

University of Bath



## DOCTOR OF HEALTH (DHEALTH)

### Happiness And Enhancement: Positive Psychology Hypnosis For Better Mental Health And Well-Being In Older Adults

Kongsuwan, Chnanis

*Award date:*  
2017

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**Happiness And Enhancement:  
Positive Psychology Hypnosis For Better Mental  
Health And Well-Being In Older Adults**

Chnanis Kongsuwan

A thesis submitted for the degree of Doctor of Health  
University of Bath

Department for Health  
September 2017

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## **Abstract**

This study proposed an early psychological intervention for promoting mental health and well-being in older adults. The study is significant since there are the needs for such interventions for this age group that is becoming a major world population. The aim of this research was to investigate the efficacy of the proposed positive psychology hypnosis intervention (PPHI) in promoting mental well-being in older adults, the participants' subjective experience, and perceived changes in their mental well-being after receiving the intervention. The PPHI was developed by applying positive psychology's well-being model and theory, as well as positive psychological exercises. In addition, hypnosis was used as a delivery approach. The study examined the effectiveness of the PPHI using a randomised controlled trial involving a mixed-methods design, where the PPHI was compared to relaxation intervention and control group. The participants were generally healthy adults aged 60 and over. It was hypothesised that the PPHI would be more effective than the relaxation intervention in terms of well-being enhancement and would present significant effects compared to the control group. The data was collected via questionnaires before and after the 4-session intervention process, along with three interviews (pre and post-intervention, and follow-up). The statistical analysis employed a MANCOVA test, and interview data was analysed by thematic analysis. The findings from the research show that the PPHI is effective for enhancing older adults' psychological well-being. Moreover, the results of the PPHI are superior to relaxation, as well as present significant effects compared to the control group. The positive results presented in this study determine that the PPHI can be another option for an early or preventative intervention for older adults, particularly for enhancing happiness, well-being, and mental health.

## CHAPTER I

### **Introduction and Background of the Study**

My personal experience and professional practice initially inspired this research. Prior to and during this study, I had an opportunity to volunteer and work with older people in several organisations, where I was able to observe their well-being and have a conversation with them and their carers. In the later stages of life, there are many life transitions that might affect an older adult's mental well-being, for example, a decline of physical health and mental functioning, role loss, and bereavement. These factors are often unavoidable. Hence, I realised that positive attitudes and the utilisation of available personal resources might help older adults to age well and cope with such factors in a productive manner, in turn enhancing happiness and mental well-being. These observations and experiences prompted this study of an intervention for older people that can support their inner potential to enhance their happiness and mental well-being.

In order to meet the purpose of the professional doctorate degree, which requires a researcher to incorporate his or her professional aspects into his or her study, I therefore intended to incorporate my professional proficiency of hypnotherapy into this study. From my professional practice and empirical research, I had found that positive psychological approaches might be helpful to incorporate into a hypnotherapeutic treatment model for well-being enhancement. However, regardless of such potential, there is very scant research into the integration of positive psychology and hypnosis, especially in older adults, on whom no studies were found. Hence, in this study, I propose an integrated positive psychology and hypnosis intervention focused on mental health and well-being in older adults.

Accordingly, this study applied positive psychology's well-being model and concepts into the treatment model of the experimental intervention and employed the standard procedure of clinical hypnosis. In order to investigate the intervention's efficiency, I compared the positive psychology hypnosis intervention to a relaxation intervention and control group. Relaxation was selected as a control intervention because it is a component of the hypnosis process that lacks hypnotic suggestions or therapeutic elements.

This chapter contains an outline of the purpose of the study, research question and hypothesis, statement of problem and significance of the study. The second chapter provides results of a literature review related to mental health and well-being in older adults, the background theory and practice of hypnosis and positive psychological intervention, particularly for well-being and happiness enhancement, as well as the treatment model and process of the experimental intervention in this study. In the third chapter, the research process will be explained in detail, including the justification of the methods employed and the research procedures. Next, results of both the qualitative and quantitative data will be presented, followed by a discussion of these results and their triangulation, as well as directions for future studies.

## **1.1. Purpose of the Study**

**1.1.1 Aim of research.** The goal of this study was to explore the efficacy of a positive psychology hypnosis intervention (PPHI) in promoting mental well-being in older adults, the participants' subjective experience, and perceived changes in their mental well-being after receiving the PPHI.

**1.1.2. Objectives of research.** The objectives of this research were as follows:

- 1) To explore the efficacy of a 4-week PPHI for older adults using a randomised controlled trial (RCT), comparing the PPHI group to a relaxation treatment group and a control group.
- 2) To measure both quantitative and qualitative outcome variables using self-reported questionnaires and semi-structured interviews in order to determine the ways in which PPHI might be more effective than the other two conditions.
- 3) To examine subjective durability of any benefits of the PPHI as well as to untangle the underlying mechanisms of the effects compared to those of the relaxation intervention.

## **1.2. Research Question and Hypothesis**

**1.2.1 Research question.** The primary question was: does a 4-week positive psychology hypnosis intervention (PPHI) facilitate well-being and happiness in older adults?

**1.2.2 Hypothesis.** The PPHI group will show higher improvement of scores on well-being and happiness scales (e.g., Oxford Happiness Questionnaire), as well as a more positive outlook on any physical or psychological symptoms that they may have (measured by a semi-structured interview), compared to the other two conditions.

## **1.3. Statement of Problem**

The number of older adults has tripled over the last fifty years. The older population currently represents a higher proportion of the world population than ever before, at 11% (Helpage, 2014a), and is predicted to triple in the next fifty years (United Nations, 2013). Within twenty years, many countries will face a situation where the largest proportion of the population will be those over 60 and the average

age of the population will approach the age of 50 years (Helpage, 2014b; United Nations, 2002). This global phenomenon is creating economic and social demands on all countries. The elderly tend to have poorer health, meaning they are less likely to be able to care for themselves or continue contributing to their communities and their countries. This situation may lead to pervasive problems in many areas, such as quality of life, sustainability of families and communities, the country's health care costs, and economic growth. This demographic change is highly significant. Although all nations consider a longer life expectancy for their people desirable, they also want to provide a good quality of life and well-being in later life. Hence, effective programmes to promote the welfare of ageing adults and older adults are certainly needed.

Among adults aged 60 and over, approximately 15% suffer from a mental health disorder, and many others are at risk for developing one (World Health Organization, 2016). The most common mental disorders are depression and anxiety, which arise due to a number of factors related to life transition such as health problems, debility, role losses, bereavement, and other stressful experiences of ageing. Psychological stress, distress, or depression can also co-occur with other illnesses that older adults tend to experience, such as heart disease, stroke, cancer, and Parkinson's disease. According to the National Institute of Mental Health (2016), depression may be viewed as a normal consequence of these problems; therefore, it has been under-diagnosed and undertreated. A study of older people's daily lives showed that distress affects a person throughout the day; depressed individuals experienced fewer positive events and reduced happiness, which may contribute to increased risks to physical and mental health (Steptoe, Leigh, & Kumari, 2011) and delay recovery or worsen outcome of other illnesses (National Institute of Mental

Health, 2016). In regard to how to treat these conditions, previous surveys (Gum, Areán, Hunkeler, Tang, Katon, Hitchcock, Steffens, Dickens, & Unützer, 2006; Mohlman, 2012) have found that more patients in older age groups prefer psychological to medical intervention. This might stem from concerns about potential health risks, side effects, and adverse outcomes that result from commonly prescribed antidepressants, including dizziness, agitation, palpitations, stroke, hyponatraemia, and myocardial infarction (Coupland, Dhiman, Morriss, Arthur, Barton, & Hippisley-Cox, 2011; Nhs, 2013). Particularly in the elderly, there are several antidepressants which are not recommended or should be used with high precautions (Ruscin & Linnebur, 2014).

In addition, many people with mental illness or psychological difficulties are either not in contact with available services, or if in contact, are not receiving any treatment (Department of Health, 2009). Regardless of this fact, the costs for mental health care are continually increasing. In the UK, it was projected in 2008 that the costs for mental health care will increase 2% each year and will increase by 45% by 2026, compared to 2007 spending (£22.50 billion to £32.6 billion; (Mccrone, Dhanasiri, Patel, Knapp, & Lawton-Smith, 2008). In order to respond to this issue and attempt to prevent further problems, the UK Department of Health stated in their government mental health outcomes strategy that early intervention and the promotion of positive mental health to improve people's well-being and resilience against mental illness is needed (Department of Health, 2009).

An effective early intervention can lead to many positive outcomes. Instead of neglecting minor symptoms until a person is devastated and develops a mental disability, early intervention will bring about greater improvement in recovery, a shorter period of treatment, and a constant development towards a good mental health

(i.e., flourishing) state that will promote resilience and serve as immunity to mental decline. A longitudinal study regarding a predictor of future risk of mental illness (Keyes, 2010) found a direct correlation between changes in level of positive mental health and future occurrence of mental illness. Participants whose mental health had declined from a moderate to low (i.e., languishing) state during the 10-year time period of the study were more likely to be diagnosed with a mental health disorder at follow-up. In sum, an improvement in mental health predicted a decrease in mental illness. Therefore, a preventative or early intervention that promotes mental health has a promising potential to build a person's resilience to mental illness.

The use of early interventions to support mental health is recognised as a positive health model (Seligman, 2008). The positive health model proposes early interventions and prevention, unlike many psychological interventions that are offered in later stages where a person already has severe mental disorders, or medical interventions that are normally provided when the illness has occurred. The positive psychology and positive health models have now been acknowledged as an effective approach to promote mental health and well-being, however, there is still scant research in this field, especially in older adults. Argyle (2001) found a large difference in the number of psychological papers on depression and on happiness or positive aspects of mental health (17:1 ratio). In addition, many interventions and research studies have focussed on children and young people in order to build their positivity, strengths, and resilience as they mature, but few have examined these factors in later life. Meanwhile, most treatments focus on illness recovery rather than promoting positive features and building on strengths that could enhance health and well-being in people's daily lives. Research into the use of early interventions has been a lower priority, despite the fact that prevention of mental health issues has been

encouraged. The World Health Organisation recognises this lack of research into the use of early intervention to support mental health and well-being in people as they age and has stated that healthy ageing is essential and that research contributing to ageing and health is required (World Health Organization, 2016).

#### **1.4. Significance of the Study**

This study proposes an early psychological intervention to promote mental health and well-being in older adults. The treatment model will consist of positive psychology integrated with hypnosis, using a relaxation-based approach as a control. An effective approach using early interventions could benefit ageing society, in that it will contribute to an active ageing scheme and encourage a healthy lifestyle in older adults. A healthy lifestyle will then enhance the happiness, well-being, and quality of life not only of the older adults as they age, but also of their families. Older people who have good health and well-being will be able to take better care of themselves and are more likely to contribute to their community. They can be good resources and supports for younger generations and society as a whole. Good mental health in older adults will not only enhance people's quality of life, but could also reduce health care expenditures by decreasing the number of primary care visits, clinical procedures, and medications prescribed.

A positive psychology hypnosis intervention could be advantageous as it could subconsciously cultivate positivity, enhance resources, and build resilience. Since it works with the subconscious, it might circumvent people's resistance to change (Robertson, 2013b); therefore, results are expected to be swift and enduring. It is also an intervention that people can continually practise by themselves at home, with no equipment required. As such, they can easily integrate this practice as one activity in their routine. Healthcare professionals in local communities can also be



trained to deliver the intervention as a community-based private or group practice. Greater understanding of such novel interventions and evidence of their effectiveness could bring about an advancement in mental health care, particularly for ageing and older adults for whom there are many risk factors related to physical and mental deterioration. This study will add a new layer of preventative and early intervention to support people's well-being, which is the main factor determining their quality of life.

## CHAPTER II

### Review of Related Literature and Studies

This chapter reviews the need for early intervention, related theories and models, as well as published research studies relevant to this study. This review includes the current state of mental health in ageing and older adults, the need for early intervention in older adults, positive mental health and well-being frameworks for positive ageing, and the existing integration of positive psychology and hypnosis for well-being. The application of the treatment model of positive psychology hypnosis intervention (PPHI) as the experimental intervention in this study as well as its process are also justified.

#### 2.1. Mental Health in Ageing and Older Adults

Mental health is defined by the World Health Organization (2013) as “a state of well-being in which the individual realises his or her own potential, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community”. According to this definition, mental health is not an absence of mental illness, but instead a presence of wellness, which brings about emotional, psychological, and social well-being (Keyes, 2005). As stated by Keyes (2007; 2002), people with complete mental health are ‘flourishing’, that is, exhibiting a syndrome of symptoms of positive feelings and functioning, which supports people to thrive, attract more positive determinants, and build resilience to negative emotions. Hence, a flourishing state could provide immunity to mental distress. Flourishing individuals report lower levels of mental disorders and lower numbers of chronic physical conditions at all ages. On the other hand, Keyes characterised the

absence of mental health as ‘languishing’, which is an incomplete mental health state associated with low well-being and increased psychological impairment. Unfortunately, previous research has revealed that only 17.2% of normal adult participants are flourishing, since to be flourishing requires that a person needs to be filled with positive emotions and functioning well both psychologically and socially (Keyes, 2002). Therefore, Keyes suggests that “mental health promotion should be the preeminent treatment objective”, supporting individuals to continually flourish.

Turning now to mental health in older adults, despite many recent studies that have investigated the characteristics of, the changes in, and the levels of their mental health and well-being (Carstensen, Turan, Scheibe, Ram, Ersner-Hershfield, Samanez-Larkin, Brooks, & Nesselroade, 2011; Gana, Bailly, Saada, Joulain, Trouillet, Hervé, & Alaphilippe, 2013; Sargent-Cox, Anstey, & Luszcz, 2012), there is no consensus on whether mental health improves or declines in people as they age. Some studies claim that people become less negative as they age and that older adults have better and more stable emotional well-being (Carstensen et al., 2011; Charles, Reynolds, & Gatz, 2001), whereas some other studies have determined that life satisfaction declines and mental distress becomes more prevalent with age (Gerstorf, Ram, Röcke, Lindenberger, & Smith, 2008; Rodda, Walker, & Carter, 2011). In such ageing circumstance, positive attributes seem to improve mental health, as indicated in a study by Chopik, Kim, and Smith (2015), which found that a positive attribute (i.e., optimism) in older adults firstly increased from the age of 50 to about 70 years old, then decreased in adults over 70 years old, a change associated with their subjective health. Furthermore, there are actually many factors that might predict subjective well-being in older adults, such as perceived health, leisure, professional status, income, and sense of coherence, which might affect older adults adjustment in

later life (Von Humboldt, 2014). According to this study, there are many factors that might affect older adults' psychological well-being, some of which are uncontrollable.

In addition, the Consensus Statement on the Upcoming Crisis in Geriatric Mental Health (Jeste, Alexopoulos, Bartels, Cummings, Gallo, Gottlieb, Halpain, Palmer, Patterson, Reynolds, & Lebowitz, 1999) states that a global crisis in geriatric mental health care is emerging; it is therefore important that preventative care is on a future research agenda, which should be conducted in a variety of settings. Although there might be some factors in later life that one cannot avoid or control as mentioned earlier, if one has good mental health, good emotional coping skills, and resilience, these will assist in coping with and adjusting to changes (Fredrickson, 2001; Seligman, 1998). According to this perspective, an intervention for older adults that enhances their ability in these areas is therefore necessary and potentially beneficial. Research into preventative and positive interventions will help fill this knowledge gap and help develop a preventative psychological intervention for mental health in older adults. The next section will delve more deeply into the need for early intervention for psychological well-being.

## **2.2. The Need for Prevention and Early Intervention**

Research shows that many people with mental health problems rarely seek professional help and support regardless of the severity of their conditions. According to one study regarding help-seeking behaviour in people with common mental health problems, a large portion of the participants (63.1%) stated that they prefer to seek help only from friends or relatives, a considerable portion of people (over 20%) with a high predisposition for mental illness choose not to request help from anyone, and

only 28% had pursued professional help (Oliver, Pearson, Coe, & Gunnell, 2005). Attitudes towards seeking help regarding psychological needs are likely to prevent people from reaching out for appropriate support. This may be especially true for men, as their attitudes toward psychological help-seeking are more negative than those of women, and they are often reluctant to seek help due to their attitudes about masculinity (Yousaf, Popat, & Hunter, 2015). In studies on older adults, there have been mixed results regarding whether their attitudes towards help-seeking for psychological problems are positive or negative. A study of attitudes towards psychological treatment among older Australians indicated that more than 50% of participants had sought help for psychological problems; therefore, it can be assumed that the attitudes towards help-seeking in this age group may not be as negative as might be expected (Woodward, 2009). In contrast, another cross-sectional study indicates that older adults perceive those with mental illness as being embarrassing and lacking in social skills. Therefore, this perception might lead to low willingness to seek psychological support, in addition to some other barriers that create difficulties for this age group in seeking help, such as concern about cost and lack of knowledge (Segal, Coolidge, Mincic, & Riley, 2005).

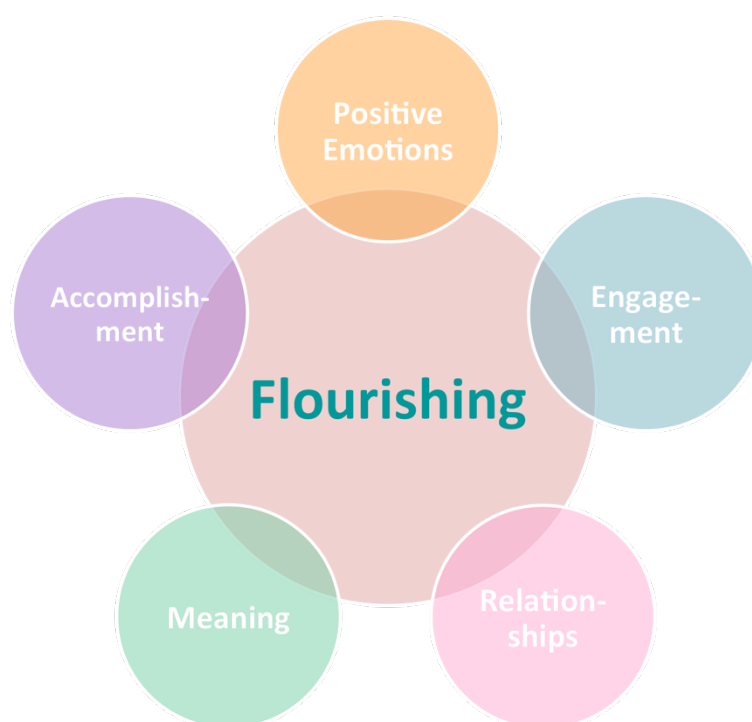
Since this factor in older adults, as well as other age groups, might vary according to personal perception, knowledge, culture, and social support, early intervention or preventative approaches could be a potential focus of outreach. These interventions will also be in the best interest of individuals. Preventative intervention can help encourage cultivation of positive habits to enhance mental health and create a healthy state of mind that can help prevent an individual from falling into psychological distress, and thus from needing to seek help. Since a preventative or early intervention can be implemented for anyone regardless of mental health status,

the intervention will not be perceived as a ‘treatment for mental illness’, but rather as a well-being related activity. As such, people may be more willing to learn and incorporate such interventions into their daily life. Therefore, such a supportive approach could contribute to creating a mentally healthy society over time.

### **2.3. Well-being Theory and Models**

Well-being is a subjective term lacking a precise definition. Many health measurements that attempt to measure well-being present it as a state that is related to a ratio of positive and negative feelings, emotional states, life satisfaction, and general health (Mcdowell, 2006). Although the term ‘well-being’ has not been firmly defined, there are many theories and guidelines that elucidate the factors contributing to well-being. One is Seligman’s PERMA model (Figure 1), a positive psychology model for well-being, which views well-being as composed of five elements: positive emotion, engagement, relationships, meaning and purpose, and accomplishment (Seligman, 2011a). Positive emotions are thought to derive from positive perception and experience of one’s past, present, and future. Barbara Fredrickson (2011), a positive psychologist, postulates that there are 10 common positive emotions: joy, gratitude, serenity, interest, hope, pride, amusement, inspiration, awe, and love. These positive emotions drive an individual to thrive, broaden an individual’s thinking, enhance psychological, intellectual, social, and physical resources, can undo negative emotions, and be accumulated over time to enhance one’s well-being (Fredrickson, 2001). Engagement occurs when one is completely in the moment and fully absorbing the experience of what one is performing, so it is also related to flow, a state of enjoyment and absorption (Csikszentmihalyi, 2002). Positive relationships are defined as supportive connections and healthy and fulfilling relations with others, namely

family, friends, loved ones, and communities. Meaning, or a meaningful life, is the sense of belonging to and contributing to something that is believed to be bigger than oneself. This sense depends on each individual's ideology and beliefs and can be influenced by positive institutions in society such as religion and societal contribution. Lastly, accomplishment can take on many forms including achievement, triumph, mastery, and realisation. This model suggests that these five elements will create a flourishing state, which is the complete psychological well-being of a person.

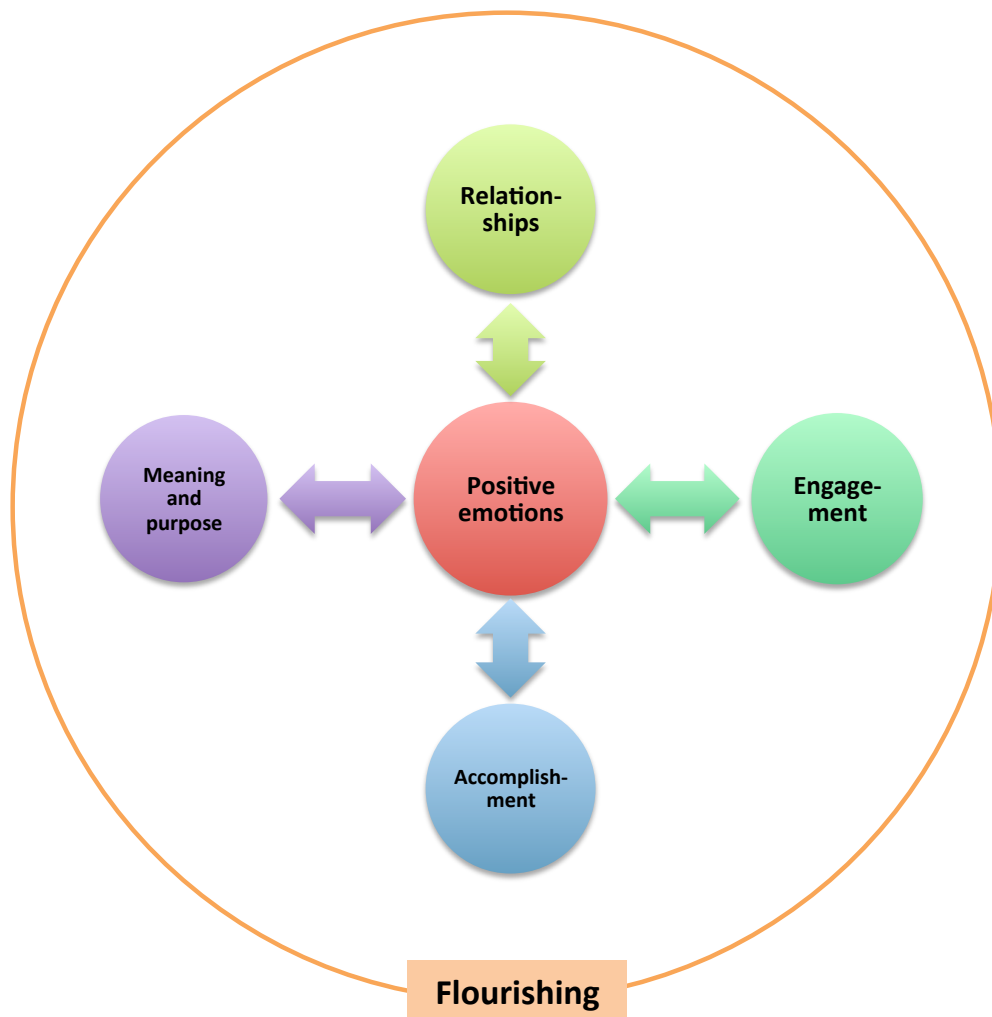


*Figure 2.1.* Seligman's PERMA model of well-being.

According to Seligman (2011b), each element stands separately and can be pursued on its own to increase one's well-being or the state of flourishing when all the elements have been fulfilled. However, it could be argued that all elements are related and affect and support one another. The five elements cover different aspects of life,

and altogether they will support a person to thrive and flourish, bringing about a sense of well-being, which may be perceived as happiness. A lack in one area might affect a person in another area. From this model, positive emotion can be viewed as the foundation of other elements (Figure 2), as it may affect a person's reactions and behaviour. A person's reaction and behaviour may then lead to positive or negative conditions in other areas. For instance, an annoyed mood (i.e., negative emotion) may be a cause of unconsidered words and gestures towards others, which might cause negative feelings in relationship; a depressive mood may obstruct a person in starting tasks, therefore, no engagement and accomplishment can be obtained. Hence, enhancing positive emotions as the first step may lead to the development of other elements, which can in turn generate more positive emotions. For example, a good relationship will bring about a sense of being loved, which is a positive feeling, contributing to the positive emotion element. In sum, all elements are not isolated pillars, but rather work together as mechanisms in one's life to aid in reaching a positive state, and positivity can be continually obtained as an upward spiral to flourishing and well-being.





*Figure 2.2.* Applied PERMA model of well-being: Positive emotions as a foundation.

Other models describe more aspects of well-being. A recent study about preserving subjective well-being has shown that personal resources like humour, social company, daily activities, and empathy help people to preserve acceptable levels of well-being, despite the presence of psychological symptoms like depression, anxiety, and stress (Bos, Snippe, De Jonge, & Jeronimus, 2016). These personal resources mentioned are in accordance with some elements in PERMA, which are positive emotions, relationship, engagement, and accomplishment. Furthermore, the elements in the PERMA model of well-being are also concordant with the well-being

factors described by the UK National Accounts of Well-being of New Economics Foundation (NEF): a sense of vitality, engaging in meaningful activities that would create feelings of competency and autonomy, and a store of inner resources to enhance one's resilience (Nef, 2009). However, while NEF includes a sense of vitality as one of the factors for well-being, which can be interpreted as both physical and psychological functioning, there is no physical element in PERMA. When considering older adults, physical health can be an important influence on their overall health and well-being. As described in the biopsychosocial model of health and illness (Engel, 2012), one's health or illness stems from the interrelation of three factors: biological, psychological, and social. This biopsychosocial model explains that mind and the body are inseparable entities, and one component alone cannot create a definite outcome of health or illness. Comparing this model to other models and theories discussed, it can be seen that PERMA mainly focuses on personal psychological aspects (i.e., positive emotions, engagement, accomplishment, and meaning), reserving the relationship element as a social aspect. Overall, there is no one particular model that covers all factors in detail. The elements that a model includes depend on the focus of a model and the aim of such a model, whether it is to present an overall picture or detailed aspects of well-being.

From this review of well-being theories and models, it can be seen that these theories and models are concerned mainly with what contributes to an individual's well-being, but not how to achieve it. This study applies these models to develop a treatment model that facilitates how people can enhance their well-being on a daily basis. The PERMA model is the underlying well-being model in this study given that it shares a primary focus with the experimental treatment of promoting mental health and well-being. For older adults, for whom physical health needs to be taken into

account, PERMA contains relevant psychological and social elements that may enhance older people's mental well-being when they are optimised. The elements can also simply be applied to daily routines and activities, which may bring about on-going optimisation of their subjective well-being. Regarding physical health, this study would recruit fairly healthy participants, but would not take this aspect into account since the study aims to focus on the participants' mental rather than physical well-being.

**2.3.1 Subjective well-being: The measurement of happiness.** In order to develop an intervention model for older adults and identify a standard by which to measure their mental well-being and happiness, the existing related literature was reviewed. Subjective well-being (SWB) is used to represent a person's level of happiness (Argyle, 2001; Diener, 2000; Ryan & Deci, 2001). Ed Diener, Alumni Professor of Psychology, University of Illinois, who has dedicated many decades to researching subjective well-being, explains that subjective well-being is an umbrella term that contains the evaluation of components in an individual's life. This encompasses how people experience their lives, including both cognitive judgments and affective reactions (Diener, 1984, 2009). Therefore, subjective well-being is related to happiness and life satisfaction. However, there is an continuing debate around subjective well-being and its role in happiness. It has been argued that a single key might not exist, since it is possible to possess the resources that are necessary for a high level of subjective well-being yet still feel unhappy (Diener, 2009; Ryff, 1989). In addition, according to hedonic adaptation theory, feelings of happiness and unhappiness, or positive and negative emotions resulting from particular factors or events, tend to subside after a period of time, no matter whether the circumstances

were positive or negative (Kahneman, Diener, Schwarz, & Russell Sage Foundation., 1999). If this is the case, an ongoing intervention will be necessary and beneficial.

According to previous studies, there are many features and factors that could affect one's subjective well-being and happiness, including positive emotions, humour, optimism, relationship, and achievement (Argyle, 2001). These factors, again, are in accordance with elements that the PERMA model includes as necessary to achieve a flourishing state. Waldinger and Vaillant, professors at Harvard Medical School, are responsible for the longest study investigating health and well-being in later life, which has tracked the lives of 724 participants over 75 years (Harvard Study of Adult Development, 2015). Their thought-provoking findings indicate that while people in modern society strive for wealth or fame, and identify these two elements as their most important life goals, the key to good life (i.e., happiness and healthiness) is actually the warmth of the fulfilling relationships that one has throughout life on a daily basis (Waldinger & Schulz, 2010). "Good relationships keep us happier and healthier", stated Waldinger (2015), as they have the greatest positive impact on life satisfaction. In addition, Vaillant (2016a) noted that the study conclusively shows that "Happiness is love".

Altogether, it appears that most theories and models of well-being, as mentioned, are constructed around the positive resources that an individual possesses. According to these models and theories, however, older adults may perceive themselves as having fewer positive resources compared to earlier stages in their lives and may therefore perceive themselves as having poorer well-being. For example, the sense of role loss because of retirement may lead to a lack of engagement and accomplishment on a daily basis, which in turn leads to fewer resources to contribute

to overall well-being. If many factors together are prolonged for a period of time, it may lead to a low state of mental well-being (i.e., languishing). Hence, it is interesting and important to gain a better understanding of whether and how we can enhance an individual's potential resources to increase and preserve subjective well-being and happiness, both continually on a daily basis and in the long run, thus allowing the individual to flourish.

According to these theories and studies, an intervention model that would promote positive emotions and amplify the acknowledgement and optimisation of other resources (e.g., relationships, engagement, and accomplishment) would be able to support older adults in maintaining and enhancing their well-being. Measurement standards for well-being that include perceived positive and negative emotions, subjective happiness, and life satisfaction would provide a more complete perspective on the changes in an individual's mental well-being. The next section will further explore the positive mental health framework, particularly in regard to positive ageing and mental well-being in older adults.

#### **2.4. Positive Mental Health and Well-being Framework for Positive Ageing**

Positive health has recently attracted more attention, becoming a principle that has been emphasised by major health organisations and in recent literature and as mentioned earlier. However, the origin of this concept has been long established since ancient times. Two examples of this are Hedonism and Eudaimonia, philosophies of ancient Egypt and ancient Greece respectively (Wikipedia, 2016b, 2016c). Hedonism identified pleasure and pain as the two motivations for humans' actions and believed happiness to be the aim of life, viewing happiness as pleasure, comfort, and enjoyment (Delle Fave, Massimini, & Bassi, 2011). Hence, one's pleasure should be

superior to one's pain in order to achieve happiness (Chandler, 1975). In Eudaimonia, happiness was found in attempting to achieve a flourishing life, and one's actions are done subconsciously to achieve an ultimate goal of happiness, which is a challenge of one's ability to pursue something that is meaningful to the individual or society (Delle Fave et al., 2011; Lutter, 2001). From these perspectives, these two ancient philosophies can be viewed as origins of positive mental health and positive psychology.

Positive mental health is not only the absence of mental illness but also the presence of a healthy state of mind of an individual. Similar to when one mentions physical health, one would not say one is 'healthy' if he or she is without illness but is not feeling particularly well. Keyes (2013) proposed that there are two main streams of what contributes to a healthy state of mind (i.e., positive mental health) of an individual, feeling positive emotions and achieving positive functioning, where these two factors are ongoing matters. A longitudinal study regarding a predictor of future risk of mental illness (Keyes, 2010) found a direct correlation between changes in level of positive mental health and future occurrence of mental illness. In addition, the statistical analysis of this study indicates that levels of mental health of the participants were not stable. Some participants improved from languishing or moderate to flourishing, while others declined from flourishing to moderate or languishing (Keyes, 2010).

These findings indicate that taking care of one's positive mental health should be a continual matter, with the aim to achieve and maintain a flourishing state. Therefore, development of a preventative or early treatment model should also consider the possibility of an ongoing, self-help intervention that allows individuals to

integrate the intervention into their daily routine in order to continually attend to their own mental well-being. If one's pleasure should be superior to one's pain to achieve happiness as believed in Hedonism, enhancement and promotion of positive emotions, as a foundation, may be a potential means to this end. This concept is also explained in Fredrickson's broaden-and-build theory, which states that positive emotions can undo negative emotions and will support a person to broaden their mind and build their ability to effectively overcome difficulties and to flourish (Fredrickson, 2001).

Turning to older adults, 'positive ageing' has been a major trend promoted by various organisations such as the World Health Organisation (WHO) and the United Nations. There are theories and models to present positive ageing, which is also known as healthy, productive, active, or successful ageing (Hill, 2011). However, they are all focused on the same outcome, which is to provide guidelines for older adults to age positively and, hopefully, happily. Analysing different definitions and models finds that ageing well involves several components, including physical, cognitive, mental, and social functioning (Cosco, Prina, Perales, Stephan, & Brayne, 2014; Depp & Jeste, 2006; Hill, 2011; Hodge, English, Giles, & Flicker, 2013; Rowe & Kahn, 1987). While these models and studies focus on and illustrate what contributes to positive ageing, the question remains as to how to attain it in daily life. If those components make people feel positive or happy as they age, then what are the implications for an older person who is experiencing physical or cognitive deterioration in regard to his or her ability to attain well-being? A few recent studies that acknowledged this gap have aimed to determine how rather than what contributes to ageing and living well in older age (Nimrod & Ben-Shem, 2015; Zimmermann & Grebe, 2014). From a number of interviews with older adults in these studies, ageing

positively is more about internal resources, which are positive attitudes and coping strategies that one establishes and maintains as one ages. According to the participants' narrative in these studies, it is not about how much a person has or how well a person is functioning, but instead how well a person utilises and optimises his or her internal resources. Similarly, Hill (2011) argued that 'positive ageing', unlike 'successful ageing', which mainly measures and concentrates on physical and cognitive functioning, is psychological adaptation and subjective emotional states as one experiences the unavoidable consequences of late-life decline.

Accordingly, a good example of positive ageing, as defined by the Australian Psychological Society (APS), is "the process of maintaining a positive attitude, feeling good about yourself, keeping fit and healthy, and engaging fully in life as you age". Considering all related aspects, positive psychology can be an effective approach to support older people in positive ageing and achieving mental fitness, as positive psychology focuses on promoting optimal human functioning and well-being by encouraging positive thoughts and behaviours and enhancing and utilising resources that one possesses in order to support continual positivity in one's life (Seligman, 2003, 2011a). Therefore, it can be a strategy that one uses to cope with challenges that one encounters in later life.

By this account, when promoting mental health and well-being in older adults, an intervention should not focus on only one area in a person's life in order to promote well-being or support him or her to flourish. Multiple dimensions should be incorporated in an intervention as consolidated therapeutic goals that contribute to the main goal, which is the healthy state of mind of a person, or, according to Keyes' definition, 'flourishing'. A more extensive search for existing studies in this area was



conducted, seeking psychological interventions for mental health promotion in older age groups or positive ageing in particular.

