Frequently	3- Somewhat Frequently	4-Somewhat Infrequently	5 - Very Infrequently	6 - Almost Never
I could be experiencing some emotion and not be conscious of it until sometime later.	1	2	3	4	5	6
I break or spill things because of carelessness, not paying attention or thinking of something else.	1	2	3	4	5	6
I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5	6
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
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	1	2	3	4	5	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
It seems I am "running on automatic," without much awareness of what I'm doing.	1	2	3	4	5	6
I rush through activities without being really attentive to them.	1	2	3	4	5	6
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
I do jobs or tasks automatically, without being aware of what I'm doing.	1	2	3	4	5	6
I find myself listening to someone with one ear, doing something else at the same time	1	2	3	4	5	6
I drive places on 'automatic pilot' and then wonder why I went there.	1	2	3	4	5	6
I find myself preoccupied with the future or the past.	1	2	3	4	5	6
I find myself doing things without paying attention.	1	2	3	4	5	6

#### MAAS Scoring

To score the scale, simply compute a mean (average) of the 15 items. Higher scores reflect higher levels of dispositional mindfulness.

## Appendix B

### Focus Group Consent Form

Dear Participants

The purpose of the discussion is to hear your opinions and feedback on the recent mindfulness programme held for staff of Sligo University Hospital. For research purposes the group discussion will be recorded via a Dictaphone so that the information provided can then be transcribed at a later date. Any information you disclose during the focus group will remain confidential and used exclusively for research purposes. Once the information is given to the researchers you will be assigned an ID number and the researchers will securely hold the coding information so your name is never revealed as part of the study. You reserve the right to decline this invitation as taking part in the focus group is entirely voluntary. Please sign below to indicate your consent to participate in this discussion. Please do not hesitate to contact us if you have further questions.

I consent to participating in a recorded group discussion about the recent mindfulness programme for staff of Sligo University Hospital. I understand that identification details will be included in the final report and that any information I provide will be used only for the purposes of the research and remain confidential.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Sarah McGuire, Support Officer Smoking Cessation/Health Promotion & Improvement  
Department Sligo University Hospital.

**Phone:** 071-9174678    **Mobile** 087-7495839    **Email:** [sarahmcg94@hotmail.com](mailto:sarahmcg94@hotmail.com)

**Address:** Research & Education Centre, Level 6, Sligo University Hospital, The Mall, Co. Sligo.



## Focus Group Guide

### Aim:

- To gather feedback from staff of Sligo University staff on their experience of participating in mindfulness based stress reduction training.
- To elaborate on the quantitative data gathered via pre and post mindfulness attention awareness scale.

### Questions:

#### Facilitator:

- 1) What was your experience of this course?
  - a. What was your experience of participating in the one day retreat? Would this be enough alone?
- 2) What did you think of the facilitator, their style of training?
  - a. Were you able to build a relationship with the facilitator? Were they approachable?
  - b. What were the demands of the course like? Were you able to meet the demands regards homework given?
  - c. What did you think of the pace of the programme? Did the facilitator rush through things or did it go too slow?

#### Self:

- 3) What do you think were the implications, positive or negative, of taking this course?
  - a. Are you more mindful having completing the course?
  - b. Do you feel you are more effective at managing stressful situations from completing the course?
  - c. Have your coping abilities improved when faced with physical, mental or emotional issues?
- 4) Have you used any of the techniques learned in the course after its completion?
  - a. Do you find this technique beneficial to you?

### Organisation:

- 5) Has this training had an impact on your working life? Has it been positive/negative?
- 6) Do you feel you have impacted on others having completed this course?

### Recommendations/Going Forward:

- 7) What element of the course really stood out for you that you found interesting/beneficial?
- 8) What did you find least beneficial from participating in the course?
- 9) Do you think this course should be continued on an annual basis? Is it worthwhile?
  - a. Would you recommend your colleagues to participate in the programme if it was rolled out again?
  - b. Do you think you would need an update every year or do you feel that once you have completed the programme it is something you don't need to do again?(techniques, information etc.)
- 10) If there was anything you could change about the course, what would that be?
  - a. Time, location, duration, size of group, gender etc.