**2.4.1 Psychological interventions for mental health promotion in older adults.** There are very limited studies regarding psychological intervention for mental health promotion in older age groups, despite the fact that positive health has been encouraging by major health care organisations, as previously mentioned. A systematic review and meta-analysis by Forsman, Schierenbeck, and Wahlbeck (2011), which assessed the effectiveness of psychosocial interventions for the prevention of depression in older adults, brought together thirty studies that closely relate to a preventative intervention and mental health promotion, since the interventions included in the study aimed to act as a preventative tool for depression. This meta-analysis provides an overall picture of the interventions that have been attempted for prevention of mental illness in older age groups. The types of intervention can be categorised into six groups: physical exercise, skill training, group support, reminiscence, social activities, and multi-componential intervention. Considering these types of intervention compared to the PERMA well-being model, and noting that physical exercise is not included in PERMA, it can be seen that the interventions can contribute to some elements in the well-being model, namely, skill training for achievement, group support and social activities for relationship, and reminiscence for possibility of positive emotion. However, no intervention aimed to utilise inner resources of the participants or cultivate positive thoughts, feelings, attitudes, and coping strategies that may contribute to positive ageing. Regarding the results of these studies, findings from meta-analysis show that there was a small or no effect, not statistically significant in reducing depression symptoms. Among all intervention types, the two trials that implemented social activities yielded the most

effective results (Forsman et al., 2011). These findings support Waldinger and Vaillant's view that relationship is the most important factor for one's happiness (Waldinger, 2015). Hence, it is worthwhile to emphasise actions that can create meaningful and supportive relationships in an intervention to enhance one's well-being.

Overall, the intervention in previous studies did not specifically focus on promoting inner resources of an individual such as positive emotions, personal strengths, daily engagement and achievement, or close relationship, which might cause positive or negative effects in other areas in life and therefore affect a person's mental well-being. The current evidence for early and preventative intervention for mental health in older adults is very scant. Because of this knowledge gap, I proposed an intervention that was expected to enhance inner resources and strengths for older people, focusing on multiple elements of the psychological well-being framework. The proposed intervention is derived from positive health and positive psychology and integrated with hypnotherapy as a delivery method, with positive psychological approaches incorporated into hypnotic suggestions. The underlying theories and approaches for the treatment model will be reviewed and illustrated further.

## **2.5. Hypnosis and Hypnotherapy**

As the proposed intervention utilises a hypnosis approach, this section will explain and review related literature regarding hypnosis and the use of hypnosis for therapeutic purposes, known as hypnotherapy. Hypnosis has not been precisely defined. Although its definition has been described in some theoretical textbooks and has been developing over time, the proposed definitions are still more like a description of its process, or what is performed to the subject, more than its precise

meaning and the experience of the process that could create a better understanding (Green, Barabasz, Barrett, & Montgomery, 2005; Heap, Aravind, & Hartland, 2002). For instance, Division 30 of the American Psychological Association states that “When using hypnosis, one person (the subject) is guided by another (the hypnotist) to respond to suggestions for changes in subjective experience, alterations in perception, sensation, emotion, thought or behaviour” (Green et al., 2005). However, Yapko (2005) expressed concern that this description could unintentionally create or reinforce negative perceptions of hypnosis given its explanation of hypnosis as something the clinician does to the client, rather than supporting the client to reach his or her goals. Since the definition of hypnosis is not clear to the general public, and it has also been presented in some entertainment settings (i.e., stage hypnosis), where a hypnotist completely controls a passive and compliant subject, there are social misconceptions about hypnosis. Major social misconceptions are related to losing control over oneself, such as: people are not aware of what they are doing while under hypnosis, hypnotised persons tend to believe everything the hypnotist says and can not resist obeying, and hypnotised persons usually forget what happened to them during trance once they awaken from it (Green, 2003; London, Cooper, & Johnson, 1962).

Because of these common myths, accurate procedures and experiences of hypnosis need to be clearly explained to clients to dissolve misconceptions and create good understanding and expectations. McConkey (2005), one of the lead researchers in the hypnosis field, has pointed out that it is important to establish the understanding, application, and communication of hypnosis; to use the developed understanding and knowledge to help address medical and psychological conditions; and to promote health and well-being. Green (2003) also indicated in his study that

the experience of being hypnotised can modify the stereotypic views about hypnosis. This suggests that even if people have some preconceptions or misconceptions about hypnosis, these can be changed when they have direct experience of the process. Hence, more research into hypnosis experience, perception, and optimal approaches is firmly encouraged. Regarding older adults, misconceptions might also be a challenge in hypnosis-related research, as they might be uncertain about an approach with which that they are not familiar. Therefore, clear explanation of the intervention and process as well as willingness of the participants needs to be paramount.

Hypnotherapy is the use of hypnosis in the treatment of a medical or psychological disorder or concern (Elkins, Barabasz, Council, & Spiegel, 2015). It is a technique that engages a person's mind to utilise their own resources and abilities to nourish, to grow, and to heal their own selves. Many clinical studies reported positive outcomes of implementing hypnotherapy for various physical conditions, for example, pain management (Jensen & Patterson, 2014; Patterson & Jensen, 2003), irritable bowel syndrome (Bremner, 2013; Peter, Tran, Michalski, & Moser, 2013), and post-menopausal symptoms (Elkins, Johnson, Fisher, Sliwinski, & Keith, 2013). Moreover, the research participants reported not only reduced illness symptoms, but also positive side effects such as improved positive affect, sense of well-being, quality of life, and increased satisfaction with life. However, it is not clear in these studies how well-being and quality of life were conceptualised. Also, satisfaction with life was more related to satisfaction with the intervention, and the reduction of symptoms was considered in the context of each condition. As such, although it can be concluded that hypnotherapy can alleviate or treat such conditions, it cannot be claimed that it increases participants' happiness or well-being. Likewise, for mental conditions, it has been shown that hypnosis can significantly decrease anxiety and

depression (Shenefelt, 2013; Yapko, 2006), diminish stress (Cardeña, Svensson, & Hejdström, 2013; Spiegel, 1988), ameliorate eating disorders (Segal, 2001; Young, 1995) and sleep disorders (Anderson, Dalton, & Basker, 1979; Serban, Padurariu, Ciobica, Cojocaru, & Lefter, 2013). Flammer and Bongartz (2003) reported in an extensive meta-analysis of 57 randomised clinical studies that investigated the efficacy of hypnosis in several physical and mental conditions that hypnosis intervention had a medium effect size ( $d = 0.56$ ) from a weighted average post-treatment of all the included studies. The studies reviewed show that hypnosis is versatile and has a positive effect on reducing symptoms of various conditions; however, these studies suffer from the fact that the improved well-being of the participants were measured by only the reduction of illness conditions. No research into the use of hypnosis for prevention of mental health problems or promotion of well-being in older adults has been found to date. It is therefore compelling to examine if hypnosis can enhance positivity and well-being outside of an illness context and if it has potential to be a preventative intervention.

Overall, despite the fact that hypnosis has been used to treat a variety of conditions because of its flexibility in practice, there is still scant research, particularly with regard to using hypnosis for well-being enhancement and preventative care, especially in older age groups. Previous studies have also called for further research in this area in order to reinforce understanding and generate additional evidence in this area (Airoso, Andersson, Falkenberg, Forsberg, Nordby-Hörnell, Ohlén, & Sundberg, 2011; Crawford, Brown, & Moon, 1993; Schoenberger, 2000).

## **2.6. Integration of Positive Psychology and Hypnosis**

Positive psychology is an evidence-based practice that has been widely accepted as a potent method to encourage a person's subjective positivity, which leads to fulfilling lives (Positive Psychology Center, 2016). Theory and practice in positive psychology is focused on promoting optimal human functioning and well-being by encouraging positive thoughts and behaviours, creating an understanding of one's strengths, as well as utilising one's resources in order to maximise potential for subjective success and happiness in one's life (Seligman, 2003). Positive psychological interventions are based on the theory that positive emotions can undo negative emotions and support a person to broaden their mind and build up their ability to effectively overcome difficulties and to flourish, as Fredrickson explains in her broaden-and-build theory (2001). These theories and practices have been applied in many areas to promote people's health and well-being, including positive mental health and positive ageing. Research on positive psychology in older adults shows that positive emotions and happiness have the power to undo detrimental effects that predict mortality (Newall, Chipperfield, Bailis, & Stewart, 2013). People with positive attitudes and optimistic perception of their own ageing have been shown to live longer, as well as having better physical well-being (Levy, Slade, Kunkel, & Kasl, 2002). A recent study regarding a programme of positive intervention in elderly (Ramírez, Ortega, Chamorro, & Colmenero, 2014) shows that positive psychological intervention increased the participants' life satisfaction and subjective happiness. However, the study found that the participants' happiness returned to their baseline in a short while after the intervention was completed. This corroborates other positive intervention studies, which imply that the improved happiness levels do not last for a very long period of time (Seligman, Steen, Park, & Peterson, 2005). As such, further development of positive interventions for longer-lasting and permanent results is

continually pursued. This being the case, an ongoing intervention that people can continually practise and implement on a daily basis is worthwhile to develop. This study proposed such an intervention, in which various positive psychological approaches were incorporated with hypnosis, presented in a format that individuals could learn and continually practise by themselves.

Integration of positive psychology and hypnosis is proposed because positive psychology and hypnosis are considered to highly reinforce each other, given their similarities in philosophy and approach. According to Yapko (2007), hypnosis can be described as the original positive psychology since it amplifies a person's positive resources. He also went on to describe hypnosis as an approach that emphasises to the subconscious the pathways into the best and most adaptive aspects of experience, since it is believed that people have more abilities than they consciously realise (Yapko, 2007). There is evidence that supports this view in previous literature regarding hypnosis, that is, hypnosis suggestions normally concentrate on reframing beliefs and attitudes, or shifting a patient's focus from one thing (i.e., negative thoughts and feelings, illness symptoms) to another (i.e., positive feelings, constructive changes), either directly or indirectly. For instance, the use of hypnosis for pain management usually suggests that patients shift their focus to the state of 'comfort' that their mind can enter and enhance that instead of focusing on their pain (Jensen & Patterson, 2014). The use of hypnosis to treat anxiety usually suggests that patients focus on what they can do to cope rather than their fear (Gunnison, 1990; Lynn, Rhue, & Kirsch, 2010). This quality of hypnosis is closely akin to positive psychology approaches that aim to change people's way of thinking by using different tools and exercises (e.g., gratitude, counting blessings, finding strengths) to improve a person's psychological well-being. Both positive psychology and hypnosis aim to

facilitate human potential and well-being by enhancing acknowledgement and utilisation of possessed resources, as well as cultivating a positive mind-set and attitudes for continual mental well-being. Both theories determine that what one focuses on amplifies in one's awareness (Yapko, 2012). Therefore, the integration of the two complementary approaches could be expected to produce greater results and enhancement of one's overall well-being.

**2.6.1. The application of hypnosis to enhance happiness using positive psychology frameworks.** Only one paper has been found regarding the use of hypnosis to enhance happiness in particular. Ruyschaert (2014) has discussed how hypnosis can be used as a facilitative approach, where happiness was a main goal of the therapy. Ruyschaert reviewed the meaning of happiness based on positive psychology frameworks and illustrated happiness-related goals for which hypnosis was used, such as generating positive emotions, developing a positive self-image, feeling connected, orienting oneself to a positive future and mobilising hope, and creating a meaningful life. In addition, when a therapy is based upon a particular positive outcome such as self-image or social connection, hypnosis can be used to relive, intensify, and nurture such experience (e.g., imaginative hypnosis or visualisation; (Ruyschaert, 2014). However, this paper does not describe a treatment model or process for this application, and no studies or trials that examine this application of happiness-related goals to hypnosis and the integration of positive psychological approaches into hypnosis for happiness were presented. Hence, a current weakness of this integrated theory is that, although in theory and practice the integrated application is possible, there is very limited evidence for its compatibility and efficiency. One argument that might be made is, although the use of hypnosis in many cases, as in applications for treating various conditions as mentioned earlier, has



not been based upon positive psychology theory or intentionally focused on well-being, a typical process of hypnosis alone can contribute to well-being and happiness. For example, a hypnotic induction where a hypnotherapist invites a client to visit a nice, safe place or imagine a pleasant experience may already have created positive emotions. From this perspective, it can be inferred that the hypnosis process itself may contribute to a person's psychological well-being, and, when the therapy is specifically focused on well-being and happiness, hypnosis can be a potential method of generating additional positive outcomes.

**2.6.2. Previous studies of integrated hypnosis and positive psychology intervention for psychological well-being enhancement.** Concerning the current use of hypnosis to facilitate positive psychological intervention, only a few studies have been found (Burns, 2009; Guse, 2012; Guse & Fourie, 2013; Guse, Wissing, & Hartman, 2006). Burns (2009) described a case study of a chronic pain patient with concurrent depression in which positive psychology was integrated with hypnosis. The intervention in this case study consisted of encouraging the patient to focus on happy moments in everyday life, as well as reviewing content and peaceful time in the past, instead of trying to alleviate the feeling of pain. The patient was then invited and mentored to reintroduce those positive experiences into the present time, using hypnosis to enhance such positive feelings and emotions. This intervention process is the application of broaden-and-build theory in positive psychology, which states that positive emotions can undo negative emotions (Fredrickson, 2001). The changes observed were that the patient engaged in more activities and developed greater orientation towards the future, rebuilt family and social relationships, and reduced the use of painkilling medication. The outcome concluded from the patient's narrative was that positive enhancement helps the patient to attain greater well-being,

regardless of whether the pain stops. This conclusion, however, relies solely on a qualitative analysis of one patient's narrative. It was not conducted as clinical or scientific research.

In addition, there are other three studies by Guse et al., who researched hypnosis intervention from a positive psychology perspective and applied this integrated intervention in several different conditions. First, Guse and colleagues (2006) developed a hypnotherapeutic programme for postnatal psychological well-being, which focused on utilising inner strengths, hope and optimism, maintaining health and well-being, and preparing for change and growth. The participants were first-time mothers, aged between 20 and 40 years. Efficiency of the intervention was evaluated by comparing an experimental group (n = 23) and control group (n = 23) on psychological well-being and other related specific aspects of early motherhood, measured after six individual hypnotherapeutic sessions. The results showed that the experimental group improved on all measures of psychological well-being compared to the control group, which remained unchanged. This study then concluded that the hypnotherapeutic programme contributed to the enhancement of psychological well-being and alleviated and prevented symptoms of depression in postnatal first-time mothers. However, the previously mentioned methods suffer from some limitations and unclear explanation. Firstly, the number of participants in the groups was relatively small; therefore, the results might not be able to be generalised. Second, while the study claimed that the hypnotherapeutic programme could prevent symptoms of postnatal depression, the only measurement of depression was the Edinburgh Postnatal Depression Scale (EPDS), which was developed only for postnatal measurement. Therefore, it is not clear how the study compared pre- and post-delivery depression symptoms. In addition, qualitative data of participants'

experiences of the intervention, lacking in this study, might provide more understanding of the intervention mechanism and aspects for development. Repetitive studies with larger groups and qualitative measures are needed to confirm the outcomes and to fully understand the intervention mechanism for well-being in this specific condition.

Second, Fourie and Guse (2011) introduced an integrated Ericksonian and ego state therapy approach based on a strengths perspective for the treatment of survivors of childhood sexual abuse, describing a case study in which this therapy was implemented. Prior to the therapy, the participant's responses reflected a low level of satisfaction, more negative than positive affect, and a low sense of coherence, which were interpreted as a low sense of psychological well-being. The participant reported that many symptoms had decreased after the therapy, which was reflected in the assessments of aspects of psychological well-being that were significantly improved. However, although this study illustrated a model of hypnosis that focused on positive aspects (i.e., inner strength, development of the self, psychological functioning), the results could not be generalised, as it was only one case study. More evidence for the effectiveness of this intervention model is needed, and in-depth case studies might be suitable in this circumstance (i.e., a sensitive case), as the therapeutic model and hypnotic suggestions will need to be tailored to suit each person's traumatic experience.

Lastly, another study by Guse and Fourie (2013) implemented the integrated hypnotherapeutic and positive psychological approach mentioned in the previous study with women who experienced childhood sexual abuse and described five case studies. Three out of five participants' psychological well-being was enhanced at the conclusion of the intervention while the other two experienced a decrease in distress,

but psychological well-being was not improved. This study concluded that the use of a hypnotherapeutic approach aligned with positive psychology could enhance psychological well-being. However, the intervention was applied in a very specific condition (i.e., sexual trauma), and there were a very limited number of samples in the study. Although this study has provided more in-depth understanding of the integrated hypnotherapeutic and positive psychological intervention model, the efficacy still cannot be generalised. Development and adjustment of the integrated approach for different contexts are needed. Further research in various contexts, population groups, and larger samples are necessary.

In conclusion, reviewing the existing literature indicates the need for psychological intervention to enhance mental health, either as an independent intervention or as a complementary one. This is especially important in older age groups, which will soon compose the majority of the population, as there is scant research into interventions that support their mental health and well-being. As there are high risks of anxiety and depression in this age group because of age-related loss and degeneration, early or preventative intervention should be a priority. For this circumstance, an integrated positive psychology and hypnosis intervention is proposed, as the two approaches both focus on enhancing and utilising internal positive resources that one possesses in order to offer support in coping with challenges. The integrated intervention model is expected to bring about meaningful outcomes for mental well-being enhancement. With regard to older adults, currently there is no research regarding integrated positive psychology and hypnosis for psychological well-being and happiness enhancement. This research study aims to fulfil this knowledge gap, present a potential integrated intervention model, and thus

provide another option for psychological intervention for mental health and well-being promotion.

## **2.7. Application of Integrated Positive Psychology and Hypnosis**

This section will present specific strategies for implementing hypnosis incorporated within a positive psychology framework, focusing on mental health and well-being enhancement in older adults. A proposed treatment model and process of positive psychology hypnosis, which is the experimental intervention in this study, will be illustrated.

### **2.7.1. Positive Psychology Hypnosis Intervention (PPHI): The experimental intervention**

The main purpose of the intervention is to enhance psychological well-being. Hence, the PERMA model of well-being (Seligman, 2011b) is used as a primary framework to develop hypnotherapeutic suggestions (i.e., positive suggestions). These suggestions will be delivered during hypnotic trance, an altered state of consciousness, which is the state where a person has reduced resistance, greater responsiveness and emotional access, and greater access to unconscious processes (Heap et al., 2002; Hilgard, 1975; Yapko, 2012). Therefore, a person is concentrating deeply on the suggestions given. The hypnotic suggestions are employed to mobilise and utilise a person's personal resources, which in this case is done in order to promote a person's well-being. This process is one wherein a person's thoughts and subconscious abilities will be shifted to focus on positivity and strengths that one has in life. These thoughts then affect one's feelings and behaviour (Gallagher-Thompson, 2010; Grant & Myilibrary, 2004; Yapko, 2001). As these attributes (i.e., thoughts, feelings, behaviour) have been optimised, it is expected to result in an

improved response to stress and emotions, as well as resilience to negative emotions. The person would then react, perform, and engage more in actions and activities that create or bring about constructive outcomes for positive emotions, good relationship, and other aspects. Hence, there would be higher potential for a person to attain better mental well-being and flourish (see Figure 3 for an illustration of the PPHI model).

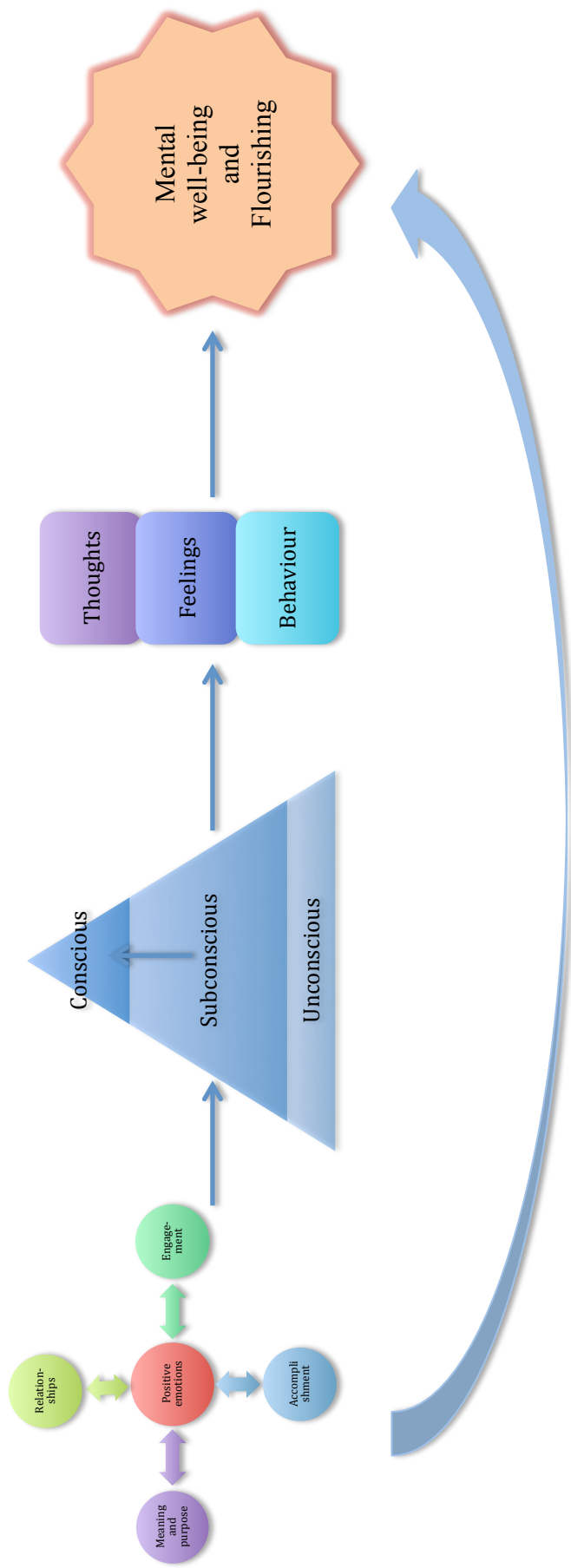


Figure 2.3. PPHI treatment model.

When developing the hypnotic suggestions in the experimental intervention, evidence-based positive psychology approaches and exercises were incorporated. Six different categories of positive psychology practices were used: a) positive savouring; b) gratitude; c) forgiveness, letting go, and self-acceptance; d) loving-kindness; e) flow, engagement, and accomplishment; and f) hope and optimism. These approaches are focused on promoting optimal human functioning and well-being by encouraging positive thoughts and behaviours and creating an understanding of one's strengths, as well as utilising one's resources in order to maximise potential for subjective success and happiness in one's life (Seligman, 2003). Each approach was applied as a strategy to optimise personal psychological strengths and resources for the elements of well-being, namely, positive emotions, engagement, relationship, meaning, and accomplishment. Hypnosis in this intervention model then works as a facilitator and amplifier for these positive psychological practices. An explanation of each category follows.

***Positive savouring.*** Positive savouring occurs when a person is being mindful, totally engaged in the occurrence of, fully appreciating, and responding to a positive moment. It is the combination of the person's sensations, thoughts, behaviour, and emotions (Bryant, 2007). Seligman (2003) explains that "savouring is the awareness of pleasure as it occurs and mindful conscious attention to the experience the pleasure derived from the experience". As such, savouring is one of positive psychology's habit-forming techniques, which is used to cultivate positive focus in order to enhance joy and positive emotions. This can be done in every moment in a typical everyday life, since the 'positive moment' can be found in a very small or common situation, for example, when a person is taking a sip of refreshing water. The key is to truly enjoy the refreshing feeling and absorb positive feelings from the moment.



Researchers in the field claim that the ability to savour positive experiences will lead to a more enjoyable life (Bryant, 2007). Recent research by Jose and colleagues, which examined correlations between savouring and happiness and assessed the associations among daily positive events, savouring responses, and happy mood, found that momentary positive events were positively related to momentary savouring, and therefore related to momentarily happy mood (Jose, Lim, & Bryant, 2012). Another research study by Smith and Hollinger-Smith (2015) that examined the relation between positive savoring and psychological well-being, particularly in older adults, found that an increased ability to savor positive experiences was associated with lower depression and greater happiness and satisfaction with life. The authors of this study then determined that positive savoring is an important aspect of successful ageing, and interventions to enhance savoring and to increase positive emotions in older adults should be a priority. As this strategy increases one's potential to attain positive feelings and emotions, it is incorporated in PPHI hypnotic suggestions, where hypnotic phenomena are expected to help enhance positive sensory experiences of the participants and cultivate this savouring habit in their daily life. As such, it would promote their internal resources for positive emotions, a fundamental element of overall mental well-being.

***Gratitude.*** Gratitude is the feeling of being grateful or thankful. It is a process of thoughts that involve acknowledgement and appreciation of positive aspects of life that one has or has received, and recognition of benefits that have occurred (Emmons & McCullough, 2004). Research into the effects of gratitude in older age groups has shown that being grateful leads to a significant decrease in anxiety and depression, and an increase in life satisfaction, subjective happiness, and specific memories (Ramírez et al., 2014). One review and theoretical integration regarding gratitude and

well-being claimed that, although the underlying mechanism of this correlation between gratitude and well-being is still unclear, gratitude may be related to and improve well-being, as well as predict satisfaction with life, risks of psychological difficulties, and physical health (e.g., sleep pattern;(Wood, Froh, & Geraghty, 2010). Gratitude interventions that have been used in positive psychology research include gratitude lists, grateful contemplation, and behavioural expressions. In the PPHI intervention, these practices will be suggested and instilled by hypnotic suggestions, and the feelings of gratitude will be amplified during hypnotic trance. This strategy aims to promote the positive emotions and relationship elements of the PERMA well-being model.

*Forgiveness, letting go, and self-acceptance.* Forgiveness is unquestionably not a new concept. It appears as doctrines in many major religions such as Buddhism, Islam, Hinduism, and Christianity (Kalayjian, 2009). Forgiveness also implies letting go, in that one lets go of anger and negative emotions towards an offender, whether that be oneself, another person, other beings, or a situation. Self-forgiveness in particular may contribute to self-acceptance. Particularly in older adults who might have been through many transgressions and much guilt in their lives, self-acceptance is one of the essential elements for happiness in later life (Ingersoll-Dayton & Krause, 2005). Studies have shown a correlation between forgiveness and mental health. Available evidence indicates that a lack of forgiveness could decrease subjective well-being and lead to poor mental health due to a higher level of stress and chronic negative emotions, whereas forgiveness is related to lower levels of depression, anxiety, and stress, and brings about psychological functioning, life satisfaction, and improved mental health (Toussaint, Worthington, Williams, Springerlink, & Link, 2015). In the PPHI, hypnotic suggestions for forgiveness, self-acceptance, and letting

go of negative feelings were included in order to cultivate these habits and form constructive attitudes. This strategy aims to promote positive emotions and good relationship elements in the PERMA well-being model.

***Loving-kindness.*** The concept of loving-kindness can also be found in many world religions, especially in Buddhism. It is now one of the core concepts in positive psychology and Buddhism psychology, where one practises spreading one's love towards oneself and others; such action could bring about positive emotions, cultivate positive habits, and create positive vibes. Loving-kindness is not a romantic love, but sincere kind and caring thoughts that one can have towards everything and everyone. The main approach to the practise of loving-kindness is 'loving-kindness meditation', in which a person thinks deeply about sending love to his or her own self, loved ones, other people, and other beings (Fredrickson, 2014). Research has provided supporting evidence for the beneficial effects of kindness-based intervention, particularly in regard to depression level and positive emotions, where the former was significantly decreased and the latter was significantly improved. (Galante, Galante, Bekkers, & Gallacher, 2014). This strategy is incorporated in the hypnotic suggestion to facilitate positive emotions, relationship, and other aspects of well-being such as self-compassion and mindfulness, and therefore it has the potential to improve the health and well-being of individuals.

***Flow, engagement, and accomplishment.*** 'Flow' is described as "a subjective state that people report when they are completely involved in something to the point of forgetting time, fatigue, and everything else but the activity itself (...) and the person functions at his or her fullest capacity" (Csikszentmihalyi, 2014). This description suggests that flow is a state which brings about or promotes one's

engagement in activities, which can lead to accomplishment in the chosen task. The nature of the flow state is also considered similar to hypnotic trance, since it is characterised as a state of deep absorption and dissociation (Guse, 2012). As such, in PPHI, the hypnosis itself induces the state of flow, and hypnotic suggestions for daily engagement and accomplishment are emphasised. Research regarding ‘flow’ has shown that flow is associated with level of challenge, perceived achievement, enjoyment, and absorption (Culbertson, Fullagar, Simmons, & Zhu, 2015; Eun Hee, 2011; Joo, 2015; Rodríguez-Sánchez, Schaufeli, Salanova, Cifre, & Sonnenschein, 2011; Vurgun, Ferudun Dorak, Ozsaker, & Uludağ, 2016). For older adults, this strategy aims to optimise positive psychological functioning and brings a pleasurable feeling of enjoyment and positive experience into daily activities that they perform, which is expected to lessen depressive emotions and heighten life satisfaction.

*Hope and optimism.* Hope and optimism are both future oriented but differ in that optimism is more about cognitive appraisals of personal outcomes, whereas hope focuses on beliefs regarding personal capabilities (Bryant & Cvendros, 2004). It is believed that higher hope is related to better outcomes in many aspects of life, such as physical health and psychological adjustment, and also plays an important role in psychotherapy, due to a sense of successful agency (i.e., goal-directed energy), and pathways (i.e., planning to meet goals; (Snyder, 2002). Regarding optimism, Seligman (1998) explained that optimism is a way one looks at and interprets events in one’s life; it is a habit of thinking positively and constructively. Hence, it can be cultivated by encouraging planning and developing a positive outlook on one’s life and could lead to positive reactions and outcomes. Evidence suggests that hope is associated with developing and successfully pursuing goals, and it predicts changes in positive affect of self-efficacy, perseverance, and flexibility in response to

impediments. Therefore, it is stated that hope may be particularly essential during transitional stages such as adolescence or ageing (Ciarrochi, Parker, Kashdan, Heaven, & Barkus, 2015). Also, optimism has been found to be related to changes in health, higher levels of general health perception, vitality, and mental health (Achat, Kawachi, Spiro, Demolles, & Sparrow, 2000; Chopik et al., 2015). Hope and optimism enhancement is therefore included in the PPHI by using suggestions that guide participants to imagine themselves in the future, and that they can successfully achieve what they want and age positively and healthily. This strategy is expected to promote positive emotions and induce a sense of meaning and purpose in life (Fredrickson, 2001).

In conclusion, these particular positive psychological approaches were selected to integrate into hypnotic suggestions in the PPHI for their high potential to promote the five elements of well-being (i.e., positive emotions, engagement, relationship, accomplishment, and meaning) outlined in the PERMA model of well-being (Seligman, 2011a). Therefore, it will enhance resources that contribute to the overall psychological well-being of older adults.

### **2.7.2 Procedure of Hypnosis**

The hypnosis procedure in the PPHI consists of the establishment of hypnosis context and the suggestions for any particular changes, by which this process will lead to changes in thoughts, feelings, and actions (Lynn, Laurence, & Kirsch, 2015). Each session will follow the procedures of clinical (i.e., classical) hypnosis, which consists of three main stages, described below.

***Hypnotic induction.*** This first stage involves a hypnotherapist inducing hypnotic trance (i.e., altered state of consciousness) in a patient by talking to the patient in a monotonous, soothing or calm voice, and emphasising one or more of

these phenomena: a) relaxation, b) imagination, c) concentration of attention, and/or d) entering a sleep-like state (Hilgard, 1965). Therefore, the hypnotherapist could incorporate any relaxation or attention shift techniques in this process to suit each patient, in order to induce the patient to move into trance. This could be to guide the patient to focus on his or her breathing, relax his or her muscles, or imagine a safe, comfortable environment that they enjoy. During the time of the trance state, therapeutic features (e.g., changes in feelings, cognitions, and behaviour) can be implemented and instilled into the patient's everyday life more effectively (Burkhard, 2015). Hence, the induction is an opening stage to increase focused attention, which prepares the patient's mind to be open to the hypnotic suggestions, where the feelings of calm, comfort, and trust need to be established, and openness to experience and readiness to respond to suggestions are encouraged, which can be perceived as the context of hypnosis (Lynn et al., 2015). There remains some controversy regarding whether or how much hypnotic trance can improve the hypnotisability or suggestibility of the patient (i.e., the degree to which a person is susceptible to hypnosis); regardless, this induction process was included because, in standard clinical practice, hypnosis is preceded by an induction of a hypnotic trance before actual hypnotic suggestions are delivered (Burkhard, 2015; Heap et al., 2002; Yapko, 2012). Also, this induction process itself can help create positive feelings of safety, calm, and comfort.

***Hypnotic suggestion.*** This stage is where the therapeutic features are implemented. Hypnotic suggestions or therapeutic suggestions include direct or indirect phrases to encourage modification or reconstruction of a specific cognition, perception, experience, or circumstance. Suggestions need to be structured to meet therapeutic goals, such as an alleviation of a condition, an increase in positive factors,

or a change in behaviours. Hence, this stage is where the positive suggestions explained earlier were performed. Generally, there are two different approaches regarding hypnotic suggestion: using standardised suggestions and using tailored or adjusted suggestions to suit the potential of each person (Heap et al., 2002; Peter, 2015). In this study, standardised suggestions were used that were identical for all participants, because the use of standardised suggestions is more appropriate for a research context. Although the use of adjusted or flexible suggestions might bring about higher effectiveness for each individual, since it is tailored to each individual's needs, experiences, and beliefs, it is not practical in a research context as it may create bias and inequality among participants. However, although standardised suggestions were used, the hypnotherapist must also be prepared for different abreactions from different patients, because people have varying backgrounds and experiences, and the suggestions might evoke various memories and feelings. Hence, improvised suggestions or reactions might be needed in some cases in order to attend to the patient's comfort and welfare.

***Post-hypnotic suggestion.*** Post-hypnotic suggestion is normally performed after therapeutic suggestion has been implemented. It is an affirmation or instruction to the patient to show certain behaviour (Barnier, 1998). In this stage, a hypnotherapist assures the patient that the therapeutic suggestion has been cultivated and that they will see some changes or positive results. Post-hypnotic suggestions include stimulus and response, for example: "When X happens (stimulus), you will be Y (response)" (Heap et al., 2002). This stage is included in order to enhance determination, positive expectations, and confidence of the patients regarding the outcomes.

Altogether, these three stages of the intervention are intended to increase an individual's focused attention, deliver therapeutic content that would facilitate an individual achieving the treatment's goals (i.e., in the case of this study: positive emotions, life satisfaction, happiness), and affirm positive results or changes. The full process of the three stages is expected to optimise a hypnotherapeutic experience and help the individual to obtain positive outcomes.

## **2.8. Relaxation: The Control Intervention**

Generally in relaxation, the focus is to relax muscle groups progressively until ultimately the whole body is relaxed, and the aim is the absence of the sense of muscular tension (Edmund, 1925). The application of mindfulness, which is to focus on what is happening here and now, such as focusing on one's breathing (Kabat-Zinn, 2003), can also be included in relaxation interventions to induce a calming and relaxing experience. Relaxation is similar in character to hypnotic trance, and thus serves as a control intervention to compare to the PPHI. One of the common hypnotic inductions involves a hypnotherapist guiding a client to firstly focus on his or her breathing, then progressively relax his or her body and mind until gradually entering a trance state (Heap et al., 2002). Explicitly, hypnosis involves a state of deep relaxation, which facilitates a person to experience complete hypnotic experiences and to access unconscious resources (Yapko, 2012). An additional feature that makes hypnosis different from relaxation is that hypnosis can focus on the past, present or future, or any other specific aspects, depending on the therapeutic plan (Guse, 2014). In the case of the PPHI, there are positive suggestions for mental well-being, as explained earlier, which are provided during hypnotic trance. The comparison between the PPHI and relaxation, which is identical to hypnotic induction with no positive hypnotic suggestions, would help determine if positive suggestions bring



about any addition outcomes, or if a relaxing experience alone could enhance well-being for older adults.

To date, only a few research studies regarding the process or comparison of hypnosis and relaxation have been found. A study that compared the effects of hypnosis with analgesia suggestions and relaxation on clinical pain found that hypnosis followed by analgesia suggestions had a greater effect on reducing the intensity of pain than relaxation (Castel, Pérez, Sala, Padrol, & Rull, 2007). Another study that compared the usefulness of self-hypnosis and meditational relaxation for treatment of anxiety (Benson, Frankel, Apfel, Daniels, Schniewind, Nemiah, Sifneos, Crassweller, Greenwood, Kotch, Arns, & Rosner, 1978) indicated that participants in both self-hypnosis and relaxation interventions significantly improved on psychiatric assessment and self-assessment for anxiety, and there were no difference between the two techniques in therapeutic efficacy according to their evaluations. Hence, this study concluded that both hypnosis and relaxation techniques are effective in the therapy of anxiety. From these few studies, it is not yet possible to conclude whether hypnosis or relaxation has superior effects, as differences in physical and mental conditions might also be influencing the results. This study will therefore compare the two approaches for mental well-being, particularly in older adults. Further studies into various conditions and different settings are still needed and will bring about more understanding and evidence regarding this aspect.

In conclusion, according to the review of existing literature, there is a need for psychological intervention to enhance mental health, especially in older age groups. Currently, there is little research into an intervention that supports their mental health and well-being. This current study proposes an integrated positive psychology and hypnosis intervention, in which the treatment model draws from positive psychology

and well-being theory. Since there is no present research regarding integrated positive psychology and hypnosis for psychological well-being and happiness enhancement in older adults, this study aims to fulfil this knowledge gap. The study presents a possible integrated intervention model of positive psychology hypnosis intervention (PPHI) and aims to explore its efficacy, the participants' subjective experience, and perceived changes in their mental well-being after receiving the PPHI. This knowledge and evidence will further the development of psychological interventions for older age groups, and, if the intervention is effective, the PPHI can serve as an additional approach for psychological intervention for the promotion of mental health and well-being.

## CHAPTER III

### Method

This chapter will describe and justify the research design, which involved sample and criteria setting as well as quantitative and qualitative approaches, including the data collection and data analysis methods. Research procedures, including ethical considerations, participant recruitment, randomisation, data collection, and the intervention process will be explained in detail.

#### 3.1. Research Design

The aim of the research was to explore the efficacy of positive psychology hypnosis intervention (PPHI) in older adults, including the participants' subjective experience, and to assess perceived changes in their psychological well-being after receiving the PPHI. This aim was in order to answer the research question regarding whether a 4-week positive psychology hypnosis intervention (PPHI) improves well-being and happiness in older adults. To this end, a randomised controlled trial (RCT), which combined quantitative and qualitative methods, was used. Roberts and Priest (2010) define randomised controlled trials as a quasi-experimental method that involves a comparison between two or more groups. RCTs allow for both qualitative and quantitative methodologies for data collection and analysis, and they are generally used in medical research to measure the efficiency of certain drugs or therapies. Such an approach is appropriate for the current research because it allows the measurement of the efficiency of PPHI in older adults in comparison with another therapeutic approach.

The design was a concurrent triangulation, with quantitative and qualitative data collected during the same phase, and analysis was conducted separately. The mixed-methods design allowed for both comprehensive understanding of the

intervention experience for further development in addition to statistical evidence of the efficacy of the intervention. Participants were randomly divided into three groups: a) positive psychology hypnosis intervention (PPHI), b) relaxation, and c) control group (no treatment). The comparison of these three groups, the experimental intervention, control intervention, and control condition, can provide non-biased findings regarding the effectiveness of the experimental treatment. Qualitative and quantitative data collection and analysis were conducted, as will be explained further.

### **3.2. Research paradigms**

According to Barkway (2013), there are two main research paradigms, based on the main research philosophies, which are interpretivism and positivism. Positivism implies that an objective reality exists, and therefore it can be measured and quantified using scientific approaches, while interpretivism argues there is a social construct to each phenomenon, the goal of research being to understand the studied phenomenon (Check & Schutt, 2011). The quantitative paradigm is based on a positivist philosophy, seeking objective answers by means of scientific methods. The qualitative paradigm is based on an interpretative philosophy, acknowledging the subjective nature of the phenomenon (Bourgeault, Dingwall, & De Vries, 2013) This paradigm seeks meaning and understanding for the issue under research. Quantitative research requires, in general, extensive data collection and uses statistical testing to support or reject hypotheses. On the other hand, qualitative research can be completed with less data collected from observations or by interviewing participants. The data is usually analysed using interpretative approaches, such as thematic analysis or framework analysis. It often occurs, especially for complex studies, to apply a mixture of the two paradigms (Creswell, 2014). Considering the aims of this study, the

application of both research paradigms as well as qualitative and quantitative methods was deemed appropriate.

### **3.3. Participants and sampling.**

*Sample and criteria setting.* The population sample of the study was adults age 60 and over, where inclusion criteria were: English language proficiency and willingness to partake in the intervention and commit to its process. Exclusion criteria were: current mental illness diagnosis, severe physical health disability, cognitive impairment, and history of severe epilepsy. The age range criterion is based on the stages of life in life span development theory, which defines late adulthood as beginning around age 65 (Baltes, Lindenberger, & Staudinger, 2007; Feldman, 2011). Since the intervention in this study was also designed for the transitional stage, the population sample starting from the age of 60 is considered appropriate for preparation for late adulthood. Also, this age range has also been used in previous research regarding preventive health behaviour of older adults (Levy & Myers, 2004; Meisner & Baker, 2013). People of these ages tend to have gradual changes in physical appearance and health (Zimbardo, 2001). A number of stressful life events occur in this stage, such as retirement, marital separation, and death of close family members (Eddy, St Pierre, & Alles, 1982). These inevitable physical and mental declines might mould a person's self-perception as they age; they may develop a caring acceptance and flourish, or they may struggle and languish (Rowbottom & Spicer, 2010). Therefore, this age group was considered appropriate for the study since the proposed intervention aims to enhance a person's mental health when their life resources might be diminished. The exclusion criteria were developed for several reasons. First, the treatments in this research were not designed for severe mental illness, and therefore would not be appropriate for a person in such a condition.

Second, a cognitive difficulty would obstruct the intervention process, which might distort research results. Last, deep relaxation might trigger a seizure in a person who has severe epilepsy.

### **3.4. Quantitative Methods.**

The quantitative arm was a single centre, non-stratified, single blind, and parallel-group RCT study, as the following details.

**3.4.1. *Quantitative sample size.*** The desired sample size for the quantitative aspect of the study was at least 60 persons in total, with at least 20 persons for each group. The sample size was based on that of previous studies involving similar interventions, including the use of hypnosis to treat anxiety and other psychological issues (Flammer & Bongartz, 2003). This number of participants was considered sufficient to provide meaningful data analysis of the intervention results.

**3.4.2. *Quantitative data collection.*** Six scales were included for quantitative data collection, where a set of four scales was used to collect data concerning the participants' psychological well-being and happiness, once before and once after the intervention process, and another two scales were used as a complement, as explained below. Since the participants of the study were older adults, a criterion for scale selection was not only the objectives and validity of the scales, but also their brevity and ease of understanding. Clear language and brief time needed to complete the questionnaires would allow the participants to feel at ease and more able to answer with their authentic thoughts and feelings.

*Oxford Happiness Questionnaire (OHQ).* This self-report questionnaire is designed to measure the participants' subjective well-being and happiness. It was derived from the Oxford Happiness Inventory (OHI), which has been used by the Department of Experimental Psychology of the University of Oxford since the late

1980s. This updated version of the questionnaire comprises 29 statements answered on a six-point Likert scale, ranging from “strongly agree” to “strongly disagree”. The instrument is compact, easy to administer, and uses simple words. In addition, Likert scales have been used widely in public health evaluation and research. They allow respondents to choose the option that best reflects their feelings and attitudes (Losby, 2012). The items in OHI can be presented in random order, and 12 of them are reversed scales, using double negative sentences, reducing respondent bias and probability of contextual and compliant answering. The validity of the OHI has been verified by the associations of the measure, tested among individuals with different cultures and variables. Previous research studies have shown relationships between the OHI and various factors that are associated with psychological well-being and life satisfaction with life, which are: satisfaction with life, efficacy, sociability/empathy, positive outlook, well-being, cheerfulness, and self-esteem (Hills & Argyle, 2002). This instrument could reveal the presence of changes in positive factors that contribute to the participants’ psychological well-being, happiness, and flourishing state. Hence, the OHI enables investigation of the efficacy of the intervention in addition to the underlying mechanisms of the effects. Moreover, since the aim of the study is to evaluate the efficacy of positive psychology hypnosis intervention (PPHI) in older adults, as a method aimed at improving their well-being and happiness, as opposed to other techniques, such as relaxation, this tool for measuring happiness is appropriate for the research.

*Depression, Anxiety and Stress Scale - 21 Items (DASS-21)*. This is a set of self-reported scales designed to measure the negative emotional states of depression, anxiety and stress. It is a short form of a 42-item self-report measure of depression, anxiety, and stress (DASS). On this 21-item scale, there are 7 items for each

emotional state, scored on a four-point severity/frequency scale answered on a scale from 0 to 3, ranging from “did not apply to me at all” to “applied to me very much or most of the time” (Lovibond, Lovibond, & Psychology Foundation., 1995). This scale was selected because it is compact and would make visible the three negative conditions that might lead to distress and a languishing state. This 21-item scale was not designed to diagnose any clinical psychological disorder; however, its validity was constructed in previous research in a large non-clinical sample to measure the dimensions of depression, anxiety, and stress (Henry & Crawford, 2005). Therefore, it was considered suitable for research purposes. DASS-21 would provide another aspect to the data analysis regarding the intervention efficacy. It could indicate if the participants’ negative symptoms decreased after receiving the intervention, in addition to the improvement of positive factors measured by OHI.

*Satisfaction with Life Scale (SwLS).* This is a brief scale, consisting of five statements that respondents may agree or disagree with, scored on a seven-point Likert scale, ranging from 1 as “strongly disagree” to 7 as “strongly agree”. This scale assesses the participants’ judgement of life satisfaction as a whole, which is one of the components of subjective well-being. The validity of the scale has been constructed in previous research, and it has been determined to be suited for use with different age groups (Diener, Emmons, Larsen, & Griffin, 1985a). This scale was selected to be an adjunct to the scales above, because it takes little time to complete while being able to provide an overall picture of a respondent’s life satisfaction. Although investigating the participants’ life satisfaction is not a main objective of this research study, this concise scale would provide information on an additional factor that contributes to well-being.



*Scale of Positive and Negative Experience (SPANE)*. This scale measured respondents' subjective positive and negative feelings and emotions during the 4 weeks prior to completion. It is a 12-item scale, which includes six items to assess the positives and another six to assess the negatives, scored on a five-point frequency scale, where 1 represents "very rarely or never" and 5 represents "very often or always". The 4-week time frame is determined by the scale developers to be short enough to allow the respondent to recall actual experiences rather than rely on general self-concept (Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi, & Biswas-Diener, 2010). This additional scale helps detect changes in the participants' subjective feelings and experiences during the intervention period.

*Happiness Measures (HM)*. This scale was included in the pre- and post-treatment questionnaire set, which the participants were asked to complete before and after every session. It is a short and straightforward scale that asks them to rate how "happy" they are, or how positively or negatively they are feeling at that moment, on a scale ranging from 0 to 10. It has been used to measure happiness in a general way, and also to monitor normal adults' mood change in previous research (Fordyce, 1988). Although this scale does not illustrate all aspects of participants' happiness, this scale was considered appropriate as an addition to the open-ended questionnaire. The main aim of this measurement was to monitor the participants' feelings in order to take care of their emotional state in each session. The results of this scale were not included in quantitative data analysis, but were used to complement and validate other data sources if their feelings and emotions changed after the intervention.

*Hospital Anxiety and Depression Scale (HADS)*. HADS is commonly used to determine levels of anxiety and depression (Mumford, 1991). A participant would be asked to complete this scale only if they reported that they are "depressed" or

“extremely unhappy” on the Happiness Measurement (HM) administered before and after every treatment session. Completion of HADS was used to take care of the participants’ welfare, to identify any symptoms of clinical depression or anxiety that would warrant contacting their GP or the researcher reporting to their GP. The results of this scale were not included in any analysis; they were used in the therapeutic process (both when conducting PPHI and relaxation), in order to adjust the therapy according to the participants’ needs.

In sum, six measurements were included. Four main scales (OHQ, DASS-21, SWLS, SPANE) were used to measure the presence of changes in participants’ psychological well-being and were included in quantitative data analysis. The other two scales were used only as complementary measurements for the therapeutic process and the participants’ welfare, and were not included in the analysis, as explained above. Many scales were incorporated because each scale measures different psychological facets that might provide interesting and meaningful findings. Also, the use of various scales can help validate results, since results from each scale can be compared to one another in order to determine if they are providing supportive or contradictory outcomes.

**3.4.3. Quantitative data analysis.** The data analysis involved multivariate analysis of covariance (MANCOVA) of scores on the four questionnaires (OHQ, DASS-21, SWLS, SPANE), which was done by using SPSS Statistics for Mac version 24. Pre-treatment scores were used as covariates in the MANCOVA to adjust post-treatment scores, and the treatment groups were used as the fixed factor. The adjustment of post-treatment scores with pre-treatment scores provided two advantages: eliminating pre-test differences between the groups and assessing for any influence of pre-test scores on the post-test scores (Field, 2013). This method compared the three groups in

regard to whether the different treatments affected the post-treatment scores and allowed for more certainty that post-test differences truly resulted from the treatment. Then, a Bonferroni post-hoc test was used to investigate further, using pairwise comparisons in order to see particular differences between each pair of the groups. This analysis enabled testing of the hypothesis that the PPHI group will show greater improvement compared to the other two conditions. The quantitative findings are not only statistical evidence of the efficacy of the intervention, but are also used to validate the qualitative findings. The selected measures are sufficiently complex to allow the analysis of the amount of data that was gathered. Singh (2008) explains that MANCOVA is used to analyse the mean differences among multiple groups for a linear combination of dependent variables. This occurs after adjusting for the covariates. The Bonferroni post-hoc test is used to reduce the possibility of error by testing for differences between each group, differences which could go undetected during MANCOVA (Brysbaert, 2011) thus strengthening the analysis and reducing the probability of obtaining false positive or false negative results that could lead to the confirmation or rejection of a hypothesis.

### **3.5. Qualitative methods.**

**3.5.1. Qualitative sample size.** The sample size of the qualitative portion was set to be at least 12 persons in total. A small sample size is appropriate when in-depth data collection and analysis is performed. This sample size was considered to be reasonable because the analysis was done on a detailed case-by-case basis, in which data from each participant was analysed scrupulously. The number is typical of thematic analysis sample sizes, which was the method used for qualitative data analysis in the study, and was expected to be sufficient for identification of common themes that occur among cases (Smith, Flowers, & Larkin, 2009).

**3.5.2. Qualitative data collection.** Semi-structured interviews were the primary data collection tool. This method was selected for its flexibility, as it allows a researcher to probe for more details from participants' responses while key questions ensure that all necessary aspects are addressed. In contrast, in a structured interview, the researcher needs to strictly follow a set of pre-determined questions, which is more appropriate for verbally administered questionnaires. An unstructured interview is progress based with no pre-organised structure, so although it could provide an in-depth understanding of a participant's point of view, some aspects might be missing (Dicicco - Bloom & Crabtree, 2006; Gill, Stewart, Treasure, & Chadwick, 2008). As such, a semi-structured interview was considered to be the most appropriate approach, since it would cover all necessary details that might be meaningful for data analysis, and further details might be added to obtain more information regarding participants' subjective experiences. In addition, supporting data was collected by pre- and post-session open-ended questionnaires. Details for each data collection technique follow.

*Semi-structured interviews.* Three interviews were conducted: a) before the first session of the intervention, b) after completing the last session of the intervention, and c) at follow-up, at least 4 weeks after the intervention. The first and second interviews were conducted at the treatment centre, on the same days that the participants came for the first and the last treatment session. The follow-up interviews were conducted by appointment approximately four to six weeks after the last treatment session. All interviews were audio-recorded, with permission of the participants. Open-ended questions and probes (see appendix) were designed to assist the participants to narrate their thoughts, feelings, and personal experiences. The first interview focused on their daily life, perceptions of their emotional and psychological health, their outlook about their personal future, and views regarding treatments (i.e., hypnotherapy, mindfulness

relaxation). This was done in order to obtain an overall picture of participants' existing resources that might contribute to their well-being and happiness. The second interview focused on the participants' experiences of the intervention and their perception of any changes in their emotional and psychological well-being, or related factors. The last interview focused on their daily life during the period of time after the intervention was completed, including any perceived decline, sustainment, or improvement in their own emotional and psychological well-being. Participants were also given the opportunity to share personal suggestions regarding the intervention process, or anything else they would like to mention. Having three interviews for comparison made it possible to determine if there were any changes in their everyday, positive activities, and psychological well-being before and after receiving the intervention. In addition, it enabled an analysis of the underlying mechanism of the intervention and understanding of the participants' perceived experience of the intervention.

*Open-ended questionnaires.* The participants were asked to complete question sets in written form before and after each intervention session. The 'before' questionnaires asked the participants to describe their feelings and emotions during the past week, their feelings and emotions at the present moment, and whether they have been practising what they have learnt in the treatment sessions. The 'after' questionnaires asked the participants to describe their feelings and experience during each treatment session as well as how they are feeling at that moment.

*Note taking by the researcher.* Throughout the treatment sessions, the researcher took note on obvious reactions of, and any comments from, the participants. The use of both open-ended questionnaires and the notes taken by the researcher, together with the interview transcripts aims at reducing the risk of bias in the interpretation of

the data, by gathering similar information using more tools. Moreover, the written questionnaires improve the quality of the data by being used to confirm the information in the transcribed interviews, testing for contradictory information.

**3.5.3. *Qualitative data analysis.*** A thematic analysis (TA) framework was selected for the qualitative data analysis. Compared to other qualitative analysis frameworks, such as grounded theory, TA is the most appropriate for the composition of this study, since the sample that was already defined and the data collected were from different groups of participants (PPHI and relaxation), were collected using more than one instrument, and done in three separate phases (pre-, post-intervention, and follow-up; (Alhojailan, 2012). Furthermore, TA involves identifying and classifying patterns and themes from the data collected (Braun & Clarke, 2006). This process allows for discovery of common themes among participants, determining patterns of changes in the participants' behaviour and their psychological well-being, and allows for learning their experience and perception of the intervention. Multi-case analysis was done to find common themes in participants' perception, experience, changes, and a possibly more positive outlook on any physical or psychological symptoms that they may have. As a result, interpretations could be drawn from the data, highlighting differences and similarities of the intervention outcomes among the participants. Therefore, the qualitative findings would provide insight into the intervention process in order to achieve the aim of the research, which was to explore the efficacy of positive psychology hypnosis intervention (PPHI), as well as the participants' subjective experience and perceived changes in their mental well-being afterwards. The three sources of data were analysed as explained in the following paragraphs.

*Interview data.* Computer software, NVivo version 11.0 for Mac, was used to facilitate the thematic analysis of interview data, seeking themes in participants' perception and experience of the intervention, as well as any changes in the participants' well-being. Computer software was chosen as a means for identifying the themes and subthemes in order to limit the risk of bias that may be found in the manual evaluation of themes (Creswell, 2014). All themes identified by the software were verified by the researcher.

Positive psychology concepts and model of well-being (PERMA; (Seligman, 2011a) were used as a theoretical baseline to analyse themes of changes in the participants' well-being and flourishing state. The model identifies the five building blocks of well-being and happiness as being positive emotions, engagement, relationships, meaning and achievement (Seligman, 2011). The model was selected for this research as it provides a complex tool for evaluating the state of happiness and well-being in more detail. The analysis was performed strictly according to Braun and Clarke's (2006) thematic analysis guidelines, following their steps of analysis: a) transcribing recorded audio files verbatim, done by Way With Words Ltd (UK) a professional transcription service; b) reviewing the transcriptions and familiarising the data; c) identifying interesting aspects of the data; d) generating initial codes that were driven by the positive psychology framework (i.e., PERMA model of well-being); e) generating initial data-driven codes; f) sorting the initial codes into potential themes; g) identifying and reviewing themes; and h) defining and naming themes. This procedure revealed patterns in the participants' experiences and perception of the intervention, as well as aiding in investigation of any changes, and identifying common changes in routines that might contribute to well-being.

*Pre- and post-session open-ended questionnaires.* The data was used as complementary data for the therapeutic process and to validate the interviews to describe participants' development through the intervention process. The data has been mentioned in the analysis only if there are any strong supporting or contrasting issues.

*Observation data.* This data is complementary data offering nonverbal information, which might be meaningful for the participants' welfare in the intervention process. The data was not included in the analysis.

### **3.6. Triangulation of quantitative and qualitative methods.**

The purpose of using a mixed-methods design was to use different types of data and different methods of data collection to complement and validate one another. The combination of different approaches can provide a more comprehensive picture of results (Heale & Forbes, 2013). In the case of this study, understanding the participants' experience, perception, and feelings could be achieved more thoroughly through the participants' narration obtained from the interviews, whereas the numeric answers derived from questionnaires might not be able to explain such perspectives in detail. On the other hand, questionnaire results can provide structured data collection on many related items relevant to each aspect of the participants' well-being. The triangulation of findings was performed by comparing themes acquired from thematic analysis to the statistical results of the four measurements' scores, especially in regard to the post-intervention effects. This triangulation of quantitative and qualitative findings allowed clarity as to whether the findings are convergent or divergent, and each finding supplemented the other approach in order to attain more complete overall research findings.

### **3.7. Procedure**



The project was completed over 18 months, from January 2016 to June 2017. This timeframe includes all of the research process: submission for ethics approval, intervention review and preparation, recruitment, intervention process, data collection, data analysis, research writing, and dissemination.

**3.7.1. Ethical considerations.** The research has been reviewed by the Department for Health and has been approved by the Research Ethics Approval Committee for Health (REACH), University of Bath. Since the intervention and data collection process in the study potentially involved sensitive psychological aspects, or might induce emotions and feelings, the researcher was fully aware of such circumstances. The participants' physical and psychological comfort was paramount at every stage of the research procedure, as indicated in the ethical statements below.

*Rights and welfare of participants.* The participants were made to understand that participation in the study and providing information were completely voluntary. There were no costs for the treatments, and they could withdraw at any time before, during, or after the intervention or the research procedure. At every stage of the intervention and the data collection, the participants' physical and psychological comfort was paramount. If there had been any discomfort, it would have been dealt with in a manner appropriate for participants' welfare.

*Confidentiality and privacy.* Participant identification numbers were used instead of participants' names in all documents to ensure the confidentiality of participants' identities. Personal information was asked only if it was considered of benefit to the therapeutic intervention or related to a description of the case study. Personal information would not be included in any publication if it could affect the participants' privacy.

***Informed consent.*** Participants were informed about the purpose of the study, the intervention and the research process, the potential benefits and the potential discomforts, the practitioner and the researcher's background, the protection of their privacy, and their rights regarding participation. They were informed that they would randomly be assigned to one of the three groups to receive either treatment or no treatment. Participants had absolute freedom to decide whether they would provide consent, and it had to be given before participating in any research-related activity.

**3.7.2. Recruitment.** In all, 75 people enrolled to take part in the study, and 68 eligible participants were recruited. The number of participants to be recruited was subject to an approximately 10% withdrawal rate in order to have at least 20 samples in each group. Among this group, five participants dropped out (3 from PPHI, 2 from relaxation group), and one participant in the control group passed away (total dropped out:  $N = 6$ , 8.82%). Hence, 41 participants (21 from PPHI, 20 from relaxation group) completed the intervention and data collection process, and 21 participants in control group who did not need to participate in the intervention completed data collection. The mean age of the sample was 70.31 years (range 60-95,  $SD = 7.703$ ), with 13% male and 87% female. All were white British, and English was their native language. All participants took part in the quantitative study, and 14 voluntary participants (8 from PPHI group and 6 from relaxation group) were involved in the qualitative study. With regard to data collection for the qualitative study, all participants were asked if they were willing to take part, and those who volunteered were randomly assigned into treatment groups and included in the qualitative data collection (i.e., interviews).

In order to obtain this sample, local older peoples' communities and retirement homes in Bath, United Kingdom, were approached. Initially, the researcher intended to recruit the majority of the participants from AgeUK day centre in Bath.

The researcher was volunteering at AgeUK and therefore had permission to approach the older people who came to the day centre and invite them to participate in the study. However, the recruitment did not go as planned. Only a few older people from AgeUK day centre agreed to take part in the study. Thus, the researcher visited care homes and retirement homes around Bath area in order to recruit more participants. However, the majority of older people who lived in those homes were not the study's target population, as most of them had severe physical health problems or cognitive impairment. Therefore, the recruitment approach was adjusted. In the meantime, the information about and invitation to take part in the research study was continually promoted to potential participants in Bath and nearby areas using posters, e-mails, local communities' mailing lists, and the researcher's personal contacts. Nevertheless, only a small number of older adults responded to declare their interest in taking part in the study. Hence, later on, the researcher contacted a local community for older people, The Bubble, a venue for older people's activities at St. John's Hospital, Bath, to conduct presentations regarding the research study, which were open to the public. In the presentations, the researcher informed potential participants about the research and intervention process, explained what they would be asked to do if they took part, and answered any questions. Potential participants were then able to indicate their interest, and the researcher contacted them to schedule an initial individual meeting. In addition, the snowball technique was used in order to obtain additional potential participants from those who were already taking part. All registered potential participants were then recruited using a criterion-based selection. This recruitment process mainly took place from January to March 2016, and a total of 75 people had registered their interest in participating. From the interest registration, the registrants were contacted to invite them for an initial meeting. In this meeting, written

information was provided and they were offered more details about the research study; the participants were also given an opportunity to ask for any needed clarification, and the researcher obtained informed consent, and then tested their cognitive functioning using 6CIT (Kingshill Version 2000®). From the interest registry, 69 persons came for the initial meeting, and one person (1.4%) did not meet the cognitive inclusion criteria measured by 6CIT. The eligible participants (N = 68) were then asked to complete the general personal information form and health questionnaires. The purpose of this health questionnaire was to obtain a comprehensive understanding of the participants' health status in order to provide appropriate care for the participants during the therapeutic sessions. Afterwards, the participants were randomly assigned into one of three treatment groups: PPHI, relaxation, or control group, and the researcher contacted them to schedule subsequent appointments within 2 weeks after the initial meeting.

**3.7.3. Randomisation.** The eligible participants were assigned to one of the three treatment groups following simple randomisation procedures, using a computer programme called Numbers (version 3.6.2). A computer-generated list of random numbers was used. The researcher assigned a set of numbers to each treatment group, created a table containing participant identification numbers, and used a numeric formula (“RANDBETWEEN (lower, upper)”), a function in the mentioned computer programme that returns a random integer within the specified range to generate a random number, to assign each participant to a group. The allocation was concealed from the researcher by not only employing participant identification numbers in the randomisation process, but also by hiding the participant identification numbers column while random numbers were assigned for group allocation. The randomisation process was conducted based on the arguments made by Johnstone et al. (2010), who

argued that the researchers need to use a randomisation programme that is not predictable in order to avoid bias. Moreover, if gender is relevant to the study, the groups should be further randomised according to this criterion. In the case of the current study, gender was not considered a significant variable.

**3.7.4. Blinding.** The intervention process was conducted using the blinding method in order to avoid bias and minimise placebo effects. Blinding is the concealment of treatments or group allocation from one or more parties who are involved in a randomised controlled trial (Karanicolas, Farrokhyar, & Bhandari, 2010). In this study, a single-blind method was employed, meaning only the therapist was aware of the intervention assigned to each participant; the participants were not aware of which intervention they were receiving (i.e., PPHI or relaxation). Blinding participants from the treatment they receive is important when the response criteria are subjective (Day & Altman, 2000). In this study, the criteria are completely subjective because the outcome would be measured according to the participants' perceived changes in their emotions and mental well-being after receiving the intervention. According to Day and Altman (2000), blinding would help reduce bias in the results and therefore helps ensure the credibility of the study's conclusions.

**3.7.5. Data collection process.** The intervention schedule was set and the researcher made block appointments with the participants who were assigned into the two treatment groups (PPHI, relaxation) for the four treatment sessions according to the participants' availability. Before the treatment process started, the participants were asked to complete a set of four questionnaires (OHQ, DASS-21, SWLS, SPANE) for pre-intervention assessment. In addition, a pre-intervention semi-structured interview was conducted with participants in both treatment groups who had agreed to take part in the qualitative study. Next, the interventions were delivered

accordingly. After the 4-session intervention ended, all participants in the two treatment groups completed the same set of questionnaires again for post-intervention assessment. For the participants who were taking part in qualitative study, a post-intervention interview was conducted on the same day as the last treatment session, and a follow-up interview was conducted between 4 and 6 weeks after the last treatment session.

For both the PPHI and relaxation group, the treatment was delivered weekly for 4 sessions, lasting approximately 30 to 45 minutes per session. All sessions were held at St. John's Hospital, Bath, where a standardised therapy room was designated. For the control group, no treatment was involved, but the participants were asked to complete a set of questionnaires once they agreed to take part, and again 4 weeks after the first measurement. Details of the intervention process are explained in the next section. The number of sessions was scheduled to 1 per week for four weeks, as this is considered to be a minimum for results to be observed. As previously mentioned, improvements can be seen immediately after the session, which is why questionnaires and interviews were completed at that time. The following section explains exactly how the sessions were designed.

### **3.8. Intervention**

Participants who were assigned into the two treatment groups met with the therapist at St John's Hospital, Bath, UK, to participate in either the positive psychology hypnosis (PPHI) or relaxation intervention. The intervention took place between March and June 2016, was delivered over the course of four treatment sessions, and the frequency of the sessions was approximately once a week.

#### **3.8.1. Experimental treatment: Positive psychology hypnosis intervention.**

The aim of PPHI is to enhance psychological factors that support a greater sense of a

patient's well-being, based on the positive psychology PERMA model of well-being (Seligman, 2011a). The sessions focused on supporting five elements of well-being based on PERMA, namely positive emotions, relationship, achievement, engagement, and meaning (Seligman, 2003). The expected outcome was that, although the participants might be facing age-related degeneration and stressful life events, they would still be able to enjoy their lives, be happy, and flourish, which will contribute to their lifelong mental and physical health. PPHI is a four-session treatment conducted by the researcher, who is a qualified therapist, on an individual basis. The therapist had weekly sessions with participants, lasting approximately 30-45 minutes, and suggested daily exercises. The sessions involved a hypnosis during which the participant was relaxed and entered a trance while being aware of the positive suggestions made by the therapist (Heap et al., 2002; Robertson, 2013a). Hypnosis scripts for each session were pre-written and reviewed by the therapist's practice supervisor, a fully qualified and highly experienced hypnotherapist and behaviourist. However, the script and session process was adjusted or improvised in the sessions according to the participant's personality, reaction, and emerging therapeutic circumstances. All sessions were performed in a standardised therapeutic room, in a seated position, where the participant could adjust to any position that they felt comfortable (e.g., resting head on a provided pillow, elevating their legs on a stool). The process in each session included: a) data collection using a pre-session open-ended questionnaire and the Happiness Measures (HM); b) introduction, which was an informal conversation with the participant to build rapport, inform them of ethical aspects of their rights and welfare, explain the treatment process, and review the previous session and the participant's week; c) a 30-minute PPHI conducted according to the specific aims of each session; d) concluding conversation (i.e.,

reflection on feelings and experience of the session); and e) data collection involving a post-session open-ended questionnaire and the Happiness Measures (HM). Details of the four experimental treatment sessions follow.

*Session 1: Decreasing negativity: Letting go, forgiveness and gratitude.* This first introductory session included an explanation of the intervention process, correcting any misconceptions, and establishing motivation and positive expectations. Hypnosis content focused on letting go of stress and negative emotions, forgiving and sending gratitude to own-self and others, reliving good memories and being grateful for supportive situations and persons (including oneself) for good things that have been achieved and received, and ritualising gratitude habits into daily life. This session was an introductory session of the intervention process, which aimed to introduce the intervention to the participant, decrease existing negative emotions, and promote positive emotions using the participant's existing resources.

*Session 2: Enhancing positivity: Mindfulness, savouring, and engagement.* This session began with a review of feelings, emotions, or any changes that had occurred during the past week, followed by an explanation of the Session 2 overview and process. Hypnosis content of this session included awareness and acceptance, emphasising creating awareness of what it is, what you have, who you are, and cultivating the positive sense of acceptance and welcoming of possessed resources; positive perception and savouring, or cultivating habits of being open to and appreciating direct sensory experience in daily life (Fredrickson, 2011), an emphasis on savouring and cherishing positive moments, things that went well in each day; engagement and achievement (creating interest and goals, cultivating sense of 'completeness' in daily activities). This session aimed to continue enhancing positive emotions and instil positive habits that would support the participants to acknowledge



and perceive positive aspects of life. Furthermore, it aimed to inspire the participants to engage in activities that they enjoyed and motivate them to achieve small goals, which would contribute to two elements in the PERMA model of well-being: engagement and achievement.

*Session 3: Strengthening relationships: Love and high-quality connections.* As before, this session started with an introduction. Hypnosis content of this session involved: a) creating acknowledgement of positives and supports in current relationships (e.g., from loved ones and others in society); b) motivating social interaction and connections; c) creating or promoting the sense of helping others (i.e., acts of kindness) and encouraging positive reactions to others; d) cultivating a sense of loving-kindness towards oneself and close persons (i.e., friends & family) as well as others (i.e., acquaintances and strangers). This session focused entirely on relationship, which was intended to not only foster positive emotions, but also aimed to create and enhance healthy relationships, which contribute to overall well-being according to the PERMA model.

*Session 4: Meaning of life: Hope and optimism, upward spiral and flourishing.*

The session started with the introductory talk, as in previous sessions. Hypnosis content of this session included further acknowledging and utilising positive resources and positive habits through visualisation of a positive future, enhancing hope and optimism, and promoting self-actualisation. After the hypnosis process was completed, the therapist reviewed the intervention process from the first session to this last session and encouraged participants to do continual independent practice. This session aimed to enhance the meaning of present and future life and to provide affirmations to the participants that they have positive resources and the ability to

utilise them now and always. This was used to contribute to the last element in PERMA model of well-being: meaning in life (Seligman, 2011a).

**3.8.2. Control treatment: Relaxation.** Control treatment sessions were focused on guiding the participants to relax their body and their mind, using mindfulness-based approaches. The therapist provided guidance and invited the participants to follow the process. Suggestive words were limited to the scope of ‘relaxation’, ‘comfort’, ‘safe’, ‘calm’, and ‘peaceful’ as related to body and mind while the therapist were guiding the participants into deep relaxation, where they were still fully aware of their breathing and sensation in their body. No other positive suggestions were included. The process in each session included: a) data collection using a pre-session open-ended questionnaire and the Happiness Measures, b) general talk (e.g., asking the participants about their day, their activities during the past week) and informing them of ethical aspects including their rights and welfare, c) 30-minute mindfulness relaxation, d) concluding conversation (i.e., reflection on feelings and experience of the session), and e) data collection consisting of a post-session open-ended questionnaire and the HM.

*Session 1: Breathing exercise for relaxation.* The therapist guided the participant to follow a simple relaxing breathing exercise to bring awareness to their own breath. Participants were asked to deeply inhale and completely exhale; the therapist guided the participants to breathe in through the nose slowly and fully, place one hand on the stomach and feel the stomach expand, and breathe out through the nose slowly and fully, allowing the stomach to contract in order to fully expel the air. This was followed by breath counting: as the participant continued to breathe in deeply and breathe out fully, they were asked to count each time they exhale from one

up to five. When completed, they were to start a new cycle, counting “one” on the next exhalation.

*Session 2: Breathing relaxation with music.* The therapist asked the participant to deeply inhale and completely exhale as practised in Session 1. Then, soothing music was played for 15 minutes, and the therapist checked with the participant regarding their comfort and offered the option to continue with music or in silence, and then continued the breathing exercise.