## Appendix C

Transcription of Focus Group  
 Name of focus group: Mindfulness follow-up  
 Date of Focus group: 02/06/16

**Codes:**

- 1= The Course **1.1**Course 1.1= The retreat **1.2**=positive experience
- 2= The Facilitator
- 3= The Benefits **3.1**= Manage Stress **3.2**= Thinking **3.3**= Mindful **3.4** = Productive
- 4= Barriers **4.1**= Course too long **4.2**= Homework
- 5= Techniques **5.1**= Breathing **5.2**= Yoga
- 6= Commitment
- 7= Recommendations **7.1**= Repeat annually **7.2**= Changes course length **7.3**= recommend a friend
- 7.4**= time of year
- 8= Importance **8.1**= Mindful for health

Name of Speaker	What said	Code	Code	Code	Theme
Researcher	Q1/ What was your experience of this course?				
P3	Really good, it has definitely impacted on me and my life, I wish I had done it ten years ago!	1	1.2		Experience
P4	Yes, I found the whole programme really good, at first it took a while to get into it but after the first three sessions it was great	1	1.2		Experience
Researcher	Q1 a) What was your experience of participating in the one day retreat? Would the retreat be enough on its own				
P3	I felt the one day retreat was brilliant, you just got to sit and be mindful for 6 hours without anything else bothering you, If you showed up to the retreat having not done the six weeks I think everyone would have felt completely different and not participated as well as you may feel silly but we were all in the same boat.	1.1			Experience



Name of Speaker	What said	Code	Code	Code	Theme
P4	I felt so calm after the retreat. The effects of the retreat lasted right through over the weekend until Monday. I felt that you needed the 6 weeks to build up to the retreat day in order to get the most out of it.	1.1	1.2	3	Experience
P5	Yes, I found the one day retreat really good and it is something I would like to participate in every year if possible.	1.1	1.2		Experience
P4	I even found that my eating behaviour/habits changed the day of the retreat as we had breakfast before turning up and then we had lunch and then dinner when we got home, which I wasn't even hungry for. Whereas normally in work you would have your breakfast then maybe something between morning and breakfast and something with your tea around 3pm but I didn't even feel hungry. Mindful eating could be beneficial.	1.1	3	3.3	Outcomes
<b>Researcher</b>	Q/2 What did you think of the facilitator?, their style of training?				
P3	Paula made the whole experience better, she always appeared calm, I feel that you have to be a certain type of person to facilitate the training. If things became overwhelming Paula was always there to provide support and advice.	2			Facilitator
P5	Yes, it really was a credit to Paula , she was very nice.	2			Facilitator
<b>Researcher</b>	Q/2 a)Were you able to build a relationship over the 6 weeks, was the facilitator approachable?				
<b>P3</b>	Yes, she was very approachable, very nice and friendly person.	2			Facilitator
P1, P2, P3, P4 & P5	All responded saying "yes"	2			

Name of Speaker	What said	Code	Code	Code	Theme
Researcher	Q/2 b) What were the demands of the course like? Were you able to meet the demands regards home assignments?				
P2	I felt that the home work was quite demanding if you hadn't the time.	4	4.2		experience
P4	I felt that the homework was ok if you were committed and self-motivated to do it. I feel that in order to get the most out of the experience you needed to do the homework given and make time.	4	6	4.2	experience
P5	I think the homework given was very doable you just needed to be committed.	6			experience
Researcher	Q/2 c) What do you think of the pace of the programme? Did the facilitator rush through things or did it go too slow?				
P1, P2, P3, P4 & P5	Were all satisfied with the pace of programme and had no complaints	1	1.2		experience
Researcher	Q/ 3 What do you think were the implications, positive or negative, of taking the course? Do you feel you are more mindful?				
P3	I feel I am definitely more effective at managing stressful situations, even my thought processes are different, I think things through. I allocate time to thinking things through. I take my time and acknowledge the things I can control and cannot control. Even my work colleagues have noticed a difference in me in situations in work where I would normally react differently.	3	3.1	3.2	outcome
P1, P2, P4, P5	All agreed with P3				outcomes