*Session 3: Body scan relaxation (i.e., progressive relaxation).* The therapist asked the participant to deeply inhale and completely exhale as practised in previous sessions and to focus on his or her breathing. The therapist then guided the participant to progressively relax his or her body, starting from the head and gradually moving down to the feet. The process aimed to release tension and relax the participant’s muscles throughout his or her body, which could also help calm the participant’s thoughts and mind.

*Session 4: Visualisation for relaxation.* The therapist asked the participant to deeply inhale and completely exhale and focus on his or her breathing as practised in previous sessions. The participant was invited to imagine and visualise a preferred safe, comfortable, and peaceful place, any natural place of their choice. The therapist invited the participant to imagine the scenery in detail including views, sounds, scents, and feelings that they might feel. The visualisation aimed to induce a sense of relaxation in the participant’s body and calm the participant’s mind.

**3.8.3. Control group: No treatment.** No treatment was delivered to the control group during the 4-week period, but the participants were asked to complete the pre- and post-questionnaires for quantitative data collection. All participants in the control group understood from the beginning that they would not receive any treatment;

however, the researcher offered one optional relaxation session to participants after they had completed all of the data collection process.

**3.8.4. Similarity of the interventions.** The PPHI involved the process of helping the participants to experience a deep relaxation state (i.e., hypnotic induction), followed by positive suggestions while the participants were in a deep relaxation state. Relaxation intervention was comparable to the hypnotic induction with no positive suggestions, simply allowing the participants to continue to experience full relaxation. The process of facilitating the experience of deep relaxation for the participants as well as the duration of the two interventions was the same. The only difference was the positive suggestions that were included in PPHI. Also, other processes were identical, including introduction of the intervention process, building rapport with the participants, reviewing and concluding the intervention sessions, and establishing confidence and positive outlook for the intervention's results.

### **3.9. Advantages and Limitations of the Research Methodology**

There are a number of significant advantages of using mixed methodologies, as well as some certain limitation to this research design. One of the main advantages is the complementarity of the two methods (Creswell 2014). In other words, the researcher can use data obtained by means of one method to illustrate the results of the other method. This approach validates the data obtained and deepens the analysis. In this study, the qualitative data gathered by means of semi-structured interviews is used in comparison with the results obtained via the quantitative questionnaires. This will allow the verification for any errors in the analysis, and it will enhance the validity of the study. Moreover, using mixed methods allows the researcher to further expand the area of research, by examining different aspects of the same topic (Creswell, 2014).

Limitations of using mixed methods in this research study can also be identified. First, qualitative data collection was conducted at the same period of time with the quantitative data collection. While this does not interfere with achieving the aims of the study, it may limit the researcher to further analyse any unusual results that may stem from the statistical analysis of the quantitative data; as in general qualitative research is designed after the quantitative data was analysed, so the researcher can use qualitative research to search for a deeper meaning of the quantitative findings (Creswell, 2014) Another limitation may consist of the number of sessions allocated for each group and the length of the sessions. While there are no studies that can indicate a clear number of sessions necessary for obtaining results, the experience of the researcher as a therapist has shown that each person is different and reacts differently to treatment at certain moments.

## CHAPTER IV

### Results

#### 4.1. Qualitative Results

This section presents the results of thematic analysis of three interviews: pre-treatment, post-treatment, and follow-up. A total of fourteen participants participated in the interviews: eight from the PPHI group and six from the relaxation group. Each interview focused on different aspects that would enhance understanding of the phenomena of the interventions. The first subsection presents the results from the first interview that illustrate the participants' baseline prior to receiving the interventions. The second subsection contains the post-treatment interview findings that show the participants' experience and perceived effects of each intervention as well as the subjective underlying mechanism of the positive effects. The content of the follow-up interview show the on-going implementation of the interventions and the sustainment of the effects. The thematic analysis was conducted across questions in order to identify typicality throughout the data. These themes are described in subsections according to the sequence of the interviews. Table 1 contains themes found from each interview.

Table 4.1  
*Themes from Pre-Treatment, Post-Treatment, and Follow-Up Interviews*

<b>Interviews</b>	<b>Themes</b>	<b>Sub-themes</b>
<b>Pre- intervention</b>	Supportive personal attitudes	Open-mindedness about the intervention. Perceived fair well-being. Good relationships and achievements bring happiness.
	Psychological and emotional factors	Age-related distress. Emotional instability.
	Constructive coping strategies and behaviour	Active lifestyle. Distraction. Socialisation.
<b>Post-intervention</b>	Positive experience of PPHI	Trustworthy and easy to follow. Deeper relaxation than ever experienced. Pleasant sensations.
	Positive perception of PPHI effects	Ability to let go of negatives. Feeling calmer. Positive reaction and communication.
	Positive experience of relaxation	Totally relaxed and enjoyable.
	Positive perception of relaxation effects	Incorporating in daily routine. Feeling relaxed and energised. Awareness and acceptance.
<b>Follow-up</b>	Durability of the PPHI	Incorporating PPHI in daily life. Continually perceiving the sense of well-being. Perceived persistency of positive effects.
	Durability of relaxation	Incorporating relaxation in daily life. Continually perceiving the sense of calm. Perceived persistency of positive effects.

#### **4.1.1. Pre-treatment Interview: Establishing the Participants' Baseline**

The pre-treatment interview was designed to solicit the participants' perception of the intervention, daily life, lifestyle, personality, attitude, emotional stability, emotional support, and their perceived sense of well-being at the time. Themes arose providing information about the participants regarding their original mental health state and coping strategies.

##### **Supportive personal attitudes.**

*Open-mindedness about hypnotherapy and relaxation.* All participants were generally open-minded about both techniques. Most of the participants stated that they did not have any pre-conceptions or direct experience of either technique. They were interested to see if the techniques would be effective for them. Some participants expected that the treatment might bring about some beneficial outcomes. A few participants had known about the use of hypnotherapy for different conditions such as fear of heights, weight loss, and smoking cessation. Only two participants had past negative experiences related to hypnosis, as from their understanding, they had been hypnotised unwillingly in the past in a non-therapeutic type of hypnosis. These two participants were still open-minded and willing to take part in the intervention despite their past experiences. In regard to relaxation, many participants remarked that they had done it before in a weekly yoga or Tai Chi class, usually for a short period (3-5 minutes) at the end of the class. They described this experience as positive, however, they had never experienced any other relaxation sessions or techniques. A few participants shared that they felt themselves to be a person who is 'unable to relax' and expressed curiosity as to whether the techniques in the study would be able to make them feel relaxed. Quotes depicting these preconceptions are presented in below.



Participant 66 expected that the intervention could help her learn to shift her thought patterns: “I don’t know about hypnotherapy because I’ve never done it, but I’m hoping to just kind of learn how to channel my thoughts from negative to positive. I seem to have got stuck in a negative thought process.”

Participant 43 viewed the intervention as an alternative treatment: “I’m very open-minded. I feel that there’s conventional medicine, which works well in a lot of things.”

Participant 45 expected an enjoyable experience:

I imagine it would be pleasant. I mean, I don’t imagine it would be horrible. (...) I quite like anything that is, on the rare occasions I’ve had a massage for example, as long as it’s not a really hard massage I find it enjoyable (...) I’m sure it would be pleasant.

Participant 25 reported holding no preconceptions, but was curious about the outcome:

I would be very open to things like that because I do wonder if there’s a level in my subconscious that could be trained to just feel happier about things. (...) I suppose it’s anxiety I suffer from. Anxiety about what might be, and that scares me. So no, I don’t have any preconceived ideas, but I am certainly feeling positive about such treatments.

Participant 11 shared that he could not relax easily, but he was willing to take part to see what would happen: “Well, I’m always interested in trying them. I’m not sure I’m a particularly relaxed type of person though, so we’ll find out.”

Participant 24 said directly about his curiosity and that he is open-minded. He also mentioned about the use of hypnotherapy that he had known, and that he believed it can be effective for some particular issues: “I find it’s an intriguing prospect. I have

an open mind about it and I believe it's effective for things like giving up smoking and getting over sort of things, you know, fear.”

*Perceived fair well-being.* Most participants (11 out of 14) described themselves as either fairly happy and healthy, or ‘neutral’ or ‘not unhappy’. The main reason for this perception about themselves was a lack of difficult issues in their lives. Although they might have had some health conditions that come with age, they did not have any severe illness that affected their daily lives, which they viewed as good luck. In addition, when they were asked to look further into the future, they were fairly positive about their future selves. Their main hope and intention was to maintain good physical and mental health, which would enable them to continue doing daily activities and maintaining or pursuing their preferred lifestyle.

Participant 39, an 82-year-old widower, described himself as being in a fairly happy and healthy condition, both mental and physical, although he had some physical health issues: “I'm quite happy, generally content. I've got a comfortable situation. My general health is reasonably good. I'm a diabetic but I control it with diet. I've got high blood pressure and I have tablets.”

Participant 24, who had been practising meditation for a long time, described himself as being grounded and neutral regarding his emotional health. He believed that this emotional state was an effect of his meditation practice: “I'm fairly, you know, neither ecstatic nor depressed. I think the meditation helps to sort of ground you, you know, in one level. Generally, I'm a grounded sort of person.”

Participant 53, who exercised regularly and liked outdoor activities, explained his current mental state and expressed that maintaining good health was very important to him because illness could affect many activities that he enjoyed in daily life:

I'm feeling pretty good at the moment, but no I wouldn't in general consider myself a particularly happy person. (...) The most important thing is in good health actually because while I'm in good health then I will be able to do the kinds of things I do now.

Participant 42, a 69-year-old woman, who also exercised regularly, spoke clearly about her future expectation that she would like to remain healthy, especially in regard to mental and cognitive health: "I would like to remain healthy. I think the most important thing for me is to be mentally alert."

Participant 50, a 61-year-old retired psychologist, described how, for her, being active and healthy was important, but also the feeling of achievement, both physically and psychologically:

Continuing, you know, to be active, healthy, helpful, to be rewarding on all sorts of levels, and yes. Yes, that's how I'd like it to be, so yes. So physically and intellectually rewarding, physically involves engaging with the outside world.

Such responses show that some of the participants had quite positive perceptions and hope for the future regarding their physical and mental health. They realised that maintaining good physical and mental functioning was an important factor requiring their focus. In addition to the health aspect, they also believed that other factors bring about happiness in their life, which are presented in the following theme.

**Good relationships and achievements bring happiness.** From the participants' point of view, good relationships (7 participants) with family and friends as well as achievements (5 participants) such as contributing to charity or other people and completing challenging or enjoyable tasks can create positive feelings or

‘happiness’ in their life. Hence, they wanted to obtain and maintain these particular two aspects in their lives constantly.

Participant 24 explained that relationship is an element of happiness for him, as positive feelings could be contagious: “I think relationships, if relationships are good and you know, you're sort of bouncing your feelings off other people that are in a like frame of mind.”

Participant 25, who regularly participated in quite a few activities such as singing in choir and playing sports, shared that such endeavours were more about people than the activities themselves, which brought about positive emotions: “Mostly, the things that make me feel good are pursuing an activity that I enjoy. But probably even more than that is being with people who make me feel good.”

Participant 42 described how both achievement and relationship invoked positive feelings:

“I will have a list of things or stuff that I want to achieve. And I suppose, when I've achieved it, then of course I feel good. Because I've done something (...) A nice day, going out with friends, hearing something funny, meeting people and having a laugh with them, that kind of thing (...) meeting people and chatting to friends makes me happy.”

Participant 57, who was still working part-time in a well-known institute, told that she had positive feelings from her work, as she felt her skills were beneficial: “I think that’s what I get from the work that I do. (...) It’s using the skills that I have and it feels a positive thing to do.” Furthermore, the participant also mentioned about good relationship in her close family that it contributed to her happiness in daily basis: “I think it’s about my relationship with my husband. Feeling loved by my

husband. It's about contact with my daughters, knowing they're okay. Having contact with them."

**Psychological and emotional factors.**

*Age-related distress.* Although all of the recruited participants had no diagnosed mental illnesses and had a fairly positive outlook about their well-being, they expressed experiencing some degree of depression, anxiety, and stress caused by ageing issues. Half of the participants in both treatment groups (4 from PPHI, 3 from relaxation group) disclosed that they are struggling with ageing-related circumstances, which caused them low mood and anxiety. Their main issues included: the thought of having less time left in life, the loss of loved ones, and degeneration as they age. Among the participants who disclosed this feeling, they were devastated by the thought that there was nothing they can do regarding ageing, and gradually they will lose what they have, such as loved ones and their physical and mental health. For them, ageing was perceived as 'waste', 'less', and 'lost'.

Participant 24, a 69-year-old man, mentioned that if he could change something in life, he would like to stop ageing, as he felt he had been collecting good resources all his life, but soon he will be walking towards the end point, death: "I'd like to stop aging. It seems a bit of a waste. Building up all this sort of knowledge and wisdom and then the next thing you do is pop your clogs."

Participant 35, a 69-year-old woman, said that although she knows about the concept of happy ageing, to her, at the moment, ageing created pressure and made her feel depressed and stressful, as she was aware of having less time remaining in life:

I think I'm much more aware of age. I know this is about age and being happy aging and I think I'm much more aware now of lack of time. So perhaps the dissatisfaction comes from the urgency of thinking (...) I need to do these

things. And therefore I'm putting a pressure on my own self rather than letting it go and just letting it organically happen.

Participant 39, an 82-year-old widower, described his personal life situation that reflected a deep sadness caused by bereavement that still lingered, although he mentioned that he was not feeling deeply sad at that moment:

Unfortunately my wife died, it will be 12 years last October. So since that time I've been on my own (...) you know, things could be better in many ways, obviously, the wife could still be alive (...) I'm not deeply sad. I have certain sadnesses, obviously. And there are certain times like wedding anniversaries or dates of wedding anniversaries or things like that.

This issue was also very evident for Participant 25, a 63-year-old woman, who spoke about the uncontrollable ageing of loved ones and herself, who were all getting older. She admitted realising that there might not be much time left with them, and it was still difficult for her to welcomingly accept the situation. She also reported on the health questionnaire that she felt depressed, anxious, stressful, and sometimes panicked:

It's accepting that. I suppose the ability to accept life as it is; maybe I struggle with that (...) because I'm getting older (...) I still have my mother, she's elderly. She won't be around for, you know, much longer. I'm going to lose my dog. My dog is my outlet; I like walking and meeting people when I'm out with the dog. (...) I think I feel sad at the passing of my younger years, my youth, my maturity, my middle years. I realise that I'm now entering a period of my life where you suddenly realise that actually, you can't think oh yes, I'll do that in 20 years' time, because you might not be able to (...) I do have a lot

of sadness that's come with age. I think it's maybe a fear of growing old, being on my own.

This age-related distress therefore might be one of the causes of emotional instability among the participants, which is another derived theme, discussed in the following section.

***Emotional instability.*** When the participants were asked about their emotions and personality, eight disclosed that although they considered themselves to be fairly happy, their emotions were quite unstable. They explained that external factors in their daily lives could easily affect their moods; they might become sad, annoyed, upset, or experience frequent mood changes, which sometimes also affected their reactions to other people and their relationships with loved ones.

Participant 25 described herself as a very emotional person. She mentioned that she woke up most days feeling depressed or anxious. However, once she could begin engaging in activities, she would feel better, and her emotions were very susceptible to influence by external factors:

I would say that I'm quite an emotional person. I do feel things very strongly. I can be very happy one minute, and I can also be very unhappy, feel very unhappy. I'm very affected by outside things (...) I think I dwell on it. But negative emotion makes me very tired and very debilitated.

Participant 45, a 65 year-old-woman, disclosed that although people around her often perceived her as a happy person, she did not feel that she was a happy person. She reported a tendency to be pessimistic, and those thoughts brought about depressive feelings. She also mentioned that she disliked the feeling of getting older, and that sometimes caused a low mood.

I would say I'm a glass half empty (...) So I get depressed, I get upset about stuff (...) I think surprisingly friends would probably think I was quite happy. But I would not describe myself as a happy person (...) I do occasionally get really depressed. I mean, I wouldn't call it clinical depression. I haven't had treatment for depression or anything like that. But I just get down.

This issue was also similar to participant 11, he noticed that his emotions were unstable, but he was not sure about causes of such emotional instability: "I don't know, I can wake up happy, I can wake up sad. I don't know. Sometimes I get a good feeling, sometimes I don't."

Participant 43, a 61-year-old nurse, noted that her emotional instability might be related to her sleep pattern and her hormonal imbalance from menopause:

I can sometimes be a bit labile. That depends on whether I sleep well or not. I don't have a very good sleep profile, so if I'm really tired I'm perhaps a bit more ratty than times when I'm more rested. I think now my hormones are, sort of, through the menopause and bits and pieces like that, I've flattened out a little bit. But when I get cross I get very cross (...) you sort of go up and down. Certain things make me happy, certain things make me sad.

These interviews indicated that some participants were not sure about the causes of their emotional instability, or did not mention causation. However, they noticed the fluctuation of their emotions or when they experienced a low mood, and they had some coping strategies for such situations, as presented in the next theme.

### **Constructive coping strategies and behaviour.**

*Active life-style.* Every participant who participated in the interviews had a lifestyle that supported active and positive ageing, including one or all of these elements: a) regular physical exercise such as yoga, Tai Chi, and walking; b)



socialising with friends and family; c) doing beloved hobbies such as reading, painting, and gardening; and d) working part-time jobs or volunteering in their local communities. The participants were actively engaged in daily activities, focusing on taking care of their health, and still pursuing achievements. They acknowledged that an active lifestyle was one important factor in maintaining good physical and mental health.

Participant 20, a 77-year-old woman, described a weekly routine full of physical activities provided by a local ageing community program:

I discovered those things which Age UK do, which are super. So I go on Monday and I do Movement to Music for an hour. And on Thursday I do tai chi and I have roughly a half a mile walk there and back so that's good for me. And then on Tuesday I do the same thing with Pilates.

This was echoed by Participant 42, who participated in a few different physical exercises regularly.

Well I normally take care of myself by doing reasonable exercise, walking and at the Zumba, and all these other things (...) On Wednesday I usually go to a Zumba class first thing in the morning. Thursday I do Tai Chi first thing in the morning.

The fairly active routines were also shown in Participant 45's, who had regular physical activities and active hobbies.

My typical day would start with walking the dogs because I have two dogs and they need exercise. So I would generally walk them about three miles. And then depending on what day of the week it is would depend what I would do next. On a Wednesday I'm very active because I do a couple of Pilates

classes as well as walking the dogs. But the rest of the week I would probably, if it was summer, this time now, I would be doing some gardening.

From the participants' narration, it can be seen that the participants remained physically and mentally active, which invoked positive emotions such as enjoyment, amusement, and contentment.

***Distraction.*** Since the participants expressed some level of distress and emotional issues, participants were asked to speak further about how they normally take care of themselves when they experience negative thoughts and emotions. Most participants distracted themselves from their unsupportive thoughts and feelings by doing various activities, for example, 'go for a walk', 'do something', 'just get out'. Participant 57, a 61-year-old woman who was still working, disclosed that although it was not easy for her to let her negative feelings go, she could do something different, especially work-related tasks, to change her mental focus, which provided some relief:

If I'm upset about something or resentful about something, I don't find it easy to let the feeling go. So what helps is if I do something completely different like I go to work and I get involved in work or I go for a long walk with some other people. Then that helps me to change my mind-set and then I feel better afterwards.

In a similar vein, Participant 53, a 65-year-old man, stated that he normally did not dwell on his negative thoughts and feelings too much, as he distracted himself by doing activities.

If I am feeling a bit tense or depressed it's to some extent something that I've brought upon myself and therefore I have to try and do something to think of

something else. So do other activities not sit around and think about it too much.

Participant 66, a female, age 63, mentioned using physical activity to divert her mind from negative thoughts and feelings: “Just walking to the exercise and taking my mind off of it is really good.”

From this theme, it can be seen that the participants worked to avoid dwelling on their emotions when they felt low and had their preferred distraction methods. In addition, they had other support factors, as will be described further in the next theme.

***Socialisation: Activities, friends, and communities.*** Regarding socialising, the participants normally met up with friends or participated in local communities to do various kinds of activities, which brought about positive feelings, as they enjoyed the time with like-minded people. In addition, when difficult situations arose, some participants mentioned that they talked to their friends or ‘someone’ to gain different points of view. This theme conveys that the participants were actively engaged in socialisation and had a good concept of self-care and social well-being, as well as a strong support system.

Participant 20 mentioned her group of friends who shared similar interests:

I have a lot of friends I like to keep in touch with on the telephone or via emails. And I love music, classical music in particular. So, there are various concerts and festivals that go on in Bath, in this area, and I go to all of them with a couple of good friends who come down from London and we go off.

Participant 39 participated in a few clubs, which allowed him to meet people:

I get a sort of routine. Wednesdays in the mornings I have the U3A cribbage section which I am part of, attend. And then in the afternoon occasionally I go

to the Lark or Liberal Club where in the afternoons there are a number of people my age, all retired people, so got sort of social activity there.

Participant 18, a 66-year-old woman, talked about her ongoing participation in a volunteering project, which kept her busy but happy, as there were opportunities to take part in an interesting activity, engage with children, and make friends:

I was doing the project with the Doll's House Project, with participating in the Doll's House Project with the Bath Preservation Trust (...) I was happy but I was very busy so I perhaps got a little bit too tired sometimes (...) That was quite nice to feel involved and also it was nice to have the children around because I don't have any children in my own daily life. (...) and I enjoyed it and made friends.

Participant 11, a 61-year-old man, found that talking to friends when he had problems made him feel better and could provide him with different perspectives:

I talk to my friends. I tend to confide with my friends and see what I should be doing. It makes me feel there's a problem shared, there's a problem halved. Certainly if they agree with me it's good, sometimes they don't, so I have to take a different perspective.

In conclusion, at the pre-treatment baseline, the participants perceived themselves as fairly happy and healthy, and they were motivated and hopeful about maintaining their physical and mental health. They lived a healthy lifestyle, which included constantly engaging in physical and social activities. They had some age-related distress and strain, which created emotional instability. However, they were taking care of themselves in a constructive way and had a fair amount of emotional support from their social circles. They were open-minded about the interventions, as they were interested to learn more about a potential method that they could

incorporate into their daily life to enhance their health and happiness. It was therefore interesting to see if the intervention, as a complementary method of self-care, could support them in maintaining their well-being and enhance their happiness.

#### **4.1.2. Post-treatment Interview: Understanding the Participants' Experience and Investigating the Outcomes of the Interventions**

The purposes of the post-treatment interview were to explore the participants' perception and experience of the intervention, and to investigate the effects of the treatments, specifically the subjective results. Each theme in each treatment group was examined separately in order to allow for comparison of the derived themes between two groups in order to detect any differences in perception and outcomes between the two groups.

##### **Positive experiences of PPHI.**

*Trustworthy and easy to follow.* The participants in the PPHI group reported that the process was easy for them to follow, and they felt absolutely safe and trusted the process. No concerns were expressed.

Participant 20 described her feeling during the sessions that she was confident to follow the intervention process because of genial words from the therapist: "I felt always very confident because everything you said to me was friendly and relaxing so I had no fears, so I just went with it."

Participant 42 expressed feeling directly that everything felt fine for her during the sessions: "I felt good. I did not feel worried or anxious, I just felt very okay."

Participant 50 noted that at the very first session that she felt comfortable and trusted the therapist, which was an important factor for her in aiding her to comply with the guidance provided: "(...) feel comfortable working with somebody new. (...) Building up that trust, and yes. Really embracing, accepted as a way of going down."

Participant 66 shared that she could stay focussed easily: “If my mind started to wander, it was very easy to come back and listen to the voice, and listen to the words, and follow the words.”

*Deeper relaxation than ever experienced.* Participants in the PPHI group reported that they had the feeling of being ‘very deeply relaxed’, ‘floating’, and ‘drifting away’. Some of the participants expressed that these experiences were a deeper relaxation that they have ever felt, although they had practised some relaxation techniques and meditation before. This theme shows that the participants had experienced the hypnotic state or altered state, which is the state in which an individual’s mind would be receptive to hypnotic suggestions.

Participant 24, who practised Tai Chi and had engaged in relaxation and meditation in Tai Chi class, regularly reported that he easily experienced a deeper meditative state that he had never experienced before. “I found it quite easy to lower down into the lowest level of conscious I've experienced.”

Participant 42 also compared her experience to relaxation and meditation in a Tai Chi class, describing it as a deeper relaxation than she normally felt in the class, possibly a half-sleep state, which she perceived as a deeply restful experience:

It was well very relaxing and almost floating (...) deeply relaxed. More so than when I do the Tai-Chi meditation. (...) I heard your voice but not quite as clearly as I might (...) well relaxed but it was just sort of almost like being asleep but not asleep.

Participant 35, who had prior experience with deep relaxation, shared that the sessions put her in touch with such a state again: “I think generally it put me in touch with a deeper relaxation which I have done before but haven’t practised.”

*Pleasant sensations.* Participants in the PPHI group reported that they experienced positive feelings during the intervention sessions, which included: ‘enjoyment’, ‘calming’, ‘peaceful’, ‘pleasant’, ‘comfortable’, ‘safe’, and ‘light’, and such feelings persisted into the day after the session. These feelings made the sessions enjoyable, and some participants also mentioned that these feelings they experienced left them ‘looking forward to come again’. This theme reveals that the participants had a very good experience and positive feelings during the PPHI sessions.

Participant 24 said directly that he experienced a pleasant sensation, which was very satisfying. He also believed that the treatment sessions were beneficial to him spiritually: “It's a very pleasant sensation. I feel safe and secure and tranquil, and I feel that it is beneficial to my spiritual self. (...) I've enjoyed the sessions immensely.”

Participant 57 agreed, saying she enjoyed the feeling of relaxation and calm, and she mentioned that she lost track of time: “I enjoyed it. I find it very relaxing, very calming. It didn't seem like long, (...) it didn't seem as long as I know it in fact was.”

Participant 66 reported a sense of gradual relaxation, and she liked the fact that it can be a tool for her to utilise when needed: “I was feeling very light. (...) I've certainly become lighter and more relaxed as the sessions have gone on, and it's given me some very simple tools how to help myself.”

Participant 20 said openly that she noticed her positive feelings during the intervention, and that made her look forward for the next one: “I began to not only feel good but to look forward to coming again (...) I was very aware how positive I felt I could be with what you got me involved with.”

**Positive perception of PPHI effects.** Participants in the PPHI group reported that they had gradually perceived some positive effects during the treatment process, which they noticed in their daily life. The effects can be grouped in three sub-themes.

*Ability to let go of negatives.* The PPHI participants reported that they felt that they could let go of negative thoughts and feelings easily when they occurred in their daily life, either automatically or consciously. They expressed that they were able to let go of negatives and focus on positives. Therefore, situations that used to irritate them were not as irritating as before.

*Feeling calmer.* The PPHI participants also reported that they felt ‘less stressed’ and ‘calmer’. They expressed that, since they were calm and more relaxed, they could cope with a stressful situation and handle pressure and difficulties in more constructive and positive ways.

*Positive reaction and communication.* The PPHI participants reported that they had more sensible reactions towards situations, as well as better communication with themselves and others. They mentioned that they felt ‘more in tune with myself’, and that they tended to ‘react positively’. Furthermore, they were becoming more aware of other people’s needs and feelings, and therefore reacted more positively towards others. They attributed these changes to the treatment that had made them feel calmer, as presented in the preceding sub-theme.

In the minds of the participants, these three sub-themes link together as a sequence of effects: as they were able to let go of negative feelings, they felt less stressful and calmer and were better able to handle a difficulty, which then resulted in positive reactions and communication to others.



Participant 50, a psychologist who stated that she always tried to manage her own thoughts and feelings, described that she was more in control of her feelings and able to let go of negative thoughts and feelings more easily:

It's like switching. The internal switch, and it gets channeled into a different way, so rather than it going inside and causing, sort of, crinkliness, which, you know, to me is not so good, it tends to flow out. And yes, you know. I think it's easier to let go.

These effects were also similar to that Participant 20 perceived. She described a particular personal situation that caused her high stress prior to the intervention, and she noticed that she could deal with such situation better:

It didn't mean I wasn't stressed (...), but I got over it much better than I would normally do. (...) It was noticeable over the whole business (...) and things because that being able to recover one's misery and bad temper so quickly was unusual. I enjoyed all that.

Participant 42 reported she was less likely to be irritated. Therefore, she had more reasonable reactions towards a situation:

Yes I am not quite so irritated with irritating things. I just shrug it off really. And even when my husband does things that are very irritating I just, I do not over-react quite so much I think. I am calmer. I feel calmer.

Participant 35 also mentioned that she had more positive reactions and communication:

I think I have become more communicative with my husband in a more empowered way, but without aggression or feeling. Before I would have perhaps come boldly forward and therefore caused a reaction. Whereas now it's much more about communication.

Participant 66, who came to the first treatment session with a very low mood and frustration from her personal issues, reported that she was more in control of her thoughts and feelings and was able to better see the positive side of situations, better able to let go of what was beyond her control:

It's just given me a lot to think about. (...) I'm more in tune with my thoughts and my feelings, and the negatives and the positive and I'm trying to stay with the positives. And thinking of the positives, and not worrying about what I can't do anything about.

She also reported that she had more positive communication with others. She felt that she was able to cope with situations better than before because she was more relaxed and knew how to help herself in a stressful situation:

I'm laughing more and negotiating with the person I'm with, so taking more positive, fun action when things get a little stressed. I find it easier to get things done because I'm more relaxed, so yes, so there's been a change.

Everything was just too big to deal with, and now I can just deal with them slowly.

#### **Positive experiences of relaxation.**

*Totally relaxed and enjoyable.* The participants in the relaxation group reported they had very relaxing moments during the relaxation sessions and that it was unusual for them to relax this deeply and stay very still for a long period of time. They reported that during the relaxation sessions they were 'drifting away', 'switched off', 'falling asleep', 'comfortable', and 'restful', all of which they enjoyed.

Participant 25 shared that these sessions allowed her to deeply focus, similar to a state of meditation. "Well I was just totally absorbed in it. (...) I was able to shut off

external noises. I was sitting very comfortably which helped anyway, so I would just say a state of total relaxation, almost meditation.”

Participant 39 was surprised that the relaxation sessions made her more aware of her body and in tune with her breathing, which she felt was beneficial to her.

I found them very relaxing and enjoyable and I think I started to become aware of how tense, particularly on my shoulders that I had been without realising it (...) I was surprised at how I was able to sort of with my, the deep breathing and getting into a rhythm, to relax. I found it very enjoyable and it was something that I felt was benefitting me deeply.

Participant 53 noted that, although it was not normal for him to stay still for quite a long period of time, he could do it in the relaxation sessions very nicely. He also felt that his relaxation deepened in the later sessions.

It's unusual for me to remain that still for that period of time. It must mean I think that I'm in a very calm and relaxed state that I'm able to stay still for so long. (...) And without feeling any real awareness of my body. I think I got into a deeper state as the sessions progressed.

Participant 45 admitted she felt so relaxed she was falling asleep: “I remember I was particularly relaxed. I fell asleep continually.”

**Positive perception of relaxation effects.** Participants in the relaxation group reported that they had perceived some positive effects along the intervention process and as they had been applying the technique in their daily lives. The effects they reported noticing in their daily life included feeling: ‘calmer’, ‘less irritated’, ‘more content’, ‘more acceptance’, and ‘more energised’. The effects of relaxation can be grouped in the following sub-themes.

*Incorporating in daily routine.* The participants expressed that the sessions were useful and the relaxation techniques were easy to apply, which would facilitate them to easily do them by themselves at home. Some participants also reported that they had been applying the relaxation techniques to help with their circumstances, and it offered them some relief.

Participant 18 said that the relaxation technique was helpful for her, especially being simple enough that she could remember and do it: “Actually I found that was helpful. (...) The remembering. I didn’t have too much homework to remember. I could just easily do that at home.”

Participant 25 expressed that the relaxation technique was beneficial to do as a routine, and she believed it would continually bring positive outcomes:

I’ve probably always been capable of doing it, but I think the techniques are a very useful tool to do it on a regular basis so that I can get the benefit for the rest of my life I suppose.

Participant 45 mentioned that a benefit of the technique was its effectiveness even when done briefly: “This is something which is easy to do for just a few minutes. And that's the beauty of it really; it's a short exercise that you can do. You don't have to apply huge amount of time.”

*Feeling relaxed and energised.* The participants in the relaxation group reported that they had been feeling relaxed physically and mentally, which for some participants had made them feel more energised. They expressed that these feelings occurred both during and after the session, as well as whenever they applied the techniques.

Participant 18 talked about a situation where she felt stressed, then used the relaxation technique to comfort herself, which worked for her both physically and mentally:

If I feel a little bit stressed I have been consciously using the breathing techniques so I have tended for years really to get sort of a tight feeling in my chest when I'm a little bit stressed and so I have sort of consciously sat down and done, probably the simplest to work with the counting, and I've had one and that's calmed me and sort of actually eased that feeling in my chest.

Participant 39 explained that he felt the effects not only while he was in the relaxation sessions, but also afterwards and into his everyday life. He simply said that it had made him feel better:

I felt was benefitting me deeply. I think that's the way I would put it and the after-effects so to speak was the fact that that feeling tended to persist. (...) It happened during the session, but then after the session, sort of unconsciously, it just carried on. (...) I feel better, nicer, more content.

Participant 45 shared that the session had helped shift her mood:

Today, I was not relaxed. I was quite grumpy and not very happy bunny and I feel much happier now. So obviously, it is beneficial. (...) It's made me more aware that I can help myself, that I can do more to be calm. (...) It has helped.

She also reported feeling more energised and could do large tasks that she previously lacked the energy to complete. She believed that the sessions had helped her to be in this energetic state:

I have felt more energised. I mean, I can't say whether it is or it isn't, but I've certainly been doing a lot. I think it's changed. (...) Maybe it changes your

mental well-being. And I also think I've drunk less alcohol. Well, it's obviously worked, because I had no energy a month ago.

*Awareness and acceptance.* Some participants in the relaxation group reported that they were aware of their feelings and situations, and their acceptance of such situations increased. According to their narrative, this sub-theme might stem from the preceding sub-theme, meaning that as they felt calmer, they tended to be more accepting of their circumstances.

Participant 25 shared that she was more able to remain calm and accept a life situation that was beyond her control. As mentioned earlier, prior to the intervention, she had age-related distress accompanied by fear and sadness. Now she reported that she could accept and cope with this situation calmly.

Well I think it was probably a sense of calm, much more able to just remain calm in a stressful situation and just accept things. (...) I can see that obviously the fears will always be there to a certain extent, but it's having the ability to accept and be calm around the facts in life that you cannot change. (...) Just relax around the negativity that you might have in your life, and it's a good way of coping with it.

Participant 39 elaborated that he might be feeling better because he became less irritated by things that had normally disturbed him previously. Those things now had less negative effects on him, and he was able to accept things as they were:

There are some of the things that tended to irritate me in the past. (...) I would have been really a bit irritated about that happening but now it's happened and I accept it. (...) It hasn't deeply affected my temper and feeling at the time. I'm more sort of accepting of what is happening around me. (...) Prior to the sessions, there was things that again were irritating me and were affecting me

and perhaps causing stress that over the past four weeks or so have seemed to dissipate.

In conclusion, according to the participants' narration, both groups had good experiences with the intervention and perceived some positive changes in their daily life. The details of the experiences and changes the participants perceived differ between the two groups. The participants in the PPHI group experienced pleasant moments that shifted their moods and created a sense of serenity after each session, which also carried over into the rest of that day. Most participants did not specifically mention if they noticed that positive suggestions brought about the positive effects, however, they perceived that the intervention in general had brought about some positive changes that they could notice in their daily life, and they appreciated such changes. The participants in the relaxation group experienced relaxing moments that allowed them to rest, and, similar to the PPHI group, the positive feelings continued after the sessions finished. The participants also found that the relaxation techniques were very simple and easy to apply, so they were able to incorporate them into their daily routine. No participants in the PPHI group mentioned doing so. The participants in the relaxation group also perceived positive effects that support them in their daily life, although the effects were less than for the PPHI group.

#### **4.1.3. Follow-up interview: Durability of Changes and Positive Effects**

A follow-up interview was conducted to investigate if the effects that the participants reported in post-treatment interview were sustained, improved, or declined, and if there were any additional changes. In addition, the interview was designed to determine if the participants continued applying the PPHI or relaxation technique in their daily life after some time had passed, their opinion of it, and if they thought they would continue incorporating the techniques on a regular basis. As with

the post-treatment interview data, themes were evaluated for each treatment group separately, and themes were compared in order to determine if there were any differences in perception and outcomes between the two groups.

### **Durability of the PPHI.**

*Incorporating PPHI in daily life.* Most participants reported that they continued applying the method they had learnt from the treatment sessions in their everyday life after the last treatment session, typically a few times a week, following the steps taught in the intervention sessions that included gradual relaxation and positive thoughts and suggestions. Also, they were motivated to continue incorporating the technique in their daily life due to the positive feelings and results they experienced.

Participant 24 explained his practice of the PPHI in his daily life, and he was very open to continuing to apply the technique in order to maintain the sense of well-being:

It's normally in the morning, and it ranges between 20 minutes and half an hour a session, possibly two or three times a week. (...) Yes, I will continue. (...) To continue these feelings of wellbeing and energising and sort of optimising my sensibilities.

Participant 43 had been applying PPHI at night and reported that the technique helped her to sleep much better, which she realised is an important factor that affects and supports her in daily life:

It still tends to be at night, when I can't sleep. (...) Yes I will (continue applying). The reasons are because, mainly, the sleep, and sleep affects my coping mechanisms for the following day. So if I can get better sleep, or feel less stressed being awake, I think it's been really positive in that way.



Participant 57 mentioned specifically that the positive thinking and positive awareness helped enhance her days. Therefore, she had known that continuing practising the technique would be a way to help her feel relaxed and positive:

I think I will continue. (...) that's a way to help me relax. So that's quite purposeful. Thinking about the good things that have happened, I just think it's a way of focusing on the good things, it kind of enhances the day.

*Continually perceiving the sense of well-being.* Participants in the PPHI group still continually perceived positive effects of the intervention, especially the participants who consistently practised by themselves after the last treatment session. The effects they described were not 'happiness' directly, but more of a sense of well-being, calmness, and optimism, which helped them to accept their situation, cope better with stress and anxiety that occurred, as well as obtain better sleep. Hence, they felt that it continued to promote their well-being and happiness.

Participant 24, who continually practised the method he had learnt from the PPHI sessions regularly 2 to 3 times a week, affirmed that the continual practice had optimised his awareness, making him feel relaxed and energised: "It increases my sensitivity, I feel energised, relaxed, all my senses seem to be enhanced. It just generally gives me a feeling of wellbeing."

Participant 20 disclosed that she had not slept well in the previous few weeks, so she had been using the technique. She said that: "I didn't sleep well and so I practiced your techniques. (...) And that did make a difference because I got my normal sleeping pattern back."

Participant 43 also had been using the PPHI when she could not sleep at night, and she said that it helped her fall back asleep because she could stop thinking:

“It seems to help me get back to sleep. I think it just stops my mind going off in, sort of, wild directions really.”

Participant 66 was pleased with the results she could feel as she repeatedly practised after the last treatment session. She intended to incorporate the method into her daily routine and continue practising:

It’s certainly very calming, it does work. It became easier the more I did it.

(...) So now that I’m settled I’d like to try and set a time that I would do it every day, that’s what I’m looking to achieve.

She also described effects such as being better able to cope with situations, and she had noticed that she could sleep much better on the days that she practised the PPHI:

There is a sense of calm and peacefulness afterwards and that I can sort of cope. And I sleep much better on the days that I do it as well, you know that night I tend to sleep a lot better than the other days, I noticed that. It took me be a while, but I did notice it.

The participant also mentioned that she feels much happier and positive overall. “Much more improved, much happier and more relaxed... I just feel lighter and, you know, more alert and more positive.”

***PPHI: Positive effects sustained.*** The participants reported that they still perceived the positive effects that they had reported earlier in the post-treatment interview, even 4 to 6 weeks after the last session. The effects were sustained, with no obvious improvement, but also no decline.

Participant 43 noticed that after the treatment, she could cope with her anxiety much better, and this coping ability has been sustained, as she knew how to put herself into a calm state:

I think they (the effects) are still there, just because if I know I'm going into something that might cause me a bit of anxiety, no matter what it is, I can stop and just look at my breathing, I can do cope with this, I can do this. (...) So perhaps going into certain situations with a different point of view. (...) You deal with it as it happens.

Participant 57 explained that, although she had not recently encountered a situation that could affect her emotions, she had perceived that the treatment had made her more aware of the positive resources she possessed, and more positive in general, and these thoughts still remained with her at the time of the follow-up interview. She also believed that it would continue:

I think having the sessions with you made me more aware – made me think more about thinking positively, feeling positively, and I remember that, I don't remember it all the time, but I remember it from time to time. And I will continue remembering it I think. So yes, I think there will be a continuing impact.

Participant 66 observed that she had been more relaxed and dealing with stressful situations more positively, as she also had stated in her after-treatment interview. She looked back to the time period before participating in the study, when she was unable to deal with stressful, unexpected or uncontrollable situations, becoming very emotional and overwhelmed. At the time of the follow-up interview, she was calm and much more relaxed. She was certain that the positivity still continued:

Definitely sustained, (...) I mean I was quite surprised. (...) If you compare to when I came the very first time with the same issue in the background, I mean there's a completely different person here I think, I don't know what you're seeing but I certainly feel there's a different person here.

### **Durability of relaxation.**

*Incorporating the relaxation techniques in daily life.* Similar to the PPHI group, most participants in the relaxation group were continuing to apply the techniques they had learnt from the sessions in their daily lives because of the positive results they experienced.

Participant 18 shared that she used relaxation techniques both during the day and at night, whenever she wanted:

If I feel I need to take a moment to calm down, I will tend to use it, and I'm still trying at night as well to try and help me to sleep. So yes, definitely still thinking about it and using it.

The participant went on to say she would surely continue using relaxation techniques because she had found that relaxation effective in helping reduce her stress and anxiety, and it is simple and easy to do.

I certainly will. (...) just because it does work and I've even taught it to my daughters as well. Because one has quite a stressful job in a shop so she tends to panic a little bit and get anxious so I taught her to do that as well. (...) It is so simple and effective I think and it's not a lot of stuff to remember. And because you can adapt it as well to what time and circumstance you've got. It certainly has been helpful.

Participant 39 had been incorporating the technique in his daily routine, and he found it was easier when he set it as one of his routine tasks: "I try after lunch to have a session where I'm relaxing, and I find it easier when it's more of a routine." He shared further that he had been enjoying doing the technique, which was the main reason he would continue. "Well, I will (continue), because I enjoy doing them or I like it."

Participant 45 shared that, although she had not incorporated the technique as her routine, she had been applying it when needed, which was when she experienced some negative emotions or difficulty sleeping:

I have yes, and I find it very relaxing. I do not do it a lot but I do it usually when I am feeling, (...) if I get a little (agitated gesture). I always do it if I cannot sleep and it sends me back to sleep really quickly. And sometimes I do it if I just want to completely relax.

*Continually perceiving the sense of calm.* Most participants reported that the results they experienced were feelings of calm and relaxation, which had made them feel less agitated about everyday annoyances. For some participants who did the relaxation technique when they awoke in the middle of the night, it also helped them to fall back asleep.

Participant 11 said that he was less agitated about things because he was calmer: “Yes, I tend to be a little more calmer. Certain things don't work me up, get me upset so much, so yes, that helps.”

Participant 18 also noted that she felt calmer, with a little surprise that the relaxation technique was very simple yet effective for her: “It always worked. I always do feel calmer, yes, absolutely. (...) It just seems such a simple thing really doesn't it to sort of breathe and take that time but it definitely does seem to have had a benefit.”

Participant 39 explained that that he could now more easily accept situations around him and feel much more relaxed, compared to before taking part in the study. Therefore, he felt less irritated about things that would have previously annoyed him:

I feel much more relaxed and can accept the surrounding environment more easily than I did prior to starting these exercises. (...) I think it has been of

value to me and I say I have noticed that external factors don't irritate me quite as much as they used to. (...) I can accept things and you know, it's part of life. (...) Before I would be a bit more aggressive in that context and feel more tense and unable to relax. So I have found that I am able to relax more easily. It is very pleasant. It's just nice, calming.

***Positive effects sustained.*** As in the PPHI group, participants in the relaxation group found that the positive effects they perceived were still sustained at the time of the follow-up interview.

Participant 25, who shared in the post-treatment interview that she had high sense of calm and acceptance described that the effects were still sustained for her, although there might be some life situations that were not ideal:

Yes I think they probably are (sustained). I mean I'm not saying that every day is perfect but yes, just generally a bit more acceptance. I suppose the inner calm results in the ability to switch off from stress more.

Participant 39 shared that he went away for a holiday, and during that time, he did not practise any relaxation. However, when he returned, he resumed his previous routine of daily practise, and he was certain that the positive effects still continued:

It's sustained certainly, and I was going to say, since I've been back from Ireland, I got back into the routine very quickly so I think in that sense, it has improved. (...) I still felt quite great, at ease, lovely. It's very pleasant.

Participant 45 also thought that the positive effects she perceived after the intervention, which included feeling calmer, more relaxed, and energised, remained at the same level: "I would say they are still sustained. I would not say that they are more but they certainly have not declined. I would say they have been sustained yes. Yes I feel positive."

Overall, at the follow-up interview, most participants continued practising the PPHI and relaxation techniques quite regularly, some as a routine, some on an as-needed basis. The PPHI group was certain that the positive feelings they experienced were the effects of the PPHI, which promoted their perceived well-being. Also, the effects had been sustained, not increased or decreased. Therefore, the participants were positive that they would continue implementing the PPHI and believed that there would be on-going optimisation of their psychological and spiritual well-being. Regarding the relaxation group, the participants also continually experienced relaxing feelings, which allowed them to feel calmer and brought about higher awareness and acceptance in their daily life. As with the PPHI group, the participants reported that the effects had been sustained, not enhanced or deteriorated, and they also intended to continue implementing the relaxation techniques.

#### **4.1.4. Conclusion for Qualitative Results: Comparison Between the Three Interviews and Between the PPHI and Relaxation Groups**

A sequence of changes was observed across the three stages of the study. According to the pre-treatment interview, all participants had a similar baseline of being fairly healthy and happy, as well as physically and socially active. Regardless of these supportive factors, the participants reported some individual age-related issues that affected their moods and emotional well-being in daily basis. In addition, the participants had supportive attitudes towards the interventions, including open-mindedness and appreciation of the value that good relationship and achievement can add to their lives, which was congruent with the intervention's content.

In the second interview that was conducted after the participants had completed the intervention, both the PPHI and relaxation groups reported positive experiences and perceived positive effects. They reported a relaxing and calming

experience, as well as enjoyable moments during the interventions. Both groups reported improvement of their emotions, thoughts, feelings, and reactions towards situations that occurred in their daily lives. They were less irritated, less stressful, and felt calmer towards situations that had irritated them prior to receiving the interventions. This feeling of calmness generally helped them to better cope with life situations. Although the participants in both groups described positive experiences and effects from the intervention, the participants in the PPHI group narrated more profound experiences than the participants in the relaxation group, such as deeply relaxing moments and pleasant sensations. Similarly, both groups experienced positive effects, but the participants in the PPHI group reported superior effects compared to the relaxation group. While the participants in the relaxation group reported the feelings of relaxation, being energised, and greater awareness and acceptance, the PPHI group expressed being more capable of releasing negative feelings and had more positive reactions and communication towards situations and other people.

At the time of the follow-up interview, which was conducted four to six weeks after the intervention, the participants in both groups reported that they had been regularly implementing the techniques they learnt from the intervention sessions in their everyday lives. The participants in the relaxation group mentioned that the relaxation techniques they learnt were simple, easy, and compact to incorporate into their daily activities, but the participants in the PPHI group did not mention anything about this. The participants in both groups also applied the PPHI and relaxation techniques as their coping strategy to handle stressful situations in their daily lives, and they mentioned that it had become easier with practice. At follow-up, the participants in both groups endorsed that the positive effects they perceived since the



second interview were still sustained, with no apparent improvement from the previous interview, but also no decline. Also, they were quite certain that the positive changes they noticed were the effects of the interventions.

Overall, both treatments had created positive experiences for the participants and were subjectively effective to enhance the participants' emotional and psychological well-being. The PPHI created more positive experiences and yielded more positive effects than the relaxation.

#### **4.2. Quantitative Results**

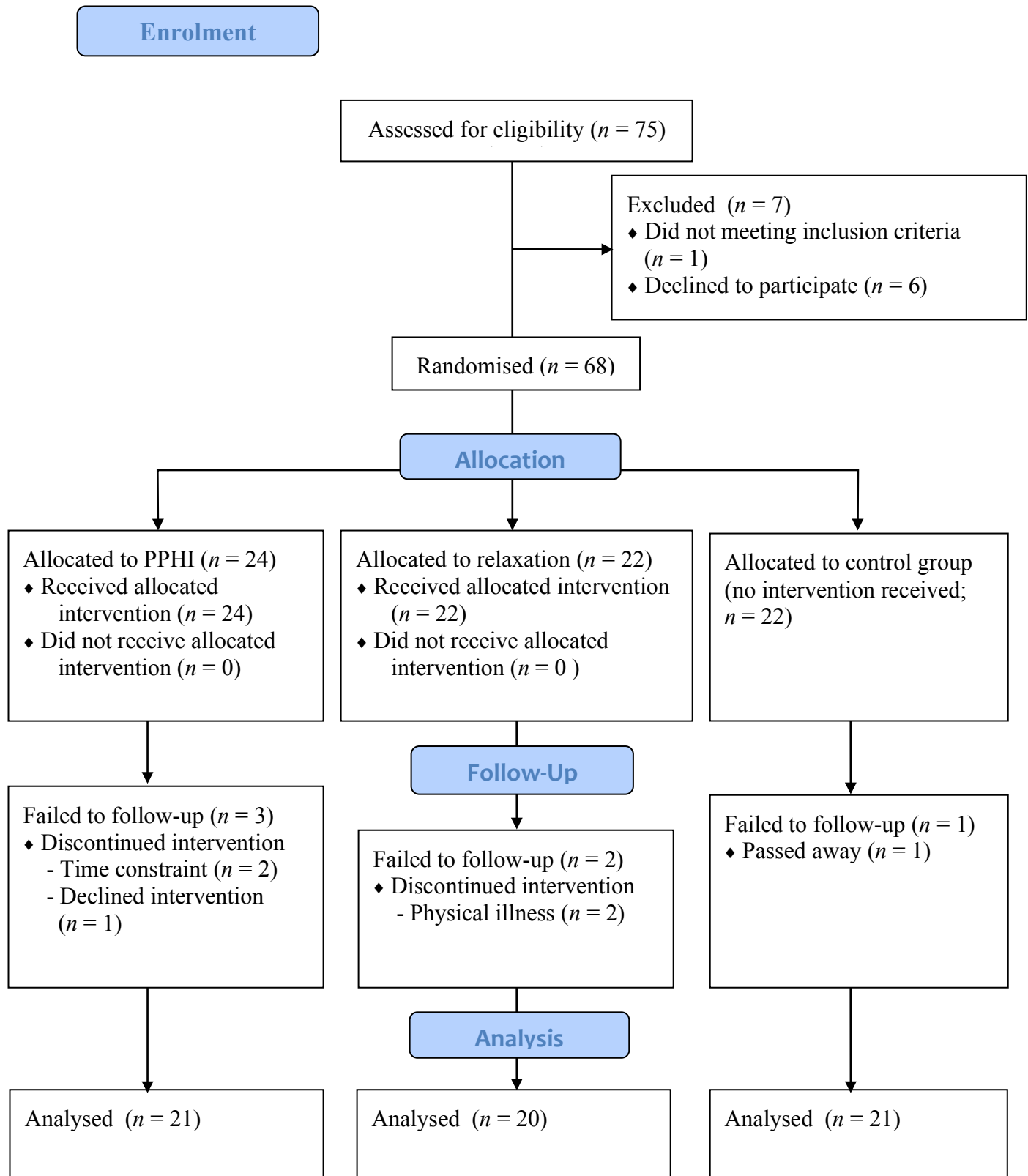
This section presents the statistical results of the four measurements used to evaluate the participants' psychological well-being, namely, the Oxford Happiness Questionnaire (OHQ), the Depression, Anxiety and Stress Scale - 21 Items (DASS-21), the Satisfaction with Life Scale (SWLS), and the Scale of Positive and Negative Experience (SPANE). A comparison of the two treatment groups indicated positive changes in participants' mental well-being after receiving the interventions.

In order to explore the efficacy of a 4-week PPHI, and to compare the PPHI group to the relaxation and the control group, the data were analysed to determine if a difference existed between treatment groups in terms of their pre- and post-treatment changes as well as the particular differences between each treatment group. Statistical tests were performed using SPSS 24.

Figure 4.1 shows the progress of the three groups through the phases of the RCT. These include enrolment, recruitment, intervention allocation, follow-up, and data analysis. The diagram indicates the numbers of the participants who were included and excluded in each phase, along with reasons for the cases that were lost to follow-up or exclusion. The enrolment and recruitment occurred between January and

March 2016. The intervention process, as well as baseline data collection and follow-up data collection, took place between March and June 2016.

**Figure 4.1** CONSORT flow diagram  
 (Participants flow)



**Baseline data.** Sixty-two older adults aged between 60 and 95 years ( $M = 70.31$ ,  $SD = 7.703$ ) completed the study. Of these, 54 participants were female (87.1%), and 8 were male (12.9%). The participants were randomly assigned to the three groups nearly equally: 21 in the PPHI, 20 in the relaxation group, and 21 in the control group. Table 4.2 presents baseline demographic and characteristics of the participants.

Table 4.2

*Baseline Demographics and Characteristics of Participants*

	<b>PPHI (N = 21)</b>	<b>Relaxation (N = 20)</b>	<b>Control (N = 21)</b>
Mean age ( <i>SD</i> )	68.67 (6.09)	69.15 (7.2)	73.05 (9.09)
<b>Gender</b>			
Female	19 (90.48%)	16 (80%)	19 (90.48%)
Male	2 (9.52%)	4 (20%)	2 (9.52%)
<b>Ethnic origin</b>			
British	21 (100%)	20 (100%)	21 (100%)
<b>Marital status</b>			
Single	1 (4.76%)	4 (20%)	1 (4.76%)
In a relationship	1 (4.76%)	0 (0%)	1 (4.76%)
Partnered	0 (0%)	1 (5%)	0 (0%)
Married	8 (38.1%)	7 (35%)	8 (38.1%)
Separated	1 (4.76%)	1 (5%)	0 (0%)
Divorced	6 (28.57%)	5 (25%)	3 (14.29%)
Widowed	4 (19.05%)	2 (10%)	8 (38.10%)
<b>Exercise</b>			
Sedentary (no exercise)	1 (4.76%)	0 (0%)	2 (9.52%)
Mild exercise (i.e. walk, gardening)	7 (33.33%)	10 (50%)	8 (38.10%)
Occasional vigorous exercise (less than 3 times/week for 30 min.)	8 (38.1%)	6 (30%)	6 (28.57%)
Regular vigorous exercise (more than 3 times/week for 30 min.)	5 (23.81%)	4 (20%)	5 (23.81%)
<b>Subjective emotional conditions (if any)</b>			
Feel depressed	6 (28.57%)	4 (20%)	5 (23.81%)
Feel lonely	8 (38.1%)	6 (30%)	5 (23.81%)
Feel tense	6 (28.57%)	6 (30%)	6 (28.57%)
Feel anxious	8 (38.1%)	4 (20%)	6 (28.57%)
Difficulty concentrating	5 (23.81%)	2 (10%)	2 (9.52%)
Sleeping problems	8 (38.1%)	7 (35%)	10 (47.62%)
Unable to relax	8 (38.1%)	4 (20%)	6 (28.57%)

**4.2.1. Statistical approach.** To test whether there was a difference between the treatment groups (PPHI, relaxation, and control) in terms of post-treatment scores, a MANCOVA test was used. Post-OHQ, post-DASS total, post-SWLS, and post-SPANE-B were set as dependent variables, and treatment groups as a fixed factor. The pre-treatment scores from the OHQ, DASS total, SWLS, and SPANE-B served as covariates in the model to adjust post-treatment scores with pre-treatment scores. Adding pre-treatment scores as covariates also allowed for controlling if pre-treatment scores influence post-treatment scores. The  $p$ -value was set at .01 as a level of significance for the MANCOVA test, since multiple dependent variables ( $n = 4$ ) were tested. The identification of outliers using boxplot and z-scores had no extreme outliers (i.e., z-scores  $> 3.29$ ) in any data from the four dependent variables. The test of normality, including Kolmogorov-Smirnov and Shapiro-Wilk and a visual inspection of their histograms, normal Q-Q plots and box plots showed that the dependent variables (post-OHQ, post-SWLS, and post-SPANE-B) were normally distributed. However, the dependent variable post-DASS was not normally distributed. In terms of skewness and kurtosis, all data were normally distributed, apart from the positively skewed post-DASS, but was normally distributed for kurtosis. The assumption of homogeneity of regression slopes (HRS) for the MANCOVA was justified for the dependent variable post-DASS total, but was violated for the other dependent variables. For Box's test of equality of covariance matrices and Levene's test of equality of error variances, neither assumption was violated. Thus, the results of Wilk's Lambda test were reported. Despite some of the assumptions being violated, the MANCOVA is considered the only suitable test for this analysis (Field, 2013). Also, most of the dependent variables met the most

important assumptions, namely normality and equality of error variances (e.g., Levene's test). In addition, as a significant difference where found between groups, a Bonferroni post-hoc test ( $p$ -value = .05) was performed for pairwise comparisons in order to see particular differences between each treatment group.

**4.2.2. Results.** Table 4.3 presents pre- and post-intervention scores of the participants in each group. As seen in the table, comparing post-treatment scores to pre-treatment scores shows that the mean OHQ, SWLS, and SPANE-B scores increased and the mean of the DASS-21 scores decreased for the PPHI group. For the relaxation group, the means of the OHQ and SPANE-B scores increased while SWLS remained approximately the same, and the mean of the DASS-21 scores decreased. For the control group, scores of all measurements remained steady pre- and post-intervention.

Table 4.3

*Pre- and post-treatment scores of participants*

<b>Measures</b>	<b>Pre (<math>M \pm 1SE</math>)</b>	<b>Post (<math>M \pm 1SE</math>)</b>
<b>PPHI group</b>		
OHQ	4.12 $\pm$ 0.14	4.58 $\pm$ 0.12
DASS-21	26 $\pm$ 6.06	17.33 $\pm$ 2.84
SWLS	19.86 $\pm$ 1.95	23.95 $\pm$ 1.45
SPANE-B	6.14 $\pm$ 1.75	11.48 $\pm$ 1.34
<b>Relaxation group</b>		
OHQ	3.92 $\pm$ 0.16	4.18 $\pm$ 0.16
DASS-21	22.20 $\pm$ 3.49	15.50 $\pm$ 2.31
SWLS	20.55 $\pm$ 1.57	20.50 $\pm$ 1.54
SPANE-B	7.00 $\pm$ 1.39	10.55 $\pm$ 1.63
<b>Control group</b>		
OHQ	4.23 $\pm$ 0.18	4.18 $\pm$ 0.23
DASS-21	22.48 $\pm$ 4.15	23.43 $\pm$ 3.85
SWLS	21.29 $\pm$ 1.60	21.14 $\pm$ 1.56
SPANE-B	9.90 $\pm$ 1.90	9.14 $\pm$ 1.90

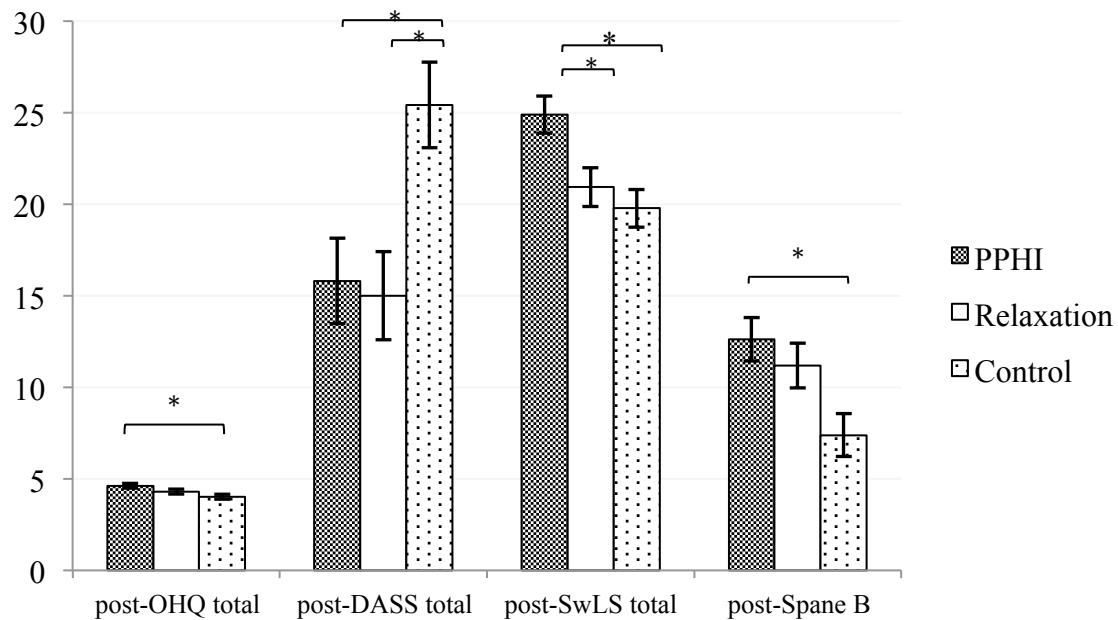
*Note:* OHQ, Oxford Happiness Questionnaire; DASS-21, Depression, Anxiety and Stress Scale - 21 Items; SWLS, The Satisfaction with Life Scale; SPANE-B, Scale of Positive and Negative Experience-Balance

For MANCOVA test, overall, there was a significant effect of treatment types on post-treatment scores after controlling for the effects of pre-treatment scores,  $F(8, 104) = 2.88$ ,  $p = .006$ , *partial*  $\eta^2 = .18$ . Specifically, the scores between treatment groups were different for post-OHQ,  $F(2, 55) = 5.13$ ,  $p = .009$ , *partial*  $\eta^2 = .16$ ; post-DASS total  $F(2, 55) = 5.95$ ,  $p = .005$ , *partial*  $\eta^2 = .18$ ; post-SWLS  $F(2, 55) = 6.7$ ,  $p = .002$ , *partial*  $\eta^2 = .20$ ; and post-SPANE-B  $F(2, 55) = 5.1$ ,  $p = .009$ , *partial*  $\eta^2 = .16$ .

In addition, the covariates of pre-treatment scores of OHQ ( $F(4, 52) = 6.743$ ,  $p < .001$ ); DASS-total ( $F(4, 52) = 5.704$ ,  $p = .001$ ); SWLS ( $F(4, 52) = 6.228$ ,  $p < .001$ ); and SPANE-B ( $F(4, 52) = 9.677$ ,  $p < .001$ ) had a significant effect on the post-treatment scores. In particular, pre-OHQ had a significant effect on post-OHQ,  $F(1, 55) = 10.461$ ,  $p = .002$ , *partial*  $\eta^2 = .16$ ; pre-SWLS had a significant effect on post-SWLS,  $F(1, 55) = 14.41$ ,  $p < .001$ , *partial*  $\eta^2 = .21$ ; and pre-SPANE-B had a significant effect on post-SWLS,  $F(1, 55) = 17.474$ ,  $p < .001$ , *partial*  $\eta^2 = .24$  and post-SPANE-B  $F(1, 55) = 31.03$ ,  $p < .001$ , *partial*  $\eta^2 = .36$ .

Post-hoc tests for pairwise comparisons between treatment groups (Figure 1) revealed that the adjusted post-treatment score of OHQ was higher for PPHI ( $M = 4.62$ ,  $SE = 0.13$ ) than for the control group ( $M = 4.02$ ,  $SE = 0.13$ ,  $p = .007$ ), while no significant differences were found for the other comparisons. The adjusted post-DASS total score was higher for the control group ( $M = 25.43$ ,  $SE = 2.34$ ) than for PPHI ( $M = 15.81$ ,  $SE = 2.33$ ,  $p = .017$ ) and relaxation ( $M = 15.00$ ,  $SE = 2.40$ ,  $p = 0.01$ ), while no significant difference were found between PPHI and relaxation. The adjusted post-SWLS score was higher for PPHI ( $M = 24.90$ ,  $SE = 1.03$ ) than for the relaxation ( $M = 20.94$ ,  $SE = 1.06$ ,  $p = .03$ ) and control group ( $M = 19.78$ ,  $SE = 1.03$ ,  $p = .003$ ), while no significant difference were found between the relaxation and the control group. The adjusted post-SPANE-B score was higher for PPHI ( $M = 12.62$ ,

$SE = 1.18$ ) than for the control group ( $M = 7.39, SE = 1.18, p = .009$ ), while no significant differences were found for the other comparisons.



**Figure 4.2.** Adjusted post-treatment scores ( $M \pm SE$ ) of OHQ, DASS total, SWLS, and SPANE-B between treatment groups (\*  $p < .05$ ).

Prior to the intervention, the average pre-treatment OHQ scores of the PPHI group revealed that the participants had an average level of happiness ( $M = 4.00$ ), which can be interpreted as ‘somewhat happy’. Then, after the treatment, the post-treatment adjusted means of the happiness scores increased to  $M = 4.62$ , which can be interpreted as ‘pretty happy’ (Hills & Argyle, 2002). In regard to life satisfaction, before the intervention, the average pre-treatment SWLS scores from the PPHI group revealed that the participants had a slightly below average life satisfaction ( $M = 19.86$ ). After the treatment, the post-treatment adjusted means of life satisfaction scores rose to ‘above average, or nearly ‘high’ ( $M = 24.9$ ; (Diener et al., 1985a). The PPHI group’s affect balance (SPANE-B) doubled between pre- ( $M = 6.14$ ) and post-



treatment ( $M = 12.62$ ), which means the participants had a higher positive to negative emotions ratio in their daily life (Diener et al., 2010).

In sum, the quantitative results show that the PPHI had enhanced the participants' scores on happiness, life satisfaction, and the balance in positive-negative emotions as well as significantly decreased their negative symptoms (i.e., depression, stress, anxiety) compared to the control group. The relaxation intervention also significantly decreased the participants' negative symptoms compared to the control group, but did not significantly affect happiness level, life satisfaction, or the balance between positive and negative emotions.

## CHAPTER V

### Discussion

In order to achieve the research aims, this study employed mixed methods. Semi-structured interviews were used and were expected to provide a comprehensive understanding of participants' experiences after receiving the intervention, as well as to illuminate the underlying mechanism of the intervention from the participants' point of view. The qualitative findings were examined in order to answer these research questions: a) What are the participants' perceptions and experiences of the interventions (PPHI and relaxation), and b) Does a 4-week positive psychology hypnosis intervention (PPHI) subjectively facilitate well-being and happiness in older adults? Quantitative methods, which included statistical analysis of one primary measurement (OHQ) and three supportive measurements (DASS-21, SWLS, and SPANE), were used to obtain complementary evidence of the intervention effects on well-being and happiness as well as any additional effects. The hypotheses were: a) PPHI would facilitate greater improvement in happiness and well-being compared to the other two conditions (relaxation and control), and b) The supporting effects of the intervention that was associated with the greatest improvement in happiness and wellbeing would be the reduction of perceived negative emotions, depression, anxiety, and stress symptoms, as well as an increase in perceived positive emotions and life satisfaction. The interpretation of the results will be divided into qualitative findings, quantitative findings, and triangulation of the two findings.

#### 5.1. Qualitative Findings

In this section I will discuss the themes described in the preceding chapter that arose from interviews designed to explore the participants' pre-intervention baseline, intervention experiences, perceived post-intervention effects, and influence of the intervention on the participants' well-being. The sequence of changes in the

participants' mental well-being and the intervention mechanism will be discussed along with the themes.

**5.1.1. Pre-intervention baseline.** The pre-intervention interview produced three major themes that contained eight sub-themes. Together, these themes provide information about participants' perception, behaviour, lifestyle, coping strategies, and factors related to their mental well-being.

*Supportive personal attitudes.* This theme contains three sub-themes that provide an understanding of the participants' perspectives on the intervention and their personal well-being and happiness: 'Open-mindedness about the intervention', 'Perceived fair well-being', and 'Good relationships and achievements bring happiness'. The participants who took part in this study were willing to commit to the intervention process, and their interest in the intervention was clear. The theme of 'Open-mindedness about the intervention' provides supportive evidence that the participants either held a neutral perception or expected the intervention to be beneficial for their mental health. This open-mindedness demonstrates the willingness and motivation of the patients, which are important factors for any psychological treatments, as these factors can predict dropout rate and outcome (Keithly, Samples, & Strupp, 1980; Ogrodniczuk, Joyce, & Piper, 2005). This open-minded attitude would also affect sustainability of the intervention, as it could influence whether treatment sessions would be incorporated into participants' daily life. In this present study, the drop-out rate was approximately 7%, lower than the 10% rate that was expected. This theme, along with the relatively low dropout rate, suggests that the open-mindedness of the participants influenced the continuity of the intervention. With the second sub-theme, the participants expressed that they currently 'perceived fair well-being' physically and mentally, and most mentioned being not particularly

happy, but also not unhappy. They reported that their well-being was at a satisfying level that they would like to maintain. This theme confirmed that this group of participants, namely older adults with no severe mental and physical conditions, were an appropriate target population for the study. The third sub-theme of ‘good relationship and achievement bring happiness’ shows that the participants had a perspective congruent with the positive psychology PERMA model of well-being (Seligman, 2011a), which the PPHI incorporated into the treatment model. The belief of the participants that ‘good relationships and achievements bring happiness’ is partially concordant with PERMA, which holds that relationship and achievement are two of the five elements of overall well-being and flourishing. The implication of this theme is that the PERMA model incorporates valuable factors that an individual perceives as positive resources and elements of well-being. In addition, considering positive emotions as a foundation of other well-being elements, as in the applied PERMA model proposed in this study, this theme can be interpreted to mean that the participants would like to establish and maintain good relationships and achievements because they believe that these aspects generate positive emotions. Having a higher level of positive emotions on a daily basis therefore leads to a more complete mental health, which they defined as ‘happiness’. According to Fredrickson’s broaden-and-build theory (Fredrickson, 2011), these positive emotions will then continually bring about further personal resources that can work as an upward spiral towards the flourishing state (i.e., complete mental health). Because the participants believed this, they held an appropriate mentality regarding the enhancement of well-being in their daily lives. Furthermore, given this attitude, it is likely that they would have felt that the content of the intervention was harmonious with their personal values. This convergence of values could bring about the participants’ acquiescence, positive

experience, and outcome of the intervention. In sum, the sub-themes present in the pre-intervention interview show that the participants have personal attitudes that generally support the process and could contribute positively to the outcome of the intervention. Therefore, pre-intervention attitudes should be considered in relation to the effectiveness of the intervention.

***Psychological and emotional factors.*** This theme revealed an incongruence in the participants' perception of their well-being: while they perceived themselves as fairly healthy and happy, as mentioned in the previous theme, contradictorily, they also expressed some 'age-related distress' and 'emotional instability'. These factors, therefore, might cause them to languish and could predict poorer mental health or mental illness in the future (Keyes, 2007; Keyes, 2010). Regarding 'age-related distress', the participants felt that ageing is 'waste', 'less', and 'lost'. From these descriptions, according to sense of coherence theory (Von Humboldt, 2014), the participants appear to be feeling that they have less clarity, manageability, and meaning in life as they age. Hence, distress, dissatisfaction, and frustration might have affected their subjective well-being. This theme corroborates previous studies, which found a greater prevalence of mental distress as people age (Gerstorf et al., 2008; Rodda et al., 2011). This also links to the other sub-theme of 'emotional instability', in which the participants endorsed frequently experiencing emotional instability in their daily lives. This might be because the participants were already struggling from age-related distress; hence, additional factors and obstructive encounters in daily life tend to bother them more easily. Their emotions were then affected by such little annoyances, leading to emotional instability. Overall, this theme confirmed the suitability of the PPHI treatment model proposed in this study for older adults, which includes the promotion of positive emotions. The promotion of

positive emotions could create an improved balance in the participants' perceived positive and negative affect in their daily lives (Fredrickson, 2011). Hence, it was expected to decrease the participants' distress and optimise their emotional state.