Name of Speaker	What said	Code	Code	Code	Theme
Researcher	Q/3 a) This course had an aim to increase mindfulness of the participants and help with stress management, do feel it has done this for you?				
P4	Yes, definitely as I now react differently and take step back from the situation as opposed to getting stressed out. My stress levels are much better.	3	3.1		outcomes
P5	I am now more aware of how stress can affect your body over time.	3	3.1		outcomes
Researcher	Q/4 Have you used or still using any of the techniques learned in the course?				
P4	Yes, the breathing exercises are something I have used and use every day.	5	5.1		outcomes
P3	Yes, now when I'm even driving the car I don't have the radio blaring or when I'm walking the dogs I would normally bring a radio with me but now I listen to the sounds around me. After the one day retreat I don't think I have ever driven so slowly, I just took my time.	3	3.4	1.1	outcomes
P5	I found that the yoga wasn't for me but I have definitely used the mindful breathing. To help us practice yoga we were also given an mp3 recording to take home.	5	5.1		outcomes
P2	Yes, even when I'm chopping the vegetables and I see all these vegetables in front of me now I take my time and I am mindful when I'm doing it.	5	5.1		outcomes
Researcher	Q/4 a) Have you shared any of these techniques with work colleagues, family, friends?				
P1, P2, P3, P4 & P5	Yes				outcomes

Name of Speaker	What said	Code	Code	Code	Theme
Researcher	Q/4 b) Have you used any of the techniques at work?				
P3	Yes, I have used techniques at work every day and even when I can't sleep at night and I'm staring at the ceiling I feel I am now more mindful and relaxed, I don't feel overwhelmed with all the thoughts in my head. In work every morning I park the car as far away from the entrance as I can so that when I walk into work I am more mindful.	5	5.1	3.2	outcomes
Researcher	Q/ 5 Has this training had an impact on your working life? Have you impacted on others in the workplace or at home?				
P1	Yes, it has had a positive effect on work but more so at home and in other things	3			outcomes
P3	Yes in work now I feel it has made me more productive because I am now caught up and overwhelmed with everything that is going on around me. I say listen take a step back and breathe.	3	3.4		outcomes
P1, P2, P3, P4 & P5	All respondents said "yes"				outcomes
Researcher	Q/7 What element of the course really stood out for you that you found interesting/beneficial?				
P5	The one day retreat was just brilliant	1.1	1.2		experience
P4	Yes, the one day retreat was great, I felt brilliant after it. I also found the yoga brilliant as we were given a step-by-step guide on how to do it.	1.1	5.2		Experience/outcome
P5	Also we were shown a video on what stress does to your body over a period of time with the cortisol levels and this made me feel that I needed to do the course and engage in the programme				outcomes

Name of Speaker	What said	Code	Code	Code	Theme
P3	Paula was just brilliant; everything about her and the way she spoke just made us relax. I remember looking at her and thinking “she must live a wonderful life”	2			facilitator
P2	The programme was a credit to Paula	2			facilitator
<b>Researcher</b>	Q/ 8 What did you find least beneficial from participating in the course?				
P2	I found that the introductory session was unnecessary if you had time constraints, I think it should of started with going straight into mindfulness	4	4.1	7.2	recommendations
<b>Researcher</b>	Q/9 Do you think this course should be continued on an annual basis? Is it worthwhile?				
P1, P2, P3, P4 & P5	All respondents felt that one day retreat should be carried out annually to refresh the techniques	1.1	7	7.1	recommendations
P5	I actually think that to be mindful is so important that I would go as far as saying this course should be made compulsory to staff.	7	7.1	8.1	recommendations
P1	Yes, I think that to be mindful is absolutely vital for staff health and should be seen as hugely important	8.1			outcomes
<b>Researcher</b>	Q/ 9 a) Would you recommend this programme to your work colleagues?				
P3	I would recommend this programme to all colleagues it is hugely beneficial. A lot of people wanted to do it I got in at week 2 due to cancellation. It would definitely be in demand.	7	7.3		recommendations
P1, P2, P3, P4 & P5	All respondents would highly recommend programme to staff and work colleagues	7.3			recommendations