*Constructive coping strategies and behaviour.* Prior to the intervention, the participants already engaged in coping strategies and behaviours that supported them in maintaining their mental and physical well-being. Three sub-themes were identified: 'active lifestyle', 'distraction', and 'socialisation'. An 'active lifestyle' that involves regular physical activities could play a role in treatment and prevention for older adults who have mild-to-moderate depression and anxiety (Paluska & Schwenk, 2000). Physical activities contribute to and maintain good physical and mental health and contribute to well-being in older adults (Meyer, 2012a), and therefore 'distraction' by means of physical or recreational activities contributes to good health and can bring about enjoyment. Using work-related tasks as a distraction could also create a sense of achievement, which would evoke positive emotions such as interest, pride, confidence, and satisfaction (Fredrickson, 2001). According to positive psychology, as Fredrickson (Fredrickson, 2011) explains, the more positive emotions a person has, the higher the likelihood the person will recover from a low-mood state. This sub-theme reveals that the participants had an appropriate supportive method to increase their resilience for negative emotions. Regarding 'socialisation', the participants stated that they regularly took part in local communities, socialised with friends, and talked to a friend when they had personal issues. This sub-theme indicates that the participants had a functioning social network and social support. This social functioning in older adults would not only reduce negative emotions, but could also create a sense of belonging and establish good relationships, therefore contributing to their mental well-being (Santini, Fiori, Feeney, Tyrovolas, Haro, &

Koyanagi, 2016). Thus, these themes have shown that the participants were a group of older people with a healthy lifestyle who engaged in behaviours that contribute to positive ageing and well-being. As such, it is important to be aware that these constructive factors may have already helped to improve the participants' well-being over time, apart from the intervention.

In conclusion, the themes gleaned from the pre-treatment interviews show that the participants' psychological and emotional well-being were affected by unavoidable factors that occur in older age and on a daily basis. To handle such circumstances, they possessed some appropriate coping strategies, behaviour, attitudes, and basic awareness of how to enhance their general well-being and happiness. Despite this fact, their happiness level was neutral (i.e., not particularly happy or unhappy) according to their accounts. The next section will discuss the participants' post-intervention experience and effects of the intervention in the light of these pre-intervention baselines.

**5.1.2. Post-intervention experience and effects.** The post-intervention interview resulted in 4 themes (2 for PPHI and 2 for relaxation) that contain 10 sub-themes (6 for PPHI and 4 for relaxation). These themes show the participants' experiences and perceptions of the PPHI and relaxation after they completed the treatment, as well as perceived effects and changes that occurred in their daily lives. This section will explore each theme pertaining to the experimental treatment (PPHI), followed by a discussion of the themes from the relaxation group in relation to the PPHI in order to identify any differences of experience and effects between the two interventions.

*Positive experience of PPHI.* The participants in the PPHI group reported positive experiences that fall into three sub-themes: 'Trustworthy and easy to follow',

‘Deeper relaxation than ever experienced’, and ‘Pleasant sensations’. The first sub-theme, ‘trustworthy and easy to follow’, shows that the participants’ actual experiences of hypnosis in this study contradict stereotypical misconceptions about hypnosis. A major misconception of hypnosis is ‘losing control over one-self’ (Green, 2003; London et al., 1962); however, the participants did not have such experience or any tendency to suspect that the hypnotherapist would have control over them. Conversely, they mentioned a feeling of trust and their willingness to follow along with the intervention process, which they felt was easily done thanks to facilitation by the therapist. As described in the results chapter in the ‘open-minded about the intervention’ theme, although most of the participants had no pre-conceptions and were generally open-minded about the interventions, there were two participants that had pre-misconceptions and negative experiences of hypnosis prior to taking part in this study. However, even these two individuals reported the same experience of trust and ease of following the process. This sub-theme shows that during an actual experience of hypnosis there is no ‘controlling over’ as is often mistakenly believed. This finding supports Green's (2003) view that the experience of being hypnotised can modify stereotypic views about hypnosis and contributes to dissolving misconceptions and creating a good understanding and expectations of hypnotherapeutic intervention.

The second sub-theme, ‘deeper relaxation than ever experienced’, has confirmed that the process of PPHI successfully facilitated the participants to reach an altered or trance state, a state in which an individual is fully relaxed. This deep state of relaxation has been described as a ‘super-learning’ state, a state of complete focus that therefore enables high absorption of information (Rubinfeld, 2009). Therefore, this state is considered one of readiness to respond to hypnotic suggestions as one’s



subconscious is opened for suggestions; hence, therapeutic features can be implemented and instilled (Lynn et al., 2015; Peter, 2015). This theme can be construed as a subjective experience of trance. In addition, the participants reported positive feelings about this state, as it created comfort and calmness. This sense of comfort and calmness helped the participants to feel at ease and safe, which are feelings conducive to establishing trust between the participants and the therapist as well as assisting the participants to fully engage in the session and continue through the intervention process (Hill, 2005). This theme, therefore, supports the rationale of the existing clinical hypnosis standard that hypnosis is preceded by an induction of a hypnotic trance before actual hypnotic suggestions are delivered (Heap et al., 2002; Peter, 2015; Yapko, 2012). There is still some controversy regarding whether or how much the state of hypnotic trance can improve hypnotisability or suggestibility of the patient. However, the accounts of the participants regarding this theme have shown that the degree of suggestibility is not the only significant factor when considering whether or not to include hypnotic induction in a hypnotherapeutic process. This is because such a state has not only brought about the readiness for suggestion that might increase suggestibility, but also created positive feelings towards the intervention that could contribute to the agreeableness of the participants to hypnotic suggestions provided. Furthermore, such positive feelings, such as serenity, are simply a positive outcome that can contribute to overall well-being according to the PERMA model of well-being and broaden-and-build theory (Fredrickson, 2011; Seligman, 2008, 2011a). Hence, regardless of whether this state of deep relaxation increases suggestibility, it helps to enhance the sense of well-being of the participants.

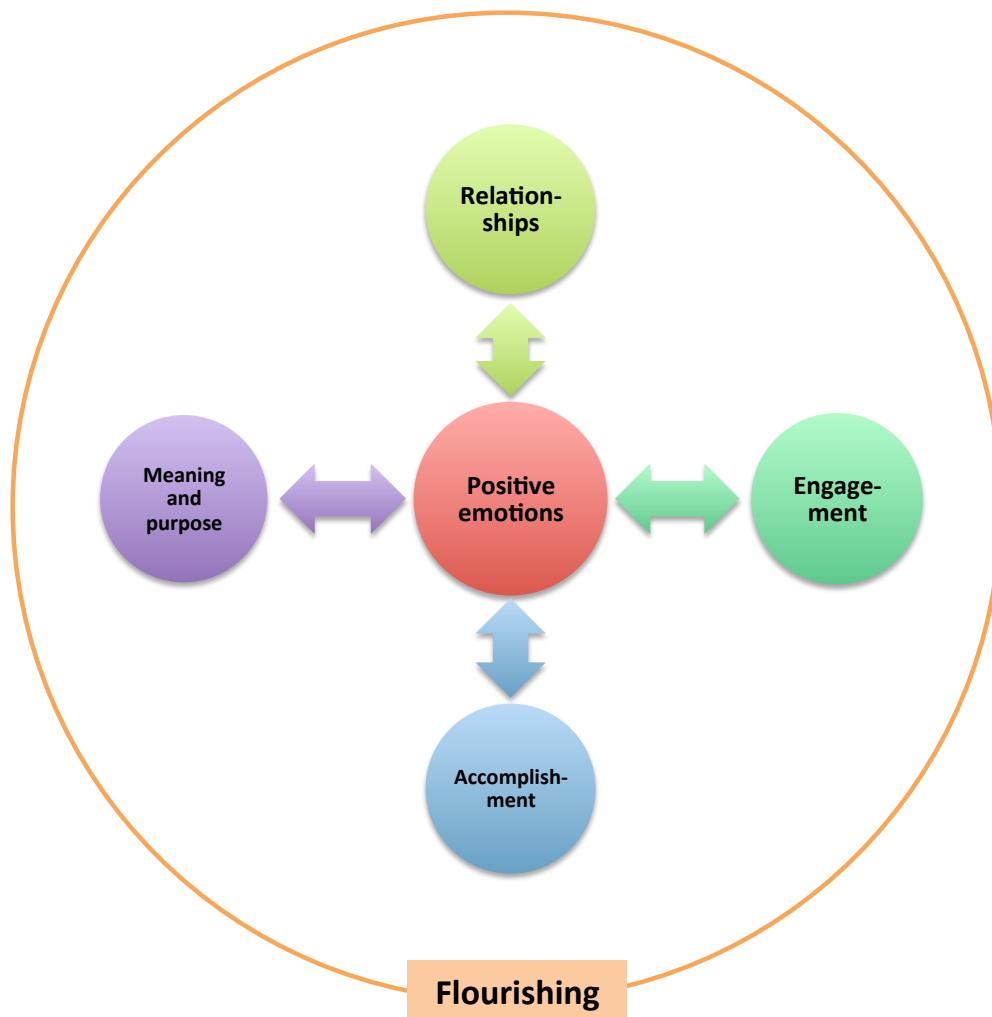
The last sub-theme that indicates a ‘positive experience of PPHI’ is ‘Pleasant sensations’, which revealed that the PPHI did not only induce the deep relaxation that

brought about the sense of comfort and calmness, as explained in the preceding sub-theme, but that it had also created additional positive feelings during and after the PPHI sessions, which continued after the sessions. This sub-theme indicates that ‘positive emotions’ were successfully promoted. Thus, it can be concluded that the PPHI process has accomplished the aim to induce and enhance ‘positive emotions’, which are an important element of an individual’s well-being that can spread into other areas in an individual’s life for further enhancement of personal resources (Fredrickson, 2011; Seligman, 2011a).

Overall, the theme of positive experiences of the PPHI has added more evidence and understanding of the intervention experience, including dispelling the myth that the therapeutic hypnosis approach involves losing control. Furthermore, the experience of both the hypnotic trance state and the positive suggestions brought about positive feelings; therefore, each stage of the PPHI process is appropriate and complements the others. Further positive effects of the intervention will be discussed in the next theme.

*Positive perception of PPHI effects.* The participants in the PPHI group reported positive perceptions of the PPHI effects in three sub-themes: ‘ability to let go of negatives’, ‘feeling calmer’, and ‘positive reaction and communication’. These three sub-themes can be seen as a sequence of change: since the participants could let go of negative feelings and emotions, they felt less stressed and more calm, and thus had more positive and constructive reactions towards situations and communication towards others. These sub-themes support the adaption of the PERMA model (see Figure 5.1), as discussed earlier in the literature review; positive emotions serve as the foundation of other well-being elements for the PPHI treatment model in this study. From this sequence of change, it can be construed that since the participants

experienced more positive emotions, the positive emotions in turn had beneficial effects on another aspect of well-being, 'relationships', as they had more positive communication with others. According to the participants' responses in the pre-intervention interview, relationship is a factor that the participants viewed as essential for their happiness, as explained in the 'Good relationships and achievements bring happiness' theme in the results chapter. This change, therefore, has directly supported them, contributing to their happiness, from their perspective. This sequence of change also suggests the appropriateness of the PPHI treatment model, where positive suggestions were expected to adjust and optimise the participants' thoughts, feelings, and behaviour. It can be seen from the pattern of the sub-themes that once the participants were in control of their thoughts (i.e., letting go of negatives), they felt better overall, and so behaved differently (i.e., more positively). This sequence of change is also in accordance with Fredrickson's broaden-and-build theory (Fredrickson, 2001), which views positive emotions as affecting and broadening an individual's momentary thought-action repertoires and building up the individual's personal resources. As a result, the personal resources, which in this case relate to good relationships, can be durable factors that might be drawn upon later for emotional support and generate further positive emotions in an upward spiral (Fredrickson, 1998). Overall, these results have shown that PPHI successfully supported the individuals to regulate their thoughts and emotions to be more positive and obtain more personal resources for their happiness and well-being.



*Figure 5.1.* Applied PERMA Model of Well-being; positive emotions as a foundation of other elements.

*Positive experiences of relaxation.* The participants in the relaxation group also reported positive experiences of the intervention they received. The theme here is ‘Totally relaxed and enjoyable’. This theme implies that the relaxation process induces restful and pleasant feelings. Based on theory that views ‘relaxation’ as a similar intervention to ‘hypnotic induction’ (Heap et al., 2002), as discussed in the literature review, it can be concluded that this process is an appropriate introductory stage in facilitating an individual to attain a hypnotic trance. After that, further therapeutic features implemented in hypnotic suggestions, such as the positive

suggestions in the PPHI, can bring about particular outcomes. Since the participants in the relaxation group perceived only feelings of relaxation with no other additional positive sensations, it appears that hypnotic suggestions in the PPHI had an essential role in establishing the positive feelings the participants in the PPHI group experienced. In sum, relaxation appears effective as a preliminary step to prepare an individual for a therapeutic stage, for example, to induce comfort and focus.

*Positive perception of relaxation effects.* Although the participants from the relaxation group did not report as many positive sensations and experiences of the intervention sessions compared to the PPHI group, they reported positive perceptions of the intervention's effects in their daily lives, which are shown in three sub-themes: 'incorporating relaxation in daily routine', 'feeling relaxed and energised', and 'awareness and acceptance'. Interestingly, the participants from the relaxation group identified the ease of the process and its adaptability to their personal needs as primary reasons they had been incorporating relaxation in their daily routine. In comparison, the participants from the PPHI group did not mention this particular point at the time of the post-intervention interview. This sub-theme suggests that a more simple intervention might increase implementation on a daily basis, since relaxation involved only breathing exercises, muscle relaxation, and visualisation, without any complicated therapeutic suggestions. Incorporating the relaxation into the participants' daily routine or into a context that they felt it would be beneficial (e.g., to promote good sleep, to calm emotions) had made them feel 'relaxed and energised', because they could rest more fully. Also, although there were no suggestions regarding awareness and acceptance included in the relaxation process, the participants reported that they perceived an increase in their 'awareness and acceptance' of situations in their lives. This sub-theme highlights an interesting

outcome of the relaxation intervention that is in accordance with two theories: somatic reaction of deep breathing, and mindfulness meditation. Somatic theorists suggest that the state of relaxation can increase sensory awareness and create changes in a person's somatic-emotional stages (Rubenfeld, 2009). The application of mindfulness, with its focus on what is happening here and now, such as focusing on one's breathing as in the relaxation intervention can enhance an individual's focus and acceptance of the present moment (Kabat-Zinn, 2003). These positive effects are evidence that relaxation can also enhance psychological well-being to some degree.

Overall, the themes discovered from the post-treatment interviews have shown that the participants in both the PPHI and relaxation groups had positive experiences of the intervention, whereas the PPHI group experienced more profound positive sensations from the intervention. The participants in both groups observed positive effects in their daily lives, however, the effects both groups perceived differed. The PPHI group reported a greater ability to manage their own thoughts, emotions, and feelings that was reflected in their behaviour, which led to better reactions and communication. The relaxation group appreciated the ease of implementing the intervention, the restful feeling, and the increase in awareness and acceptance of their situation. In comparison, the PPHI provided the participants with some personal resources that can be expanded to help enhance other aspects of their well-being, while relaxation is more focused on the individual and their adjustment to accept the situation as it is. From this perspective of the outcomes, both interventions are effective, although the efficiency for well-being enhancement might depend on what each individual sets as goals: the 'acceptance' of what they have versus the 'enhancement' of what they possess. In addition, considering these positive effects of both the PPHI and relaxation compared to the pre-intervention baseline, as discussed

in the previous section, it should be noted that the participants already had supportive factors for their well-being such as healthy lifestyle and positive attitudes. The role of the intervention, whether the PPHI or relaxation, was as a complementary resource and strategy for the participants, that together with other existing supportive factors, would enhance their positivity and in turn increase their happiness and lead to a flourishing state or good mental health. Accordingly, these findings have provided evidence of the effects of the two approaches; this improved understanding indicates that both can be good options for psychological intervention for older adults. Therapists can apply them according to the treatment goals in each circumstance, in addition to other supportive well-being factors from an individual's daily life.

**5.1.3. The durability of the interventions.** The follow-up interview resulted in 2 themes (1 for PPHI and 1 for relaxation), which contain a total of 6 sub-themes (3 for each intervention). The themes show the participants' implementation of the intervention and perception of the persistency of the effects of the PPHI and relaxation four to six weeks after the intervention process had been completed. This section will discuss each theme individually concerning the experimental treatment (PPHI), followed by the themes from the relaxation group in a comparison to the PPHI in order to determine any differences in experience and effects between the two interventions.

***Durability of PPHI.*** The three sub-themes that indicate durability of the PPHI are interrelated: 'incorporating the PPHI in daily life', 'continually perceiving the sense of well-being', and 'perceived persistency of positive effects'. The 'incorporating PPHI in daily life' theme reveals that the participants had been employing the PPHI as a well-being enhancement activity on a regular basis, performing it on their own time at home as a self-hypnosis according to the procedure

they learned from the intervention sessions. This theme has confirmed the purpose and potential of the PPHI to be an ongoing intervention that people can apply in daily life as a tool to enhance their well-being. Also, it implies that the post-hypnotic suggestions in the PPHI process that aimed to establish confidence in the results and ongoing implementation is effective. From this continuing practice, the participants perceived the positive effects as persistent, and they described the effects as ‘the sense of well-being’. According to their narrations, the sense of well-being they perceived at this stage developed from the sequence of effects as shown in the discussion of the themes from the post-intervention interview, where they expressed that the PPHI promoted their well-being and happiness by helping them to become more in control of their emotional state, and therefore they had been more positive. According to this, the PPHI shifted the participants’ focus to be more positive, and this focus enabled them to better cope with life situations. This therefore continually promoted their psychological well-being. Although some of the participants did not mention the increase of well-being and happiness directly, the effects they reported can be implied as being a better well-being in general, for example, better sleep, greater confidence in coping ability, and a higher energy level, as described in the results chapter. This theme reconfirmed that the PPHI enabled the participants to attain positive attributes that brought about well-being in their daily lives. As time passed and such a state was maintained, they therefore perceived it as a sense of well-being. This sense can be interpreted as ‘happiness’, since happiness or subjective well-being is defined by how people experience their lives, including both cognitive judgments and affective reactions (Diener, 1984, 2009). This sub-theme therefore supports the proposition by Ruyschaert (2014) of using hypnosis to enhance happiness using positive psychology frameworks, in that Ruyschaert proposed that hypnosis can be used to generate and



intensify positive emotions, as well as nurture positive experience in order to orient an individual to positive perspectives. In the light of the findings of this present study, it can be construed that the integration of positive psychology frameworks and hypnosis is efficacious because the suggestions underpinned by positive psychology that promote positive attitudes, thoughts and emotions, and hypnosis was effective in cultivating and amplifying such suggestions and effects. The results of happiness or well-being stemmed from the improvement in positivity the participants had in their daily lives, which evolved over time. It was not that the participants felt happy or perceived well-being immediately after receiving the intervention, but rather the effects from the continual changes in their perception that the intervention implanted. It should be noted that, in this study, the participants did not only take part in the intervention sessions, but also applied what they had learnt from the sessions in their daily lives during and after the intervention period. Due to the participants' implementation of the intervention, to determine the PPHI durability, the intervention should be treated as ongoing, just like other practices in positive psychology that were incorporated into the PPHI such as gratitude journaling and loving-kindness meditation that are recommended as daily practices (Fredrickson, 2011, 2014). Since there are ongoing life transitions that might create emotional instability in older adults, as also shown in the theme from the pre-intervention interview, the positive effects might remain for a period of time after the intervention sessions, but might not endure if an individual does not continually incorporate such methods in their daily lives.

***Durability of relaxation.*** The participants in the relaxation group also reported sub-themes similar to the PPHI group, which include three interrelated sub-themes: 'incorporating the relaxation in daily life', 'continually perceiving the sense of calm',

and 'positive effects sustained'. These sub-themes revealed that the relaxation intervention could also be an ongoing activity that individuals employ on a daily basis by themselves after they have learnt the process. As with the themes from the post-intervention interview, the effects that the participants perceived from relaxation at this follow-up stage were different from the PPHI. The participants from the relaxation group only perceived the persistency of the effects as 'the sense of calm', and did not describe it as a greater sense of well-being. It can be implied that the sense of calm the participants from relaxation group perceived at this stage developed from the increase in 'awareness and acceptance' they reported in the post-intervention interview. Since the participants were more aware and able to accept situations that arose, their emotions were not swayed by such situations as much as prior to the intervention. According to these sub-themes, relaxation interventions can help reduce the 'emotional instability' that the participants experienced prior to the intervention. A study by Janbozorgi et al. (2009) also reported a comparable finding that relaxation training can provide emotional stability for people who have anxiety. However, the samples in Janbozorgi's study were anxiety disorder patients aged 19 to 35 years old, which differs from this present study using participants who were above 60 years old with no anxiety disorder. Although this present study cannot be directly compared to Janbozorgi's study due to the differences in the samples, the qualitative results of the relaxation group from this present study have added complementary evidence that relaxation is also able to facilitate emotional stability for generally healthy older adults. However, the relaxation did not promote other aspects of the participants' positive emotions and well-being resources such as relationship. Also, research specifically on relaxation interventions in older adults will be more appropriate to investigate all possible effects of relaxation.

In conclusion, the thematic analysis results have shown that the PPHI has superior effects to relaxation in regard to psychological well-being and happiness enhancement. Although the relaxation intervention also produced some changes in the emotional state of the participants, which might be due to the somatic reaction to deep breathing that can induce calmness (Rubenfeld, 2009), it did not apparently promote positive emotions and positive attributes that can nurture the flourishing state of an individual. The mechanism of the PPHI can be viewed as ‘positive reappraisal’, where the PPHI aided the participants in shifting their thoughts and feelings to focus on positivity. This method then became their coping strategy in daily life to regulate their emotions. The effective regulation of emotions affected their reactions and behaviour that then translated into their relationship with others. It therefore not only promotes their personal psychological state, but also their well-being according to their belief that good relationships lead to happiness. Hence, the results suggest that the PPHI can enhance positive emotions and relationship elements as predicted by the PERMA model of well-being (Seligman, 2011a), but it remains unclear whether it also affects other well-being elements, namely engagement, accomplishment, and meaning and purpose. However, if positive attributes are predictors of mental health in older adults (Chopik et al., 2015), and positive emotions are the foundation that can enhance personal resources (Fredrickson, 2001), as presented in the adapted PERMA model proposed and applied in the PPHI, the increase in positivity that the participants experienced should be able to support the individuals to gradually attain improved mental health and well-being over time. The quantitative findings that will be discussed in the next section provide complementary evidence regarding the changes in participants’ negative and positive emotional states as well as their

psychological well-being and life satisfaction that can be interpreted as their level of happiness and mental health.

## **5.2. Quantitative Findings**

As seen in Table 4.2 in the previous chapter, the participants in the three groups had similar average ages and all were of the same ethnicity. This demographic homogeneity allowed the study to compare the effects of the intervention without complications from age and cultural differences. The participants in the three groups also had similar percentages of participants who were in close relationships (i.e., in relationship, partnered, married; total for PPHI = 42.86%, relaxation = 40%, control = 42.86%). Since close relationship is one of the important factors that could affect psychological well-being and happiness level (Waldinger & Schulz, 2010), it was a potential confounding factor, which was not an issue in this study. According to the baseline data, the participants in the three groups had a similar ratio of relationship status; therefore, the results of the intervention could be compared without considering relationship status differences between groups. In addition, the majority of the participants in all groups were regularly involved in some degree of physical exercise (PPHI = 95.24%, relaxation = 100%, control = 90.48%). This factor should also be considered supportive of the intervention effects, because levels of physical activity could also bring about positive feelings and mental health (Meyer, 2012b; Paluska & Schwenk, 2000). Also, if physical exercise helped improve the participants' mental well-being during the research period, the control group would be expected to also display some degree of improvement between baseline and follow-up. However, according to the quantitative results, no differences were found for the control group in any of the measures.

The quantitative results suggest that the positive psychological hypnosis intervention (PPHI) had a significantly positive impact on older adults' psychological well-being. By the time the participants had completed the four-session intervention, the participants in the PPHI group had significantly improved scores on all measurements compared to the control group: a higher level of happiness, life satisfaction, and the affect balance of positive and negative emotions, measured by the OHQ, SWLS, and SPANE respectively, as well as a lower level of negative symptoms for depression, anxiety, and stress, measured by the DASS-21. The significant effects on all four of the measurements confirm that the PPHI can help to alleviate mild-to-moderate negative symptoms of depression, anxiety, and stress as well as enhancing older adults' mental health, as determined by happiness, life satisfaction, and the higher ratio of positive emotions. These results support the hypothesis that the PPHI is more effective in enhancing older adults' happiness and mental health compared to the other two conditions (relaxation and control).

**5.2.1. Results of the PPHI.** The PPHI group showed improvement on four measures. Before the intervention, the average pre-treatment scores on the OHQ of the PPHI group revealed that the participants had an average level of happiness and slightly below average life satisfaction. Then, after the treatment, the post-treatment adjusted means of both scores rose to above average. In addition, the participants in the PPHI group's affect balance (i.e., SPANE-B) doubled between pre- and post-treatment, which means the participants had a higher positive to negative emotion ratio in their daily life (Diener et al., 2010).

In addition, the analysis of covariates revealed that some aspects of the participants' pre-assessment had an influence on the post-assessment. In particular, pre-happiness scores influenced post-happiness scores (i.e., OHQ); pre-life

satisfaction scores influenced post-life satisfaction scores (i.e., SWLS); pre-affect balance influenced post-affect balance (i.e., SPANE-B) and life satisfaction scores (i.e., SWLS). These results have added an additional understanding of the intervention mechanism in that a person's baseline will have an impact on the outcomes. Interestingly, while other pre-scores affect the equivalent post-scores, the affect balance scores (i.e., SPANE) affected not only the equivalent post-scores, but also the life satisfaction scores. This could indicate that the balance of emotions in daily life before the intervention might influence how satisfied a person is with their life after the intervention. This correlation suggests that positive emotions might be able to change people's perspective on their lives, because it is unlikely that major factors in the participants' life would have changed over the time of the intervention period. This is in accordance with Fredrickson's broaden-and-build theory, which determines that positive emotions or the positive ratio of positive and negative emotions can lead to the enhancement of personal resources that contribute to higher subjective well-being, and therefore could increase life satisfaction (Fredrickson, 2001). From this perspective of emotional balance, a possible interpretation is that the higher balance of emotions the participants had prior to the intervention, the greater their ability to utilise the resources from the intervention to enhance their life satisfaction.

**5.2.2. Relationship of the PPHI results to previous research.** The results of PPHI from this study are mostly consistent with the outcomes of existing studies that applied positive psychology integrated with hypnosis reviewed earlier in the literature review section. One is Burns's case study (Burns, 2009) that applied positive psychology integrated with hypnosis to treat a person with chronic pain who also had depression. In Burns's case study, the patient had an impressively higher level of happiness, positive emotions, and life satisfaction at post-intervention assessment,

although depression and stress symptoms were not significantly reduced. The present study has supported the proposition in Burns's case study that positive psychology integrated with hypnosis can help enhance psychological well-being. However, one aspect that contradicts Burns's case study is that the experimental intervention (i.e., PPHI) in this study also helped significantly reduce depression, anxiety, and stress symptoms. The reason for this divergent outcome might be that the patient in Burns's case study had depression prior to the intervention, but the participants in this study did not have depression at baseline. These differences in baseline negative symptoms of the participants might influence the outcomes of the intervention. However, the quantitative findings considering the covariates in the present study do not support this hypothesis, since the pre-treatment DASS-21 scores that measured depression, anxiety, and stress level did not significantly influence the post-treatment scores of any measurements. This divergence leaves uncertainty with regard to whether the difference in negative symptoms at baseline can predict improvement in psychological well-being after receiving the intervention. Hence, future research studies to understand more about the underlying mechanism of the intervention are suggested. Another study by Guse and colleagues (2006) developed a positive psychology hypnotherapeutic programme for postnatal psychological well-being. In Guse's study, the first-time mothers had significantly improved psychological well-being, life satisfaction, and negative and positive affect balance at post-intervention assessment. The quantitative findings from the present study therefore support the existing evidence that integrating positive psychology with hypnosis can help improve an individual's mental health, as determined by improved scores on psychological measurements. However, in Guse's study, 'happiness' was not a goal of the treatment, therefore, it was not measured. The two directly comparable

outcomes of life satisfaction and negative and positive affect balance were increased by the intervention in both Guse's study and this study. Even so, this study does not provide direct supportive evidence for the abovementioned studies, as it is focused on a different age group in a different context (i.e., general older adults), it has, nonetheless, added more layers of evidence, particularly for the application of positive psychology hypnosis in an older age group.

These layers of evidence that indicate positive outcomes of the PPHI have provided another option for psychological interventions for older adults. The evidence also highlights the need to research preventative or positive health interventions, which is currently quite scant. The integration of positive psychology and hypnosis can be adapted for various treatment goals and used in different contexts, as the previous studies and this one have shown positive results. The application of integrated approaches, particularly positive psychology and hypnosis, is therefore worthwhile for future research, especially with the purpose of developing effective interventions and gathering additional layers of evidence for different treatment goals and different age groups.

**5.2.3. Results of relaxation.** The participants in the relaxation group also had a higher level of post-intervention scores in all measurements compared to the control group; however, there was no significant difference between the three positive measurements (e.g., OHQ, SWLS, SPANE), as was the case with the PPHI. The only measurement on which the relaxation group showed a significant change in post-intervention scores compared to the control group was the DASS-21, which measured symptoms of depression, anxiety, and stress. Hence, the relaxation intervention is effective in reducing negative emotional symptoms, but not significantly effective in improving other positive aspects. These effects of relaxation, which involved



awareness of deep breathing and progressive muscle relaxation exercises, support the theory of the interoceptive connection of emotional state and breath. This theory views the body and the brain as interacting with one another, and thus the somatic reaction of deep breathing can alter an individual's emotional state (Paulus, 2013). The same theory regarding the mind and body connection is also applied in mindfulness practice for stress and anxiety reduction, in which a person focuses on his or her breathing and the present moment, and such deep breathing and awareness alters the emotional experience (Kabat-Zinn, 2008). The results from this study therefore have added evidence of the benefits of relaxation intervention to such theory and practice. In addition, since the relaxation process is comparable to the 'hypnotic induction' used in the PPHI, it can be construed that the hypnotic induction can help reduce negative feelings related to stress, anxiety, and depression. However, to obtain the treatment goals (e.g., greater mental health and happiness), relaxation alone is not adequate. The differences in the results suggest that the positive hypnotic suggestions in the PPHI play an important role in supporting a person to obtain positive effects.

**5.2.4. Relationship of relaxation results to previous research.** The results of relaxation effects were in accordance with current evidence. Previous studies have achieved positive results from using relaxation techniques such as breathing exercises and progressive relaxation in alleviating anxiety in different contexts and age groups (Klainin-Yobas, Oo, Suzanne Yew, & Lau, 2015; Reiss, Warnecke, Tolgou, Krampen, Luka-Krausgrill, & Rohrman, 2017; Scogin, Rickard, Keith, Wilson, & Mcelreath, 1992). A systematic review of empirical evidence of the effects of relaxation on depression (Klainin-Yobas et al., 2015) has also shown that relaxation, in particular progressive muscle relaxation, had positive effects on depression. Previous studies regarding the use of relaxation techniques to reduce stress have also

shown comparable outcomes, with participants reporting reduced stress levels and improved ability to recover from stress after the intervention compared to a control group (Kaspereen, 2012; Rausch, Gramling, & Auerbach, 2006). Although the relaxation intervention in this study was not the experimental treatment, the results relating to the effects of relaxation intervention provide additional evidence for the proposition that a relaxation intervention can reduce depression, anxiety, and stress among older adults. However, a study that employs relaxation as an experimental treatment compared with a control group will be more appropriate to confirm this proposition.

In conclusion, for the quantitative findings, the results supported the hypothesis that the PPHI has higher effectiveness than the relaxation and control group in enhancing older adults' happiness and mental well-being. These results provide statistical evidence of the effectiveness of this novel intervention and support existing studies' propositions of integrated positive psychology and hypnosis.

### **5.3. Triangulation of Qualitative and Quantitative Findings**

This section explores the juxtaposition between the themes from qualitative analysis and the quantitative results in terms of pre- and post-intervention assessment of the two treatment groups (e.g., PPHI and relaxation). This will reveal if the two findings are convergent or divergent in order to validate and complement each other.

**5.3.1. Pre-intervention assessment.** The themes from pre-treatment interviews have shown that the participants in all groups were 'fairly happy and healthy' persons, an appropriate target population for this study. Compared to the quantitative results, for the OHQ, the pre-treatment means (PPHI:  $M = 4.12$ , Relaxation:  $M = 3.92$ ) showed that the participants were "not particularly happy or unhappy" (Hills & Argyle, 2002). For the DASS-21, which measured depression,

anxiety, and stress, all domains were in the normal range for both treatment groups (depression < 9, anxiety < 7, stress < 14). Also, participants in both groups reported life satisfaction in the average range, as measured by the SWLS ( $M = 20-24$ ; (Diener, Emmons, Larsen, & Griffin, 1985b)). This indicates the convergence of the quantitative and qualitative data and confirms the reliability of the information regarding the participants' pre-assessment mental state and perception of their well-being.

In regard to the age-related distress and emotional instability that the participants reported in the pre-treatment interview, these are congruent with the baseline data (Table 4.2) regarding subjective emotional conditions. Regardless of being fairly physically and mentally healthy, approximately a third of the participants reported recent experiences of depressive feelings, loneliness, tension, and anxiety as well as difficulties concentrating, sleeping, and relaxing. In addition, pre-treatment scores on the DASS-21 were examined for the eight participants who reported such conditions in the pre-intervention interviews. Half of this group of participants had scores that exceeded an average level of depression (i.e., mild to moderate level). Of the four participants whose depression scores were at a mild to moderate level, two also had anxiety and stress scores at a mild to moderate level. This indicated that these particular participants had some emotional issues, although such conditions were not yet at a level of severity requiring clinical intervention. This convergence of quantitative and qualitative results again confirmed the validity of the findings regarding the participants' emotional state prior to the intervention.

Overall, the quantitative results have corroborated the qualitative findings regarding the participants' pre-intervention happiness and emotional state. The other themes regarding the participants' supportive attitudes and additional well-being

factors such as social support were not included in this triangulation because there was no quantitative data concerning these aspects.

**5.3.2. Post-intervention assessment.** The triangulation of post-intervention results can be examined for changes in the participants' psychological well-being by comparing themes that the participants reported regarding the effects they perceived from the PPHI and relaxation and the results of the OHQ, DASS-21, SWLS, and SPANE.

*Post-intervention assessment for the PPHI.* For the PPHI group, the themes from post-intervention and follow-up interviews show that the participants had positive changes in their daily lives, including the ability to regulate their emotions, more positive reactions and communication, and an increased sense of well-being. These effects are equivalent to the improvement in the OHQ, DASS-21, SWLS, and SPANE scores from the post-intervention assessment. As discussed earlier, the participants in the PPHI group had higher scores on all measurements at post-intervention assessment compared to pre-intervention assessment, as well as significant differences from the control group on all measurements. In particular, the lower DASS-21 scores indicate that these participants had fewer symptoms of depression, anxiety, and stress at the point of post-intervention assessment. This is congruent with the theme that they reported of the 'ability to let go of negatives' and 'feeling calmer' in their daily lives. Also, the increased SPANE-B scores support these themes, as they show that the participants had a higher balance of positive and negative emotional affect during the four weeks following the interventions. The higher scores on the OHQ revealed that the participants perceived higher subjective happiness, which is comparable to the theme 'continually perceiving the sense of well-being' that they reported later in the follow-up interview. The higher SWLS

scores cannot be directly compared to any of the themes discovered, since no obvious themes were found regarding changes in life satisfaction. However, the higher scores on life satisfaction are complementary evidence for the positive changes that the participants perceived.

*Post-intervention assessment for relaxation.* Regarding the relaxation group, the quantitative results also show that the participants had an improvement on all measurements. However, only the DASS-21 scores differed significantly in post-intervention assessment compared to the control group. This suggests that relaxation can help reduce the participants' negative symptoms, but the results for the measurements of positive aspects were not clear. Comparing these quantitative results to the themes discovered from the post-intervention and follow-up interviews, the participants in the relaxation group reported that they felt relaxed and energised and continually perceiving a sense of calm. These relaxing and calming feelings can be interpreted as lower stress and anxiety, which was also seen in the reduction of DASS-21 scores in the quantitative results. Since stress and anxiety can trigger an individual to remain continually alert in order to cope with the situation, possibly causing restlessness (Bystritsky, Khalsa, Cameron, & Schiffman, 2013; Schneiderman, Ironson, & Siegel, 2005), an individual feels more relaxed and calm when he or she has fewer stressful conditions. However, although such relaxing and calming feelings had made the participants from the relaxation group feel better in general according to their accounts, the participants did not report any other apparent positive changes. This, again, is congruent with the non-significant results of the OHQ, SWLS, and SPANE compared to the control group.

In conclusion, the triangulation of quantitative and qualitative findings presents a convergence of the two findings in both pre- and post-intervention

assessment. However, there are some limitations of the triangulation, since not every aspect of the data can be compared due to the lack of information on some particular details. For the comparable aspects, the triangulation provides the validation of the results from both methods and strongly confirms that the effects of the PPHI and relaxation in older adults in this present study are reliable. Even so, there are some limitations of the present study, which will be discussed in the next section.

#### **5.4. Limitations of the Present Study**

Firstly, it should be noted that the therapist and the researcher in this study was the same person. This was decided in order to ensure the standardisation of the interventions and the research process, since the researcher was the person who developed the intervention and is a certified hypnotherapist and mindfulness-based therapist. From a therapeutic perspective and setting, a therapist would be the only person to observe and evaluate participants on their improvement. However, in a research setting, this arrangement could create a research bias and might hinder the participants from reporting their honest thoughts and feelings in the interviews. The participants might consider negative feedback as impolite when they need to directly speak to the person who gave them the intervention sessions. To prevent this, during the intervention and the interview process, the researcher always emphasised to the participants to be open and honest for both their personal welfare and the study's research process. The researcher also adhered to therapeutic ethics regarding truthful improvement of the participants and results of the therapeutic process, with the main goal being the potential benefits of the intervention to the participants. The quantitative arm has played an important role in validating the intervention results, since the participants did not need to include their names on the questionnaires and did not need to directly report their opinions to the researcher in the quantitative data

collection process. Participants completed the questionnaires in writing. Therefore, they might be more likely to report their true thoughts and feelings on those.

Secondly, the number of participants in each group for the quantitative arm was relatively small, which can affect the significance and limit generalisation of the statistical results from quantitative analysis. The sample size of this study was based on the sample size of previous studies that involved similar psychological interventions (Flammer & Bongartz, 2003), and was considered reasonable and sufficient to allow for meaningful data analysis of the intervention results. However, it is acknowledged that the number is relatively small for statistical analysis. A larger sample size normally gives a greater potential to detect significant differences (Field, 2013), but in the case of this study, the focus is the detection of the changes between pre- and post-intervention and the difference between treatment groups. A larger sample size can also reduce margin of error, which means the group of samples in the research is more likely to be representative of the target population (Field, 2013). These quantitative limitations were acknowledged since the protocol of this study was designed and proposed. However, this sample size was considered the most appropriate because the standard of the interventions was prioritized, which had to be delivered individually by the same therapist, for a total of four sessions for each participant. It would have created time constraints within the limited timeframe of this research and a heavy caseload for the therapist if the number of participants were too large. Hence, the maintenance of equal intervention quality for every participant might have been diminished. Given this limitation, the quantitative arm in this study was therefore considered to be complementary statistical evidence to the qualitative study. Quantitative studies with larger groups or repetitive studies will provide confirmation and validity of the statistical results of the intervention.

Thirdly, there was the limitation of the demographics of the sample. All of the participants were from the relatively homogenous Bath, UK, population, and they were all Caucasian British. This might limit generalisability of the results to people who have different attributes. Also, the study did not include any older adults who had comorbid conditions, because the intervention was designed for generally healthy individuals. Therefore, the findings cannot be generalised to all older adults.

Fourthly, all measurements used for the quantitative study were based on self-report. Although self-report questionnaires are typically used in many psychological studies, their limitations should still be considered. Disadvantages of self-report scales may include self-deception, self-presentation, and memory, whereas each individual might have some bias that could create inaccuracy (Robins, Fraley, & Krueger, 2009). Therefore, the veracity of the reported scores could not be proven, although the participants were encouraged to be forthright. In addition, according to the researcher's observation in this study, there were some questionnaire items that the participants interpreted in different ways, depending on their personal attitudes and perspectives. Since the items were not interpreted in exactly the same way by each participant, it was difficult to determine if such variation in interpretation affected the overall results. Furthermore, it was not possible to ascertain if each person perceived the degrees of frequency and intensity (e.g., scale from 1 to 10) at precisely the same levels. As this study was investigating the participants' subjective views of their well-being and happiness, self-report questionnaires were selected in order to see subjective changes. Although self-report questionnaires were adequate for this purpose, it might limit the credibility and generalisability of the results. Repetitive studies regarding the efficiency of the intervention in identical and different settings are still needed to provide validation of these results.



Fifthly, the study could not fully determine if the presented outcomes of the intervention would be temporary or permanent. While the participants reported ongoing effects in the follow-up interviews, the interviews took place between four to six weeks after the participants completed the intervention, and the quantitative arm examined only the changes between pre- and post-intervention, without a follow-up. A longitudinal study regarding the effects of the intervention, in which measurements could be taken periodically (e.g., at one, three, six months afterwards) would provide stronger evidence of the intervention's efficiency, stability, and durability.

Lastly, this study focused purely on the presence of changes in psychological well-being and mental health, which was the purpose of the research. However, some participants reported in the interviews that they also felt better physically (e.g., improved sleep, reduced pain). Even though it was not the main purpose of the study and the designed intervention, it was quite interesting to acquire additional data on general somatic symptoms to see if there are also any perceived changes in the participants' physical health, because physical health is one of the important factors affecting general well-being in older adults (Engel, 2012). A stronger mind or better mental health might create higher resilience and tolerance to negativity, either mentally or physically. This will be an interesting facet to add in future studies.

### **5.5. Future Directions**

According to the limitations and issues encountered during the study, and in order to further develop the integrated positive psychology and hypnosis intervention, there are six recommendations for future studies.

First, to investigate the phenomenon of the intervention effects in more depth, future researchers may consider using a daily journal (e.g., voice recording or diary writing) as one of the data collection methods. This method may provide more

detailed information than the interviews conducted in this present study. For the interviews, the participants needed to reflect upon and recall their feelings and experiences. Hence, some participants could not answer the questions in much detail. This is especially important when studying older adults, as their short-term memory may fade more quickly over time compared to younger age groups. A structured daily journal will enable the participants to review and report their thoughts and feelings promptly. Therefore, they will be able to describe such information more thoroughly. In order to see changes in the participants' psychological well-being pre- and post-intervention, a researcher may ask participants to complete a daily journal for a certain period of time prior to and during the intervention process, then for another period of time after the intervention process. Such data can then be analysed to see a sequence of changes in the participants' daily encounters and psychological conditions before, during, and after receiving the intervention.

Second, to investigate the influence of an individual characteristic that might affect the hypnosis intervention in particular, future researchers might add a hypnotic susceptibility scale such as the Harvard Group Scale of Hypnotic Susceptibility or the Stanford Hypnotic Susceptibility Scales (Angelini, Kumar, & Chandler, 1999; Weitzenhoffer & Hilgard, 1962) as another pre-intervention measurement. These measurements provide procedures to assess how responsive an individual is to hypnotic suggestions, which might influence the outcomes of a hypnotic intervention. Including this process prior to the intervention will enable future research to understand the phenomenon of the intervention in more detail. In addition, future researchers may group participants according to the range of their hypnotic susceptibility scores, or analyse this factor as a covariate in quantitative analysis. This would help determine if and how much an individual's hypnotic susceptibility level

affects the intervention results. This information will be useful for further adjustment and development of the intervention process; for example, the therapist might provide pre-intervention sessions to increase an individual's hypnotic susceptibility for those who have low hypnotic susceptibility.

Third, since the participants in this study were older adults who were fairly healthy and had healthy lifestyles, future researchers may prioritise different characteristics such as less physically and socially active older adults, or older adults with some physical limitations or mental decline. The different characteristics of the participants will add more evidence regarding the feasibility of the intervention implementation among older adults. Also, future researchers should be aware that there are challenges related to this population, which might affect the interpretation of the results. For instance, there are physical conditions that may appear in older age, as well as side effects of medications that participants might be taking. These factors may cause symptoms that can be misinterpreted as stress and anxiety, including rapid breathing, trembling, dryness of mouth, and increased heart rate. If future researchers choose a less healthy group of older adults as research samples, these factors will be more likely to appear. In this study, there were a few cases in which the participants informed the researcher regarding the side effects of the medications they were taking. It is therefore highly recommended for future researchers to collect information regarding existing physical symptoms of the participants, their current prescriptions and possible side effects, taking them into account and considering such factors thoroughly whilst analysing the intervention effects.

Fourth, future researchers may develop further understanding and more evidence of the PPHI's effectiveness by conducting research in different contexts, particularly in terms of the intervention delivery for the same target population (i.e.,

older adults). For example, one could deliver the intervention remotely over an online application, deliver the intervention by audio recordings that the participants can practise at home in their own time, and deliver the intervention in a small group. Future studies for different delivery methods will provide assurance of the appropriateness and effectiveness of the PPHI in different contexts. However, for some contexts such as remote delivery or group delivery, future researchers and therapists need to be aware that, in such circumstances, a therapist might not be able to take care of the participants promptly or individually in the case of any abreaction caused by the intervention. The policy regarding the participants' welfare in each context should be considered thoroughly and needs to be paramount.

Fifth, a quantitative study with a larger number of participants with the same context and the same target population will provide more statistical evidence regarding the efficiency of the intervention and will allow generalisation of the results for the particular target population. The psychological measurements used in future studies can be identical, equivalent, or additional to those in this study. Identical and equivalent measurements that measure the same domains of well-being, including happiness, negative psychological symptoms, life satisfaction, and positive-negative emotional balance will directly confirm or contrast the evidence in the present study. Additional or different measurements will enable future studies to determine if the interventions provide other well-being related effects or any other effects that might enhance an individual's mental health and well-being.

Last, a longitudinal study, or a longer timeframe for the study that monitors effectiveness and durability of the intervention implementation and effects periodically over a longer period of time will provide more evidence regarding the sustainability of the intervention effects and the subjective experience of the

intervention implementation in daily life. This can be done for both qualitative and quantitative methods using techniques such as interviewing the participants and asking the participants to complete questionnaires pre- and post-intervention, then periodically after completing the intervention process. The periodic data collection can be at intervals such as six, twelve, twenty-four weeks, and a year after the post-intervention assessment. This can help determine if there are any on-going changes, development, or maintenance, as well as whether the participants continue to practise the intervention. Evidence from such a study will provide a better understanding of the intervention's mechanism and reveal its long-term efficiency.

### **5.6. Generalisability**

The interventions were implemented for generally healthy older adults, who had no severe physical or mental illness but might have reported feeling depressed, lonely, stressed, or anxious. The results indicate that this group of older adults would benefit from PPHI and relaxation. PPHI could enhance their mental health, including the sense of well-being and happiness as well as better reactions and communication towards situation and people. Mindfulness-based relaxation could reduce negative emotions as well as increase acceptance and awareness. From this perspective of the outcomes, both interventions are effective as a preventative or early intervention for mental health, although their efficiency might depend on each individual's goals: the 'acceptance' of what they have versus the 'enhancement' of what they possess. In terms of rolling this intervention out at a larger scale, it can be delivered to general older adults through local communities such as the NHS clinics and AgeUK. Older adults aged 60 and over will mostly benefit from the intervention because the intervention could support them to cope with ageing-related emotional instability, help them to utilise existing resources to enhance their well-being during a life

transition period. Although this will require local health practitioners such as mental health therapists and trainee clinical psychologists to be trained in the process, requiring a small investment at the beginning, it will be beneficial in the long run. The training may consist of the principle of hypnosis and mindfulness-based relaxation approaches, the process of the intervention, delivery methods, and adjustment of sessions for different circumstances such as group or individual delivery and reactions of the service users. Once the practitioners have learnt the process, they will be able to permanently deliver the interventions and train others. The interventions may be conducted in a small group instead of individually to reduce time and cost. However, it should be noted that, each individual might have different levels of improvement and reactions towards an intervention. Hence, it could be complicated for the practitioners to take care of each person's needs and preferences in a group session. A small group of people of similar age and background might minimise complications. Nevertheless, the practitioners will need to be aware of each individual's understanding of the intervention process, his or her improvement as well as abreaction that may occur and provide appropriate care. Once the service users have attended the intervention sessions and learnt about the intervention and its process, they will be able to practise and apply it by themselves at home without any equipment. To support their home practice, CDs of guided PPHI or relaxation and booklets with instructions could be given. Continual practice will bring about durability of the intervention effects. Despite that, as discussed, the participants in the study already showed tendencies that were conducive to their well-being such as healthy lifestyles and positive attitudes. The role of the intervention, whether the PPHI or relaxation, was as a complementary resource and strategy that, together with other supportive factors, would enhance their positivity and in turn increase their

happiness and lead to a flourishing state or good mental health. The intervention is particularly useful since it can help enhancing and maintaining mental health of older adults to the best possible, which include good emotional coping skills, and resilience. These will assist in coping with and adjusting to changes that are often unavoidable in later life.

### **5.7. Conclusion**

This study investigated the positive psychology hypnosis intervention (PPHI) with the objective of facilitating well-being and happiness in older adults. This intervention was proposed because there is a need for an early or preventative psychological intervention to maintain and enhance older adults' mental health. Since older adults are globally becoming a majority group of the world population, a prevention of mental health decline in this age group is significant. Positive mental health will help them to establish a healthy lifestyle, continue to take care of themselves, and contribute to their community. Such an active lifestyle would contribute to the active ageing scheme promoted by global organisations.

The PPHI treatment model was designed by applying positive psychology's well-being model and theory, mainly Seligman's PERMA model of well-being and Fredrikson's broaden-and-build theory, as well as by incorporating positive psychological exercises. Hypnosis was used to deliver the intervention. The integration of positive psychology and hypnosis was intended to enhance the effects of each for greater results. The study examined the effectiveness of the PPHI via a randomised controlled trial using a mixed-methods design in which the PPHI was compared to the relaxation intervention and the control group. Relaxation was selected as a comparative intervention because it is comparable to hypnotic induction without the positive suggestions. Therefore, it would allow a comparison to see if the

positive suggestions in the PPHI would bring about superior results. It was hypothesised that the PPHI would be more effective than relaxation and would present significant effects compared to the control group. The data was collected through questionnaires before and after the 4-session intervention process, along with three interviews (pre- and post-intervention, and follow-up). The statistical analysis employed a MANCOVA test, and interview data was analysed by thematic analysis.

The results show that the PPHI was effective for enhancing older adults' psychological well-being and that the results of the PPHI were superior to relaxation. In particular, the PPHI appeared to significantly decrease negative psychological symptoms, namely depression, anxiety, and stress, whilst at the same time increasing happiness, life satisfaction, and positive-negative affect balance. On the other hand, relaxation aided in decreasing negative psychological symptoms and promoting awareness and acceptance according to the participants' subjective experiences. The participants enjoyed the intervention sessions and experienced positive effects from the intervention. They continued to implement the PPHI and relaxation in their daily lives, and they perceived the results of the interventions to be enduring, which brought about a sense of well-being. The triangulation of qualitative and quantitative results shows that the results are convergent for those results that can be compared. Hence, the results from both methods complement and validate each other.

Based upon the positive results presented in this study, these findings have provided evidence of the effects of the two approaches; this improved understanding indicates that both can be good options for psychological intervention with older adults. Therapists can apply them according to the treatment goals in each circumstance, in addition to other supportive well-being factors from an individual's daily life. The PPHI can be another alternative for an early or preventative



intervention for older adults, particularly for enhancing happiness, well-being, and mental health. Further research into the PPHI or the development of similar integrations of positive psychology and hypnosis approaches will be worthwhile to improve understanding of the intervention and provide evidence of its efficiency in the positive health field.

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## Appendices

### Appendix A – Participant information sheet

#### Participant Information Sheet

You are being invited to take part in a research study: *Happiness and Enhancement: Positive psychology hypnosis for better mental health and well-being in older adults*. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully and feel free to ask questions if there is anything that is not clear, or if you would like further information.

#### **Purpose of the Study**

Previous studies have pointed to the need of preventative or early intervention for the ageing population, because it is indicated that major mental problems among older adults are depression and anxiety. Hence, the study would like to evaluate and gain an in-depth understanding of older people's experiences, perceptions, and feelings regarding the proposed different interventions for mental health enhancement. Greater understanding about and evidence of a novel intervention will bring about an advancement of mental healthcare, particularly in older adults where there are many risk factors related to physical and mental deterioration.

#### **Why have I been invited?**

You have been invited to participate because you are 60 years old and over, and do not suffer from a severe mental illness.

#### **Do I have to take part?**

Your participation will be appreciated, but it is entirely voluntary. No penalty or loss will be involved for refusal or withdrawal. It is completely up to you to decide whether or not to take part. If you decide to take part, you will be given this information sheet to keep and will be asked to sign a consent form.

#### **What will happen if I start but then do not want to carry on with the study?**

You are able to withdraw from the study at any time without having to justify the decision. If you decide to withdraw from the study, you can inform whether you allow

the study to use your information obtained up to that point. If you do not, all of your given information will be destroyed and no further contact will be made.

### **What will happen to me if I take part?**

You will be asked to complete a participant information and health history form and a simple cognitive functioning test. If you are eligible for the study, you will be asked to complete pre-treatment questionnaires, which can be done on the same day, or within 2 weeks after the day you have agreed to take part.

Then, you will be randomly assigned to either of these three treatment groups: 1) Positive Psychology Hypnosis Intervention (PPHI), 2) Relaxation, or 3) Control. Group one and two will involve having four weekly therapeutic sessions, conducted by a qualified therapist. Each session will last for approximately 45 minutes, where the therapist will provide therapeutic treatment according to the group you are in. After the 4-week therapeutic process is finished, you will be asked to complete the questionnaires again for post-treatment assessment. If you are in the control group, you will not be involved in the four weekly therapeutic sessions, but you will be asked to complete a set of questionnaires once you have agreed to take part, and again 4 weeks after the first measurement.

In addition, if you are in either group one or two (PPHI or Relaxation), you are also invited to take part in the second part of the study, which will involve three interviews: 1) before the treatment process 2) after the treatment process, and 3) follow-up interview. The first interview will be conducted on the same day as the questionnaires completion, or on the same day as the first treatment session. The second interview will be conducted on the same day of the last treatment session, or within one week afterwards. The follow-up interview will be conducted 4 weeks after the last treatment session. The dates and times of the interviews will be according to your convenience. You will be asked about your experience of the treatment you received, your perceived effects of the treatment, and your additional comments. Further information that you will provide in the interviews will help us to understand more about your, experience, perception, and changes during and after the treatment. It is entirely up to you whether or not you would like to also take part in the interviews.

For your convenience, all the sessions will be held at a recruitment place that you belong to, where a standardised therapy room will be set. If there is any case that a room cannot be booked at the recruitment places, the sessions will be held at St John's Hospital 4-5 Chapel Court, Bath, or an equivalent standardised therapy room in Bath, UK.

### **What are the possible disadvantages, risks or side effects of taking part?**

Some of the questionnaires may cover issues that may be sensitive to you, such as asking about your feelings and emotions. These questions are chosen to help us understand if the treatment is effective and how it can support people to change their emotional state. You can stop at any stage of the questionnaire or interview if you feel uncomfortable and you can refuse to answer any questions.

### **What are the possible benefits of taking part?**

The treatment in this study is designed for and expected to enhance well-being. But we cannot promise that it will help you in any way. You may find that participating is interesting and the information we get from you will help to increase the understanding and reinforce the evidence of positive and early intervention for mental health.

### **Will I be compensated for my time?**

You may receive reimbursement for your time for £10 when you have completed all the study process. You will receive an extra £5, if you also take part in the interviews.

### **Will my taking part in the study be kept confidential?**

All information about you that is collected during the course of the study will be kept confidential. All electronic information will be secured using a password-protected folder. The original interview recording, original written documents, and the interview transcripts will not be made available in any form beyond the research team.

No identity of you, or your information will be disclosed in any report or publications.

### **What will happen to the results of the study?**

The research is expected to be completed by the end of May 2017. If the results are successful, the interventions will be promoted and offered to more people to improve their well-being. The findings of the study will be published in a peer-reviewed journal and will be submitted for Professional Doctorate in Health degree at University of Bath. All data will be in anonymous form, it will be ensured that no individual will be identifiable from the published results.

### **Who has reviewed the study?**

This research has been reviewed by the Department for Health and has been approved by Research Ethics Approval Committee for Health, University of Bath.

### **What if there is a problem?**

If you have a concern about any aspect of this study, you can speak with the researcher, Chnanis Kongsuwan in the first contact, or the Project Supervisor, Dr Omar Yousaf, who will do their best to answer your questions. If you remain unhappy and wish to complain formally, you can do this through the Director of Studies for the Professional Doctorate in Health programme, Dr David Wainwright. All contact details are provided below.

### **Contact Details**

If you have any questions relating to this research, or concerns about participation, please contact:

#### *Researcher*

Chnanis Kongsuwan

Email: [c.kongsuwan@bath.ac.uk](mailto:c.kongsuwan@bath.ac.uk)

Tel: [REDACTED]

#### *Lead Project Supervisor*

Dr Omar Yousaf

Email: [o.yousaf@bath.ac.uk](mailto:o.yousaf@bath.ac.uk)

Tel: +44 (0) 1225 38 4647

#### *Director of Studies*

Dr David Wainwright

Email: [d.wainwright@bath.ac.uk](mailto:d.wainwright@bath.ac.uk)

Tel: +44 (0) 1225 38 5477

## Appendix B – Participant consent form

### Participant Consent Form

**Title of Study: Happiness and Enhancement: Positive psychology hypnosis for better mental health and well-being in older adults**

**Name of Researcher: Chnanis Kongsuwan**

1. I confirm that I have been given the information sheet about the above research study. I have read and understand the information given and have received enough information about this study.
2. I have had an opportunity to ask questions and have received satisfactory answers to all my questions.
3. I understand that my participation in this study is voluntary and that I am free to withdraw from this study at any time without giving any reason.
4. I understand that my information and responses will be kept confidential. I give permission only for members of the research team to have access to my information and responses. I understand that my name and identical information will not be identified or identifiable in any report or publications that result from the research.
5. I understand that my research data gathered in this study may be stored anonymously and securely, and may be used in future research in anonymous form.
6. I agree to volunteer as a research participant for this study.

Name of participant ( <i>in block letters</i> )	
Signature of participant	Date
Signature of researcher	Date
Researcher's contact details (including telephone number and e-mail address): Chnanis Kongsuwan Phone: <span style="background-color: black; color: black;">XXXXXXXXXX</span> E-mail: c.kongsuwan@bath.ac.uk	

## Appendix C – Six Item Cognitive Impairment Test

(6CIT; Kingshill Version 2000®)

### Six Item Cognitive Impairment Test (6CIT)

1. **What year is it?**  
 Correct – 0 points  
 Incorrect – 4 points
  
2. **What month is it?**  
 Correct – 0 points  
 Incorrect – 3 points
  
3. **Give the patient an address phrase to remember with 5 components,**  
John Brown, 42, High Street, Bedford
  
4. **About what time is it?** (within 1 hour)  
 Correct – 0 points  
 Incorrect – 3 points
  
5. **Count backwards from 20-1**  
 Correct – 0 points  
 1 error – 2 points  
 More than one error – 4 points
  
6. **Say the months of the year in reverse**  
 Correct – 0 points  
 1 error – 2 points  
 More than one error – 4 points
  
7. **Repeat address phrase**  
 Correct – 0 points                       1 error – 2 points  
 2 errors – 4 points                       3 errors – 6 points  
 4 errors – 8 points                       All wrong – 10 points

6CIT score = \_\_\_\_\_/28

\* Scores of 0-7 are considered normal and 8 or more significant.

## Appendix D – Participant Information and Health History

### Questionnaire

#### Participant Information and Health History Questionnaire

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The purpose of this questionnaire is to obtain a comprehensive understanding of your health status, life background, and experience. Your honest answer will help us to provide appropriate care for you during the study and the therapeutic sessions.

All reasonable steps will be taken to ensure that your responses will be treated as confidential, and will only be used for therapeutic and research purposes. No identity of you, or your information will be disclosed in any publications.

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

#### Personal Information

First name: \_\_\_\_\_ Last name: \_\_\_\_\_

Male  Female Age: \_\_\_\_\_ Date of Birth: \_\_\_\_\_ Ethnicity: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Marital status:

Single  In a relationship

Partnered  Married

Separated  Divorced  Widowed

Do you have any children?  Yes  No Number of children: \_\_\_\_\_

Highest level of education: \_\_\_\_\_

Current occupation: \_\_\_\_\_ Past occupation: \_\_\_\_\_

Emergency Contact

Name: \_\_\_\_\_ Relationship: \_\_\_\_\_

Phone: \_\_\_\_\_

Doctor

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

### Personal Health History

How is your physical health in general?

\_\_\_\_\_

Have you ever been hospitalised for a physical problem over the past 5 years?

Yes  No

If yes, what for? \_\_\_\_\_

Are you currently taking any prescribed medication for a physical problem?

Yes  No

Current prescribed medications: \_\_\_\_\_

\_\_\_\_\_

Have you ever been hospitalised for a mental health problem over the past 5 years?

Yes  No

If yes, what for? \_\_\_\_\_

Have you ever seen a mental health provider for any reason (i.e. psychiatrist, psychologist, counsellor)?

Yes  No

If yes, when and why? \_\_\_\_\_

Are you currently taking any prescribed medication for a mental health problem?

Yes  No

Current prescribed medications: \_\_\_\_\_

\_\_\_\_\_

Do you suffer or have you suffered from epilepsy, asthma, or breathing difficulties?

Yes  No

If yes, which one and when? \_\_\_\_\_

Do you have a cardiovascular condition?

Yes  No



If yes, what condition? \_\_\_\_\_

Do you have diabetes?

Yes  No

If yes, do you regularly take insulin? \_\_\_\_\_

**Please mark any of the following conditions or terms that currently and recently apply to you:**

<input type="checkbox"/> headaches	<input type="checkbox"/> dizziness	<input type="checkbox"/> fainting spells
<input type="checkbox"/> high blood pressure	<input type="checkbox"/> shortness of breath	<input type="checkbox"/> heart palpitations
<input type="checkbox"/> fatigue	<input type="checkbox"/> sleeping problems	<input type="checkbox"/> nightmares
<input type="checkbox"/> bowel disturbances	<input type="checkbox"/> digestive problems	<input type="checkbox"/> poor appetite
<input type="checkbox"/> feel tense	<input type="checkbox"/> feel depressed	<input type="checkbox"/> feel angry
<input type="checkbox"/> feel panic	<input type="checkbox"/> feel lonely	<input type="checkbox"/> feel anxious
<input type="checkbox"/> unable to have a good time	<input type="checkbox"/> difficulty making decisions	<input type="checkbox"/> difficulty making friends
<input type="checkbox"/> difficulty concentrating	<input type="checkbox"/> memory problems	<input type="checkbox"/> unable to relax
<input type="checkbox"/> increased alcohol use	<input type="checkbox"/> increased tobacco use	<input type="checkbox"/> suicidal thoughts

other: \_\_\_\_\_

### Health Habits and Life Style

- Exercise**
- Sedentary (No exercise)
  - Mild exercise (i.e. walk, gardening, housework)
  - Occasional vigorous exercise (less than 3 times/week for 30 min.)
  - Regular vigorous exercise (more than 3 times/week for 30 min.)

- Diet**
- No special diet       Diabetic diet
  - Vegetarian               Vegan
  - Other: \_\_\_\_\_

- Caffeine**
- None       Coffee       Tea       Cola
- How many cups/cans per day? \_\_\_\_\_

- Alcohol**      Do you drink alcohol?       Yes  No

If yes, what kind? \_\_\_\_\_

How many drinks per week? \_\_\_\_\_

**Tobacco** Do you smoke?  Yes  No  Quit

How long have you been smoking? \_\_\_\_\_

How long since you quit? \_\_\_\_\_

**Drugs** Do you currently use recreational drugs?  Yes  No

If yes, what kind? \_\_\_\_\_

**Is there anything else about you that you want us to know? Please comment.**

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## Appendix E – Oxford Happiness Questionnaire (OHQ)

### Instructions

Below are a number of statements about happiness. Please indicate how much you agree or disagree with each by entering a number in the blank after each statement, according to the following scale:

1 = strongly disagree

2 = moderately disagree

3 = slightly disagree

4 = slightly agree

5 = moderately agree

6 = strongly agree

Please read the statements carefully, some of the questions are phrased positively and others negatively. Don't take too long over individual questions; there are no "right" or "wrong" answers (and no trick questions). The first answer that comes into your head is probably the right one for you. If you find some of the questions difficult, please give the answer that is true for you in general or for most of the time.

1. I don't feel particularly pleased with the way I am. \_\_\_\_\_
2. I am intensely interested in other people. \_\_\_\_\_
3. I feel that life is very rewarding. \_\_\_\_\_
4. I have very warm feelings towards almost everyone. \_\_\_\_\_
5. I rarely wake up feeling rested. \_\_\_\_\_
6. I am not particularly optimistic about the future. \_\_\_\_\_
7. I find most things amusing. \_\_\_\_\_
8. I am always committed and involved. \_\_\_\_\_
9. Life is good. \_\_\_\_\_
10. I do not think that the world is a good place. \_\_\_\_\_
11. I laugh a lot. \_\_\_\_\_
12. I am well satisfied about everything in my life. \_\_\_\_\_
13. I don't think I look attractive. \_\_\_\_\_
14. There is a gap between what I would like to do and what I have done. \_\_\_\_\_

Please indicate how much you agree or disagree with each by entering a number in the blank after each statement, according to the following scale:

- 1 = strongly disagree
- 2 = moderately disagree
- 3 = slightly disagree
- 4 = slightly agree
- 5 = moderately agree
- 6 = strongly agree

- 15. I am very happy. \_\_\_\_\_
- 16. I find beauty in some things. \_\_\_\_\_
- 17. I always have a cheerful effect on others. \_\_\_\_\_
- 18. I can fit in (find time for) everything I want to. \_\_\_\_\_
- 19. I feel that I am not especially in control of my life. \_\_\_\_\_
- 20. I feel able to take anything on. \_\_\_\_\_
- 21. I feel fully mentally alert. \_\_\_\_\_
- 22. I often experience joy and elation. \_\_\_\_\_
- 23. I don't find it easy to make decisions. \_\_\_\_\_
- 24. I don't have a particular sense of meaning and purpose in my life. \_\_\_\_\_
- 25. I feel I have a great deal of energy. \_\_\_\_\_
- 26. I usually have a good influence on events. \_\_\_\_\_
- 27. I don't have fun with other people. \_\_\_\_\_
- 28. I don't feel particularly healthy. \_\_\_\_\_
- 29. I don't have particularly happy memories of the past. \_\_\_\_\_

### **OHQ Scoring**

Step 1. Item 1, 5, 6, 10, 13, 14, 19, 23, 24, 27, 28, 29 should be scored in reverse:

For example, if you gave yourself a “1,” cross it out and change it to a 6. Change 2 to a 5. Change 3 to a 4. Change 4 to a 3. Change 5 to a 2. Change 6 to a 1.

Step 2. Add the numbers for all 29 questions (use the converted numbers for the 12 items that are reverse scored).

Step 3. Divide by 29. So the happiness score = the total (from step 2) divided by 29.

## Appendix F – Depression, Anxiety and Stress Scale - 21 Items (DASS-21)

### Instructions

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you *over the past week*. There are no right or wrong answers. Do not spend too much time on any statement.

*The rating scale is as follows:*

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree, or a good part of time
- 3 Applied to me very much, or most of the time

1	I found it hard to wind down	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I experienced trembling (e.g., in the hands)	0	1	2	3
8	I felt that I was using a lot of nervous energy	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting agitated	0	1	2	3
12	I found it difficult to relax	0	1	2	3
13	I felt down-hearted and blue	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	I felt I was close to panic	0	1	2	3
16	I was unable to become enthusiastic about anything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3

*The rating scale is as follows:*

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree, or a good part of time

3 Applied to me very much, or most of the time

19	I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

### **DASS-21 Scoring**

Depression items: 3, 5, 10, 13, 16, 17, 21

Anxiety items: 2, 4, 7, 9, 15, 19, 20

Stress items: 1, 6, 8, 11, 12, 14, 18

Total scores of each category on the DASS-21 will need to be multiplied by 2 to calculate final score.

Recommended cut-off scores for conventional severity labels are as follows:

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	25-33
Extremely severe	28+	20+	34+



## Appendix G – Satisfaction with Life Scale (SWLS)

### Instructions

Below are five statements that you may agree or disagree with. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item.

7 = Strongly agree

6 = Agree

5 = Slightly agree

4 = Neither agree nor disagree

3 = Slightly disagree

2 = Disagree

1 = Strongly disagree

\_\_\_\_\_ In most ways, my life is close to my ideal.

\_\_\_\_\_ The conditions of my life are excellent.

\_\_\_\_\_ I am completely satisfied with my life.

\_\_\_\_\_ So far, I have gotten the most important things I want in life.

\_\_\_\_\_ If I could live my life over, I would change nothing.

\_\_\_\_\_ **TOTAL**

## Appendix H – Scale of Positive and Negative Experience (SPANE)

### Instructions

Please think about what you have been doing and experiencing during the past four weeks. Then report how much you experienced each of the following feelings, using the scale below. For each item, select a number from 1 to 5, and indicate that number on your response sheet.

1 = Very Rarely or Never

2 = Rarely

3 = Sometimes

4 = Often

5 = Very Often or Always

Positive \_\_\_\_\_

Negative \_\_\_\_\_

Good \_\_\_\_\_

Bad \_\_\_\_\_

Pleasant \_\_\_\_\_

Unpleasant \_\_\_\_\_

Happy \_\_\_\_\_

Sad \_\_\_\_\_

Afraid \_\_\_\_\_

Joyful \_\_\_\_\_

Angry \_\_\_\_\_

Contented \_\_\_\_\_

**SPANE-P (Positive feelings)** \_\_\_\_\_

**SPANE-N (Negative feelings)** \_\_\_\_\_

**SPANE-B (Affect balance: Positive - Negative feelings)** \_\_\_\_\_

\* The resultant difference score (SPANE-B) can vary from -24 (unhappiest possible) to 24 (highest affect balance possible)

## Appendix I – Hospital Anxiety and Depression Scale (HADS)

### Hospital Anxiety and Depression Scale (HADS)

Tick the box beside the reply that is closest to how you have been feeling in the past week.  
 Don't take too long over you replies: your immediate is best.