Name of Speaker	What said	Code	Code	Code	Theme
Researcher	Q/10 If there was anything you could change about the course, what would that be? Time, location, duration, size of group, gender?				
P2	I felt that the introductory session was not necessary. I also feel that the workshop sessions were too long at 2.5 hours and could easily be condensed into 1 hour or 1.5 hr max. The body scans were also a little time consuming.	7	7.2	4.1	recommendations
P1, P3, P4 & P5	All respondents said they would not change a thing				recommendations
Researcher	What were your opinions on the group?				
P4	It was great that we were all from the same work place because if we met each other in the corridor we could ask each other about the home assignments etc. It was also good because we were all in the same boat and didn't feel silly doing the exercises	3			Outcomes/experience
Researcher	What did you think of the time of year the programme was run? After Christmas would you change this?				
P1, P2, P3, P4 & P5	All respondents felt that the time of year picked to run the programme was great	7.1			recommendations
P1	It was great because the evenings were darker so it was easier to go to the sessions as opposed to going during the summer when the evenings are so long	7	7.4		recommendations
P5	Autumn or after Christmas would be the perfect time for the course	7	7.4		recommendations
P1, P2, P3, P4 & P5	All respondents stated that they would like this programme to receive attention and to be backed and implemented each year				recommendations

Name of Speaker	What said	Code	Code	Code	Theme
P4	I would even pay each year to see it implemented.				outcomes

## Appendix D

### Quantitative Data Analysis

#### Themes

##### **A. Theme – Client Satisfaction with overall experience**

The focus group data demonstrated that overall the participants were very satisfied with the mindfulness course. Participants reported that the 6 week training course was a really good positive experience with positive feedback across the board.

***“Really good, it has definitely impacted on me and my life, I wish I had done it ten years ago!” ED Nurse***

#### **Subtheme-The Course Content**

The different components of the course were explored with all respondents stating that the course content was really beneficial and interesting. Several highlighted that it took time to adjust to the concept of mindfulness.

***“Yes, I found the whole programme really good, at first it took a while to get into it but after the first three sessions it was great”***

In particular the one day retreat was mentioned as being one of the best components of the course with all participants reporting high levels of satisfaction with the experience. They felt this was hugely beneficial having completed the six sessions first. One participant highlighted that the one day retreat would not have been as beneficial without having completed the six workshop sessions.

***“I felt that the one day retreat was brilliant, you just got to sit and be mindful for 6 hours without anything else bothering you. If you showed up to the retreat having not done the six weeks I think everyone would have felt completely different and not participated as well as you may feel silly, but we were all in the same boat” pseudo name etc***



A number of participants mentioned that the full day retreat had long lasting effects with one participant stating that the effects of the one day retreat lasted over a period of days.

***“I felt so calm after the retreat. The effects of the retreat lasted right through over the weekend until Monday. I felt that you needed the 6 weeks to build up to the retreat day in order to get the most out of it.”*** Pseudo name etc

### **Subtheme-barriers to participation**

Barriers to full participation were identified in the group discussion. One participant found the homework was very difficult to complete if you had time constraints.

***“I felt that the home work was quite demanding if you hadn’t the time.”*** Pseudo name etc

However some of the participants found that the home assignments were very doable and were not seen as a barrier. However the participants did mention that you need to be committed and self-motivated in order to complete the given assignments in your own time.

***“I felt that the homework was ok if you were committed and self-motivated to do it. I feel that in order to get the most out of the experience you needed to do the homework given and make time.”*** Pseudo name etc

### **B) Theme - Facilitator**

Participants were asked to provide feedback on their experience of the facilitator. Respondents reported that the facilitator was a huge help throughout the programme mentioning that she was very friendly and approachable and that the course would have not been the same without her.

***“Yes, she was very approachable, very nice and friendly person.”***

A number of the participants stated that only a certain type of person can deliver the training.

***“Paula made the whole experience better, she always appeared calm. I feel that you have to be a certain type of person to facilitate the training. If things became overwhelming Paula was always there to provide support and advice”.***

### **C) Theme – Recommendations**

Participants were invited to give recommendations for the course including the content, the techniques, the facilitators, time, location etc. The one element of the course which was highlighted was the one day retreat. Participants enjoyed this thoroughly and would like it to be an annual event. Participants also stated that they would definitely recommend the course to a friend or colleague if it was to be run again.

***“I would recommend this programme to all colleagues it is hugely beneficial....It would definitely be in demand.”***

One participant stated that mindfulness is so important for your health that this course should be made compulsory for all staff.

***“I actually think that to be mindful is so important that I would go as far as saying that this course should be made compulsory to staff.”***

Participants were invited to give recommendations relating to the group and who participated in the course. Some of the respondents mentioned that it was beneficial that they were all from the same workplace/organisation so they could discuss the course together.

***“It was great that we were all from the same work place because if we met each other in the corridor we could ask each other about the home assignments etc. It was also good because we were all in the same boat and didn’t feel silly doing the exercises.”***

When discussing the time of year the programme was delivered the participants felt that early in the year or late in the year would be most appropriate.

***“Autumn or after Christmas would be the perfect time for the course”***

***“It was great because the evenings were darker so it was easier to go to the sessions as opposed to going during the summer when the evenings are so long”.***

One respondent made some recommendations regarding the course itself and how it may be improved if it was to be run again.

***“I felt that the introductory session was not necessary. I also feel that the workshop sessions were too long at 2.5 hours and could easily be condensed into 1 hour or 1.5 hr max. The body scans were also a little time consuming.”***

## **Abstract**

### **Introduction**

Stress in the workplace is one of the most prevalent and persistent issues that affect workers and is linked to employee absenteeism, diminished productivity, staff turnover, medical care expenses, short and long-term disability, accidents and legal costs<sup>1</sup>. There is growing evidence to support the implementation of workplace wellbeing programmes that assist staff in stress management and anxiety.

### **Aims and Objectives**

The primary aim of this study was to determine the effectiveness of introducing mindfulness based stress reduction training in increasing the overall mindfulness of staff at SUH.

**Objective:** To increase the mindfulness of SUH staff through delivering a MBSR course facilitated by a certified mindfulness instructor.

### **Methodology**

This study incorporated a mixed method design to gain a better understanding of the impact of an eight week mindfulness training on staff employed in a health care setting. A sample of 17(n=17) participated in the eight week mindfulness course. Mindfulness was measured using pre and post Mindfulness Attention Awareness Scale (MAAS) which is a scale that requires participants to indicate how frequently they experience what is described in each statement using a 6-point Likert scale from 1 (almost always) to 6 (almost never), with higher scores reflecting greater mindfulness. Attendance was recorded by the facilitator at each session. On completion of the course an evaluation form was administered to 13(n=13) of the participants. 3 months post completion of the programme 5(n=5) of the participants engaged in a focus group.

## **Results**

A paired samples t- test was conducted on the pre and post MAAS and a statistically significant increase was observed ( $p=0.02$ ). Attendance record demonstrated that 11 ( $n=11$ ) of the 17 ( $n=17$ ) participants achieved full attendance with 1 ( $n=1$ ) drop out. The focus group participants reflected an improvement in their stress management and reflected on how mindful they have become not only in the workplace but in their personal/home life also.

## **Conclusion**

The results support the hypothesis that an eight week workplace mindfulness programme can have a positive impact on stress management and mindfulness levels. However our search demonstrated limited research in Ireland on the impact of mindfulness programmes in a workplace setting. Future research is recommended.