D	A		D	A	
		<b>I feel tense or 'wound up':</b>			<b>I feel as if I am slowed down:</b>
	3	Most of the time	3		Nearly all the time
	2	A lot of the time	2		Very often
	1	From time to time, occasionally	1		Sometimes
	0	Not at all	0		Not at all
		<b>I still enjoy the things I used to enjoy:</b>			<b>I get a sort of frightened feeling like 'butterflies' in the stomach:</b>
0		Definitely as much		0	Not at all
1		Not quite so much		1	Occasionally
2		Only a little		2	Quite Often
3		Hardly at all		3	Very Often
		<b>I get a sort of frightened feeling as if something awful is about to happen:</b>			<b>I have lost interest in my appearance:</b>
	3	Very definitely and quite badly	3		Definitely
	2	Yes, but not too badly	2		I don't take as much care as I should
	1	A little, but it doesn't worry me	1		I may not take quite as much care
	0	Not at all	0		I take just as much care as ever
		<b>I can laugh and see the funny side of things:</b>			<b>I feel restless as I have to be on the move:</b>
0		As much as I always could		3	Very much indeed
1		Not quite so much now		2	Quite a lot
2		Definitely not so much now		1	Not very much
3		Not at all		0	Not at all
		<b>Worrying thoughts go through my mind:</b>			<b>I look forward with enjoyment to things:</b>
	3	A great deal of the time	0		As much as I ever did
	2	A lot of the time	1		Rather less than I used to
	1	From time to time, but not too often	2		Definitely less than I used to
	0	Only occasionally	3		Hardly at all
		<b>I feel cheerful:</b>			<b>I get sudden feelings of panic:</b>
3		Not at all		3	Very often indeed
2		Not often		2	Quite often
1		Sometimes		1	Not very often
0		Most of the time		0	Not at all
		<b>I can sit at ease and feel relaxed:</b>			<b>I can enjoy a good book or radio or TV program:</b>
	0	Definitely	0		Often
	1	Usually	1		Sometimes
	2	Not Often	2		Not often
	3	Not at all	3		Very seldom

Please check you have answered all the questions

#### Scoring:

Total score: Depression (D) \_\_\_\_\_ Anxiety (A) \_\_\_\_\_

0-7 = Normal

8-10 = Borderline abnormal (borderline case)

11-21 = Abnormal (case)

## Appendix J – Pre- and post-treatment questionnaires set

### Session 1: Pre-treatment Questionnaire

- 1) Please describe briefly how have you been feeling over the past week.

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- 2) How are you feeling at this moment?

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- 3) On a 0 to 10 scale, how positive or negative (happy or unhappy) are you feeling now? Please mark only one that best describes your feeling.

- 10 Extremely happy (feeling ecstatic, joyous, fantastic!)
- 9 Very happy (feeling really good, elated!)
- 8 Pretty happy (spirits high, feeling good.)
- 7 Mildly happy (feeling fairly good and somewhat cheerful.)
- 6 Slightly happy (just a bit above neutral.)
- 5 Neutral (not particularly happy or unhappy.)
- 4 Slight unhappy (just a bit below neutral.)
- 3 Mildly unhappy (just a little low.)
- 2 Pretty unhappy (somewhat “blue”, spirits down.)
- 1 Very unhappy (depressed, spirits very low.)
- 0 Extremely unhappy (utterly depressed, completely down.)

### Session 1: Post-treatment Questionnaire

- 1) Please briefly describe your feelings and experience during today's treatment.

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- 2) How are you feeling at this moment?

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- 3) On a 0 to 10 scale, how positive or negative (happy or unhappy) are you feeling now? Please mark only one that best describes your feeling.

- 10 Extremely happy (feeling ecstatic, joyous, fantastic!)
- 9 Very happy (feeling really good, elated!)
- 8 Pretty happy (spirits high, feeling good.)
- 7 Mildly happy (feeling fairly good and somewhat cheerful.)
- 6 Slightly happy (just a bit above neutral.)
- 5 Neutral (not particularly happy or unhappy.)
- 4 Slight unhappy (just a bit below neutral.)
- 3 Mildly unhappy (just a little low.)
- 2 Pretty unhappy (somewhat "blue", spirits down.)
- 1 Very unhappy (depressed, spirits very low.)
- 0 Extremely unhappy (utterly depressed, completely down.)

## Session 2: Pre-treatment Questionnaire

- 1) Please briefly describe how you have been feeling over the past week.

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- 2) How are you feeling at this moment?

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- 3) Have you been implementing / practising techniques you have learnt from the previous session over the past week? Please briefly describe your experience e.g. How often? When do you apply or practise? How did you find it?

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- 4) On a 0 to 10 scale, how positive or negative (happy or unhappy) are you feeling now? Please mark only one that best describes your feeling.

- |                          |    |   |
|--------------------------|----|---|
| <input type="checkbox"/> | 10 | Extremely happy (feeling ecstatic, joyous, fantastic!)    |
| <input type="checkbox"/> | 9  | Very happy (feeling really good, elated!)                 |
| <input type="checkbox"/> | 8  | Pretty happy (spirits high, feeling good.)                |
| <input type="checkbox"/> | 7  | Mildly happy (feeling fairly good and somewhat cheerful.) |
| <input type="checkbox"/> | 6  | Slightly happy (just a bit above neutral.)                |
| <input type="checkbox"/> | 5  | Neutral (not particularly happy or unhappy.)              |
| <input type="checkbox"/> | 4  | Slight unhappy (just a bit below neutral.)                |
| <input type="checkbox"/> | 3  | Mildly unhappy (just a little low.)                       |
| <input type="checkbox"/> | 2  | Pretty unhappy (somewhat “blue”, spirits down.)           |
| <input type="checkbox"/> | 1  | Very unhappy (depressed, spirits very low.)               |
| <input type="checkbox"/> | 0  | Extremely unhappy (utterly depressed, completely down.)   |

## Session 2: Post-treatment Questionnaire

1) Please briefly describe your feelings and experience during today's treatment.

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2) How are you feeling at this moment?

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3) On a 0 to 10 scale, how positive or negative (happy or unhappy) are you feeling now? Please mark only one that best describes your feeling.

- 10 Extremely happy (feeling ecstatic, joyous, fantastic!)
- 9 Very happy (feeling really good, elated!)
- 8 Pretty happy (spirits high, feeling good.)
- 7 Mildly happy (feeling fairly good and somewhat cheerful.)
- 6 Slightly happy (just a bit above neutral.)
- 5 Neutral (not particularly happy or unhappy.)
- 4 Slight unhappy (just a bit below neutral.)
- 3 Mildly unhappy (just a little low.)
- 2 Pretty unhappy (somewhat "blue", spirits down.)
- 1 Very unhappy (depressed, spirits very low.)
- 0 Extremely unhappy (utterly depressed, completely down.)

### Session 3: Pre-treatment Questionnaire

- 1) Please briefly describe how you have been feeling over the past week.

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- 2) How are you feeling at this moment?

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- 3) Have you been implementing / practising techniques you have learnt from the previous session over the past week? Please briefly describe your experience e.g. How often? When do you apply or practise? How did you find it?

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- 4) On a 0 to 10 scale, how positive or negative (happy or unhappy) are you feeling now? Please mark only one that best describes your feeling.

- |                          |    |   |
|--------------------------|----|---|
| <input type="checkbox"/> | 10 | Extremely happy (feeling ecstatic, joyous, fantastic!)    |
| <input type="checkbox"/> | 9  | Very happy (feeling really good, elated!)                 |
| <input type="checkbox"/> | 8  | Pretty happy (spirits high, feeling good.)                |
| <input type="checkbox"/> | 7  | Mildly happy (feeling fairly good and somewhat cheerful.) |
| <input type="checkbox"/> | 6  | Slightly happy (just a bit above neutral.)                |
| <input type="checkbox"/> | 5  | Neutral (not particularly happy or unhappy.)              |
| <input type="checkbox"/> | 4  | Slight unhappy (just a bit below neutral.)                |
| <input type="checkbox"/> | 3  | Mildly unhappy (just a little low.)                       |
| <input type="checkbox"/> | 2  | Pretty unhappy (somewhat “blue”, spirits down.)           |
| <input type="checkbox"/> | 1  | Very unhappy (depressed, spirits very low.)               |
| <input type="checkbox"/> | 0  | Extremely unhappy (utterly depressed, completely down.)   |



### Session 3: Post-treatment Questionnaire

1) Please briefly describe your feelings and experience during today's treatment.

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2) How are you feeling at this moment?

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3) On a 0 to 10 scale, how positive or negative (happy or unhappy) are you feeling now? Please mark only one that best describes your feeling.

- 10 Extremely happy (feeling ecstatic, joyous, fantastic!)
- 9 Very happy (feeling really good, elated!)
- 8 Pretty happy (spirits high, feeling good.)
- 7 Mildly happy (feeling fairly good and somewhat cheerful.)
- 6 Slightly happy (just a bit above neutral.)
- 5 Neutral (not particularly happy or unhappy.)
- 4 Slight unhappy (just a bit below neutral.)
- 3 Mildly unhappy (just a little low.)
- 2 Pretty unhappy (somewhat "blue", spirits down.)
- 1 Very unhappy (depressed, spirits very low.)
- 0 Extremely unhappy (utterly depressed, completely down.)

### Session 4: Pre-treatment Questionnaire

- 1) Please briefly describe how you have been feeling over the past week.

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- 1) How are you feeling at this moment?

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- 2) Have you been implementing / practising techniques you have learnt from the previous session over the past week? Please briefly describe your experience e.g. How often? When do you apply or practise? How did you find it?

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- 3) On a 0 to 10 scale, how positive or negative (happy or unhappy) are you feeling now? Please mark only one that best describes your feeling.

- |                          |    |   |
|--------------------------|----|---|
| <input type="checkbox"/> | 10 | Extremely happy (feeling ecstatic, joyous, fantastic!)    |
| <input type="checkbox"/> | 9  | Very happy (feeling really good, elated!)                 |
| <input type="checkbox"/> | 8  | Pretty happy (spirits high, feeling good.)                |
| <input type="checkbox"/> | 7  | Mildly happy (feeling fairly good and somewhat cheerful.) |
| <input type="checkbox"/> | 6  | Slightly happy (just a bit above neutral.)                |
| <input type="checkbox"/> | 5  | Neutral (not particularly happy or unhappy.)              |
| <input type="checkbox"/> | 4  | Slight unhappy (just a bit below neutral.)                |
| <input type="checkbox"/> | 3  | Mildly unhappy (just a little low.)                       |
| <input type="checkbox"/> | 2  | Pretty unhappy (somewhat “blue”, spirits down.)           |
| <input type="checkbox"/> | 1  | Very unhappy (depressed, spirits very low.)               |
| <input type="checkbox"/> | 0  | Extremely unhappy (utterly depressed, completely down.)   |

### Session 4: Post-treatment Questionnaire

1) Please briefly describe your feelings and experience during today's treatment.

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2) How are you feeling at this moment?

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3) On a 0 to 10 scale, how positive or negative (happy or unhappy) are you feeling now? Please mark only one that best describes your feeling.

- 10 Extremely happy (feeling ecstatic, joyous, fantastic!)
- 9 Very happy (feeling really good, elated!)
- 8 Pretty happy (spirits high, feeling good.)
- 7 Mildly happy (feeling fairly good and somewhat cheerful.)
- 6 Slightly happy (just a bit above neutral.)
- 5 Neutral (not particularly happy or unhappy.)
- 4 Slight unhappy (just a bit below neutral.)
- 3 Mildly unhappy (just a little low.)
- 2 Pretty unhappy (somewhat "blue", spirits down.)
- 1 Very unhappy (depressed, spirits very low.)
- 0 Extremely unhappy (utterly depressed, completely down.)

4) Will you continue to practise what you have learnt from the sessions? Why?

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5) Is there anything else you would like to mention? Please comment.

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## Appendix K – Interview schedules

### Interview Schedule

#### Interview I – Pre-intervention

1. Can you tell me about your daily life (your typical day) in general?

*Prompts:* 1.1 What are your routines, what do you usually do?

1.2 Do you usually do something that makes you feel good or relaxed?

What are those?

2. How would you describe your personality and emotions in general?

*Prompts:* 2.1 Would you consider yourself as a happy person?

2.2 What are the reasons for that?

2.3 What makes (or could make) you happy?

3. What would you like to change in your life at present, if any?

4. How do you want your future life to be?

*Prompts* 4.1 Do you feel positive that you can achieve (can be) that?

5. You mentioned in Health Questionnaire that you have (if any)... [refer to conditions that the participant currently has e.g. headaches, sleeping problems, feeling anxious, feeling lonely]:

5.1 How often do you get those symptoms?

5.2 What do you think the causes are?

5.3 How do you normally take care of yourself when you have them?

(tension, feeling down)

6. Have you ever known about, practised or involved in any kind of relaxation, mindfulness meditation or hypnotherapy before?

Yes – Can you tell me about your experience?

No – What do you think about those in your perception?

### **Interview II – Post-intervention**

1. Can you tell me about your experience when you were receiving the treatment?

1.1 How were your feelings in each therapeutic session?

2. Do you feel or recognise any changes of yourself such as your emotions, feelings, and reactions to things, people, or situation in your life recently, after involving in the intervention?

Yes – What are the changes?

No – What are the reasons you think they make you do not feel any changes?

3. Besides the changes we talk about in the previous question, have you done anything differently in your daily routine?

Yes – What are the differences?

No – To question 3.1 and then question 5.

3.1 Have you been implementing what we have done in the sessions in your daily life? When and how?

4. Do you think the changes you perceived in your daily basis are the effects of the intervention, how so?

5. You mentioned that you would like to be [answer from pre-intervention interview question 4]. How are you feeling about those right now?

Do you feel positive that you can achieve (can be) that?

### **Interview III – Follow-up, 4 weeks after the intervention completed**

1. Can you tell me about your daily life in general in the past 4 weeks?

2. Have you continued practising what we did in the treatment sessions?

2.1 Can you share your experience?

(e.g. When and how, for how long?, how did you find it?)

3. Will you continue to practise this method? What are the reasons for that?

4. *[If the participant perceived some changes, as of their answers in interview II]*

You mentioned that you perceived changes in [...] in the previous interview.

Are the changes still sustained, improved, or declined?

Declined – What are the reasons you think that the changes cannot be sustained?

Sustained / Improved – Can you tell me about that?

*[If the participant did not perceive any changes, as of their answers in interview II]*

You mentioned that you did not perceive any changes after the treatment, as time has passed, do you feel any changes of yourself after our last talk?

Yes – What are the changes?

5. What do you think can be developed for a better treatment and higher effectiveness for yourself?

5.1 Could we include/exclude anything in the sessions?

6. What was your perception about hypnosis before starting this study trial? And how would you describe them currently? (For PPHI group only)

6.1 If you were to compare your perception between before and now, how would you describe it?

7. Is there anything else you would like to add about your experience of the treatment or anything you would like to mention?

## Appendix L – Experimental intervention (PPHI) outlines and scripts

### Experimental Treatment: PPHI

#### Session 1 – Decreasing negativity: *Letting go, Forgiveness & Gratitude*

##### Outline:

- 1) Introduction
  - a. Explanation of the intervention process
  - b. Correcting misconceptions (if any)
  - c. Establishing motivation (positive expectation)
- 2) Hypnosis: Letting go of stress and negative emotions
- 3) Hypnosis: Sending gratitude to situations, self and others
  - Reliving good memories in the past and thanking the supportive situations and persons (including yourself) for good things you have achieved and received
  - Ritualising gratitude habits into daily life

##### Introduction:

As I mentioned before, all the sessions we will be having are deep relaxation, integrated with positive psychological approach. The deep relaxation state is a state where your subconscious is open to positive suggestions. So, not only I hope that you will be relaxing and enjoying, but we also can utilise your mind to learn positive methods and affirmations to support you in daily basis. And as our goal is to make you feel good, if you find yourself feel uncomfortable by any reasons at any point, you can let me know right away at anytime.

Today's session will help you to release your stress and underlying negative emotions that you may or may not be aware of. It is very simple that you can just go along with what I will be saying, and you may find some changes in your body and your mind along the way and afterwards.

##### Script:

Now just make yourself **comfortable** on your chair, **settle** yourself down into a very comfortable position. **Notice** if there is any tension, if any parts of your body still feel uncomfortable, you can **adjust** your position or move yourself a little bit until you

feel most comfortable the way you are. I would like you to **keep** in that **nice** settled comfortable position, and remember that you can gently move yourself or **change** your position at **anytime** if you would like. Let your **eyes** close, and allow yourself to rest and **relax** in this moment. This moment, where it is the time for you to just **rest**, relax, and **let go**, let go of everything **today**, let go of everything in the **past**, let go of any prediction of the **future**. **Nobody** wants anything, there's **nothing** to worry about, nothing for you to do, except to **relax**. If there is any thoughts come to mind, that is just **normal**, let it **come**, and let it **go**. And remember that if there's anything uncomfortable for your body and your mind, you can let me know at anytime. Now I would like to allow yourself to just rest and relax in this moment.

Now feel your **breath** as you inhale and exhale. Breathe in **deeply** and feel the air that passes through your nostrils into your chest, **feel** your tummy rises. Breathe out **slowly** and feel the air that comes out through your nostrils as your tummy lowers. **Continue** to feel your breath, as you breathe in deeply and breathe out completely like this from now on, you will feel **more** and more relaxed by **each breath** you take.

As you are **hearing** and listening to **my voice**, just let my voice **soothe** and comfort you. My voice is **relaxing** you no matter you are listening attentively or just hearing it and let your mind **drift**. If you also hear any **other sounds** around now or later, those sounds relax you as well. **No sounds** can disturb you. **Nothing** can disturb you. All the sounds are **comforting** and relaxing, making you drift **deeper** and deeper into another state of mind, where you are just relaxed **calmly** and peacefully. With each breath that you take you go a little deeper, and a **wonderful** peacefulness is beginning to move **through** your mind and body, with each breath, each sound, each thought, and each word, you relax more and more.

Soon I will **count** from ten down to one, each lower number will make each part of your body progressively **loose**, and relaxed, like you are drifting deeper and deeper into **relaxation**. Ten; feel the sense of relaxation at the **top** of your head and let it **spread** down to your scalp, your forehead, your eyebrows, eyelids and all the muscles around your eyes. Feel the relaxing **heaviness** on your eyelids, just like you only want to let them close now. Let them **gently** close now, let both of your eyes **rest**. Nine; relax all the **facial** muscles, the muscles around your nose and your mouth, your cheeks, your chin, as well as your jaw muscles. **All** the tiny muscles on your head and your face are completely limp, loose, and relaxed. Eight; neck and shoulders are **loosen**, let go of all the tension now, and let this **nice** feeling move across your shoulders, then down into your back, like a **wave** of comfort slowly **moving down** to each joint of your **spine**, one by one, relaxing from top to bottom, and **relaxing** all of your **back muscles**, the muscles that go down to the tip of your spine, and the supporting muscles that go across. Seven; as your back and your shoulders are relaxed, **allow** this relaxed feeling to move down into your upper arms, down into your elbows, forearms, your wrists and hands, and right out through your fingertips, they are all limp, loose, and relaxed. Six; your breathing is becoming **regular** and



relaxed, so your chest, your lungs, your stomach, and all the organs feel so **comfortable**, just like your breathing, your body, and your mind, they are all now **synchronised**, working wonderfully in harmony. Five; think now about your **lower body**, as those muscles begin to relax, let the feeling of comfort move down through your lower body, through your hips, your thighs, knees, calves, shins, ankles, your feet and to every toe. Allow all those muscles to become limp, loose, and **relaxed now**. Four; let the waves of **peace** and comfort move through you now, from the top of your head to the tips of your toes, all over your **body**, in **harmony** with your **mind**. All is wonderfully relaxed.

Soon I will count from three down to one, and as the **lowest number**'s reached, you will **drift** down instantly deeper into a **powerful** state of mind, a state where you are **free**, free from conflict, free from all stress and strain, a state where you have the **ability** to control your habits, your memories, and your emotions, a state where your mind is **wide-opened**. Three – drifting and **floating**. Two – relaxing **deeper** than ever before. One – shift into the **profoundest** relaxed state, a **powerful** state of mind.

Perhaps now you can go back in **time**, to a time in the **past**. I would like you to search for the **photo albums** of your mind, the photo albums of your **life**. Perhaps you can see that there are **many** albums and a lot of photos you have collected. Take a look at those photos; perhaps you can see many **memories**, pictures from you past, **pictures** of yourself when you're very young, pictures of your **love** ones and people that you have known in your **life**, pictures of many situations and events that **happened** in the past.

And if you see, you may see, any **dark** dusty albums, any dark dusty photos, the photos of **discomfort**, where there are the things in your life that you didn't like, that you don't like, perhaps, your problems, disappointments, regrets, or any **negative** feelings and emotions occurred that have been **kept** inside, no matter how recent or long time ago, it's a good time to **get rid** of those now. You **can** get rid of those **anytime** you want **now**. Just think of a large **rubbish** bin that you can just throw all unwanted items away and they will disappear, and now **throw away** any photos that you don't like, any pictures that represent any kind of discomforts, pictures that **represent** any **negative** feelings and emotions. Regardless of you are aware or not aware of, you can get rid of them, let them **go away** by just throw them into the rubbish bin now, **get rid** of all your issues, all the things and feelings that are unsupportive to you, the ones you **really** want to get rid of, just see yourself throw them into the rubbish bin. If you have discomfort of some kind, no matter what they are, no matter you **know** or don't know, throw those away too, just get rid of them, and as we go on, if you think of any other discomforts, or any other unwanted things, just throw those away, and then you will be **free** of them, because you really don't need them anymore, not anymore, let them all **disappear**, throw them away and see them **disappear**.

And as you have **let go** of past hurts, as you have thrown away any negative feelings that attached to those situations, now you can just **forgive** those who have wronged you, and also forgive **yourself** for your mistakes. If there are ones those treat you wrong, you can just thank them for making you strong. Think of those **situations**, those **people**, and your past **self**, forgive them; **wish** them **well**. **Replace** all the negative feelings and discomforts with the sense of **forgiveness**. **Let go** of the gloomy past and feelings. They all have **disappeared** now. They all have gone. As you have **forgiven** them now, you feel so **light**, you feel so **bright**, because you are **healed**, and you are **free**.

I am sure there are many **other** pictures that you remember, that have **great** meaning to you. *[Smile]* Think of the good things now, the **pleasant** things in your life, think about all the **good times**, and see them in your photo albums. See good pictures from your **past**, or any good moments in your life, perhaps you even **remember** one of your favourite activity, your favourite homemade food, or any of your favourite things. See good **memories** of your life, perhaps you can see pictures of friends, family, perhaps there's one picture of a person that is close to you, that you always **enjoyed** looking at or remember very well. I believe there are many **joyful** situations and good memories that you can **recall**, no matter how long ago or just recent. **See** those **wonderful** pictures in your albums now, see them in **details**, not just the person in the picture, but the background, look at **everything**, the location, the type of clothing being worn, and think about that moment of your life, and kind of **be part** of it, be there, what was your life like, what was that **experience** like. Enjoy your pictures, **enjoy** the moments, and **appreciate** those positive feelings that you have received, no matter it is only a little or so **substantial**. Appreciate all things and **every** person that showed up in your life and filled you with joy and **happiness**. Be grateful and **thankful** for all the good things and experiences you have had. Perhaps you can think of some **words** of appreciation that you would like to **say** to those people who were or have been **supportive** to you. Then see yourself **really** say thank you to them for all the good things you have and received, **express** your gratitude to them. And finally thank to **yourself** as well for all the good **achievements** in your life, no matter how little or how large. Just be grateful, be thankful for what you had and what you have. And now you may know, that living every minute with appreciation and gratitude brings you **heart-felt** positive feelings, brings you **true** happiness, and will even bring more of what you want in your life. In **everyday**, there are always **some little things** to enjoy and to be thankful for, you can **acknowledge**, appreciate, and sincerely express your **gratitude** to everything and everyone.

Ultimately you will be totally **refreshed** and relaxed, knowing that a tremendous **change** has taken place in you, and that you feel really great, **every day in every way you're getting better and better**, let that thought go **deep** into your mind, **every day** in every way you're getting **better and better**, every day in **every way**, you're **living** with appreciation, gratitude, and **happiness**.

In a few moments time, I am going to count **up** to five, and you will **come out** from this deep relaxation state feeling relaxed and refreshed, feeling really good. If you are going about your every day life, you will do so feeling a **different** person, all the time keeping with you these positive feelings, **peace**, calmness, fulfilment and **happiness**.

One, you're **starting** to come back now. Two, isn't it **wonderful** what a few minutes of relaxation can do. Three, all the muscles in you body feeling refreshed and **alert**. Four, almost back now, body and mind work together in **harmony**, feeling really good. And five, come back to your **full** awareness now, open your eyes, feeling **wonderfully** good and refreshed.

**Post-hypnotic suggestions:**

Remember that you can bring this process to use in your daily life, whenever you would like. Now your mind and your brain have known the way, it will continue to do so in your subconscious, and you can also implement it consciously at any time. If you have anything in your mind, any negative feelings that you would like to let go, you can just think of throwing them away. You will also have better focus on good things in everyday life. Then next time you can let me know how you find it.

*Ask the participant to complete post-treatment questionnaire.*

## Experimental Treatment: PPHI

### Session 2 – Enhancing positivity: *Mindfulness, Flow & Achievement*

#### Outline:

- 1) Introduction
  - a. Review feeling, emotions, or any changes occurred during the past week
  - b. Explain session 2 overview and process
- 2) Hypnosis: Awareness & acceptance
  - a. Creating awareness of what it is, what you have, who you are
  - b. Cultivating the positive sense of acceptance and welcoming of possessed resources
- 3) Hypnosis: Positive perception
  - a. Cultivating habits of being open to and appreciate direct sensory experience in daily life (Fredrickson, 2011)
  - b. Savouring positivity in daily life
    - Savour and cherish positive moments
    - What-went-well exercise
- 4) Hypnosis: Engagement & Achievement
  - a. Creating interest and goals
  - b. Cultivating sense of ‘completeness’ in daily activities

#### Introduction:

In today’s session, we will be exploring and creating positive sense of yourself: what you have, who you are, and your inner resources. There will be simple but powerful affirmations that will enable your mind and your brain to acknowledge and utilise the resources that you have. You will be able to bring what we practise in the session to implement in your daily basis, which will increase your positive perception and engagement.

I will also turn on background music to support you to relax even more. But if you find that only my voice relaxes you more, you can also let me know anytime later.

And as our goal is to make you feel good, if you find yourself feel uncomfortable by any reasons at any point, you can let me know right away at anytime. And just as easy as last time, perhaps even easier, as you know how to do it already, just listen and go along with what I will be guiding you through.

### Script:

Now just **settle** yourself into a very comfortable position, and **listen** quietly to the sound of my voice. Just listen, **relax**, and co-operate with the sound of my voice. And perhaps you would like to **close** your eyes, close your **eyes** gently, keep them closed and relax. There's **nothing** whatsoever for you to do except to relax, just relax. As you rest there with your eyes closed, you can begin to relax **more** and more, and I will also turn on soothing relaxing music, to help you relax even more.

*[Turn on relaxation music 'Delta']*

**Breathe** in through your nose, take in a nice **deep** breath, and breathe out **slowly**, and as you breathe out, think to yourself '**let go**', just let the word 'let go' float through your **mind**, 'let go'. At first you may be **aware** of some sounds, you are hearing relaxing music in the background, you might hear the sounds of something **outside**, you might hear some other voices, noises, and after a while you may find it's very interesting to **realise** that you're not really listening to the sounds, that you're not even **listening** to me, so if you find other sounds **coming** and **going**, let them, and if thoughts come and go through your mind, let them. Let them in one side and out the other, that's all right, just **observe**, notice, and become aware of your own thoughts and everything around you, the surface beneath you, the **feelings** in your body, the **sensations** in your hands, your feet, your arms, and your legs.

You might even notice as you begin to experience the feelings of **relaxation** that are **developing** in your body, you may be wondering what part of your **body** will relax first, whether it's going to be your left **leg** or your right leg, your left **hand** or arm, or your right hand or **arm**, you may even begin to wonder when your breathing will **change**. It's so nice not to have to think, or move, or even be aware of the gradual slowing down, as your **unconscious** mind slowly opens, allowing you to **learn**, allowing you to learn how to learn, how to use your **mind** in a more **productive** and **positive** way, as you drift down now, to that **quiet** place, within you, to that place of complete **peace** and calm, with good feelings, you relax, you become aware of everything around you, and should any situation arise that requires your attention, you can open your eyes at any time, and take care of anything, so just let things happen all by themselves now, it's like a feeling of **drifting** down very slowly. Just notice your experience, be **aware** of how your **body** is feeling now, and be aware of how your **mind** is drifting now.

And maybe at times there's a feeling of sort of **floating**, just **think** of your mind as being in **two** parts, your **conscious** mind, and the **unconscious** part, that holds the power to make changes that you **desire**, just think now with your conscious mind, there's a little **bridge** between your two minds, and we will call it the bridge to the unconscious, and when you're ready, you can **cross** the bridge, and **enter** the fascinating world of your inner mind, it's as though you're floating, so **easily**, no

effort at all, just **enjoy** the feeling of **freedom** of letting go, while your unconscious mind opens to **receive** positive suggestions, positive thoughts, use the unconscious in a more **positive** way now, learning how to relax, crossing the bridge to positive thinking and positive feeling, and as you drift down into a **deeper** place, you do it so easily, deeper than ever before, at times you're listening to me, but mostly not listening at all, only **floating** down or, perhaps up, listening, or not listening.

Maybe your mind may **wander** through time, **see** yourself, think about **who** you are, perhaps you can see yourself when you were **younger**, when you were a little child, teenager, young adult, middle-age, and further on. I'm sure there're so many **experiences** in your life that you have gathered, and you may have been through so many ups and downs, and these experiences have **shaped** who you are right now. You know it is just **normal** in life, you have learnt, you have **grown**, and all the experiences you have are good **resources** that you can utilise. And you continue to learn, continue to grow, just **improve** what you can change, and learn to welcomely **accept** what you can't change. Perhaps you can see yourself have **changed** over time, and still **changing**, just like the seasons, like the world, everything **constantly** changes. It's just normal, and somehow you may find it's interesting to **observe**, to see things constantly change, little by little. Life is like a **journey**, as you welcome the changes, now you may know that true **happiness** is all about **acceptance** of life and what it brings.

In a moment I am going to **count** down from ten, all the way **down** to zero, and as I count from ten to zero I want you to **imagine** that you are taking ten **steps** down into deeper and deeper relaxation state, you are feeling safe and comfortable, and just let yourself step down **slowly**, one step at a time, and with each count that I make, and with each breath that you take, you're going to find yourself **drifting**, deeper and deeper still, just **letting go**, completely, and when I reach the count of zero you'll be more deeply relaxed than you have ever been before, letting go, completely, ten, nine, eight, seven, six, five, **drowsier** and drowsier, sleepier and sleepier, and you go deeper and deeper into **calm**, into **relaxation**, into **tranquility**, four, relaxing every nerve, every muscle in you **body**, from the tips of your toes, to the top of your head, every nerve, every muscle, **relaxing**, and resting, perfectly at ease and every time you **breathe in**, imagine yourself breathing in the breath of **relaxation**, and every time you **breathe out**, just think to yourself, **let go**, let go, and let go all those cares past, present, and future, let them all go, completely, and all resistance to deeper relaxation is just **melting** away, as you let go, three, now you can feel yourself getting **heavier**, and heavier, your body is feeling heavier and heavier, as you rest there comfortably, two, the sound of my voice makes you drowsier and drowsier, **sleepier** and sleepier, **dreamier** and dreamier and the more I speak, the deeper you are going to relax, so just let go, completely, one, almost down to a deep state now, just relaxing and resting, **perfectly** at ease, so nice to relax, so nice to rest, so just relax, and rest, deeper and deeper still, just letting go, it's a **lovely** feeling, a lovely **lazy** cozy feeling, as you let go, completely, and zero, right down **now**, into a deep relaxed state, with

every breath that you take from now on, you are going to find yourself drifting, **deeper** and deeper still, and now you're at a **beautiful** comfortable place. And as you become more comfortable, allowing your **unconscious** to help heal you, to help you change, and you can allow my voice to **help** you experience a more perfect state of **calmness**, so relax now, breathe in and out slowly and **easily**, slowly and naturally, and just continue thinking of the word '**let go**'.

As your unconscious mind is **wide-opened**. Your unconscious mind is now opened to **positive** suggestions for positive feelings and experiences, your unconscious mind **knows** how to live your life everyday **peacefully**, calmly, and **joyfully**, in the way that you want. Your unconscious mind knows how to make something **good** even **better**, how to make something **positive** even more positive. Perhaps you can now **think** about some **wonderful** things that could **happen** in your daily life, no matter how little. Maybe a **little** lovely cup of tea, a nice weather that it is just the way you **like**, a warm hug from someone, a cozy **feeling** when you are under a blanket going to sleep at night, there are **a lot** of good moments in each day, every day. So, let yourself become deeply **involved** in each moment, deeply involved in **everything** that is happening, **savour** the good moments deeply and slowly, **gather** positive feelings from each moment. Tell yourself that with each passing day, you will feel **happier**, more content, more joyous, more cheerful, because you **choose** to feel this way, because you can see and **enjoy** good little things in life. And because you feel this way, you will enjoy **each day**, and you will become more and more **healthy**, as your body functions **easily** in a tension free environment. Day by day, just let yourself **free** of tense, free of nervous, free of worried or anxious. Let yourself feel more **alive**, more energetic, enjoy every moment of **living**. Tell yourself that your mind and body are **relaxed**, calm, at ease, and you are at **peace** with yourself, with the great **nature**, the world, and the **people** around you. And perhaps everyday before you go to **sleep**, spend a little time think about a few things that **went well** for you that day, why it happened that way, and what it **means** to you.

And **each** day, as you wake up in the **morning**, you'll have an inner feeling of hope and excitement, a feeling of **energy** and underlying **joy**, eager to get up from bed and to get **going**. You feel so good, **refreshed**, awake, relaxed, with energy, an feeling of joy, and **well-being**, when you wake up in the morning, it will be so good to begin to plan for the **new day** ahead. Perhaps you can set a small **goal** for yourself each day, a goal to do something that you are **passionate** about, something that you really like, give yourself **time** to play, and allow yourself to fully **absorb** and **engage** in an activity you like doing. It might be anything, anything that you like, or even your **daily** activities like cooking, reading, listening to music, walking, or **talking** to people. Just be fully engaged, let yourself **be** in the moment and **enjoy**, let your thoughts **flow**, let your time fly. And throughout the day, you'll be **filled** with a feeling of joy of living, of **vibrant** energy, of heart-felt **positive** feelings that **fulfil** your heart. Knowing that each day as life **goes on**, you will **enjoy** it more and more as you become more and more **aware** of every **beauty**, and every mystery and **amazing**

things that surround you, as you become more and more aware of the amazing nature of the universe and **life**. And every single day, there'll be something you've done, something you've **completed**, no matter how large or little, be **proud** of yourself, be proud of every little thing that you've **accomplished** in everyday. And at night, before you close your eyes, just be **content** with what you've done and be proud of who you are.

Now all the **positive** suggestions and affirmations have been **cultivated** in your mind, soon you will wake up and will be totally **refreshed**, knowing that a very great **change** has taken place in you, and that you feel really great, **every day** in every way you're getting **better** and better, let this thought go deep into your mind, **every day** in **every way** you're getting better and better. You'll be able to have more and more calmness, **peace of mind**, awareness, and a feeling of strength, **health** and energy, that will **grow** as the days pass. You're living more and more **fully**, more and more deeply, every day, starting **now**. And as you let these thoughts enter the back of your mind, you'll feel more and more at **peace**, calm, and **at ease**, with peace of mind. Your **life** will become more and more **wonderful**, living **happily**, every day in every way.

And now in your own time and in your own way, you can **count** up to five and when you get to five, just **open** your eyes feeling wonderfully **refreshed**, beautifully relaxed, and **amazingly** good.

#### **Post-hypnotic suggestions:**

So, after today, you will be aware of any positive changes in your daily life, although they're so little. And remember that you can do this process briefly by yourself at anytime you would like, at night before you go to sleep is one of the good times, to explore and savour good feelings and let yourself fall asleep with positive emotions. Then you can let me know how you find it.

*Ask the participant to complete post-treatment questionnaire.*



## Experimental Treatment: PPHI

### Session 3 – Strengthening relationships: *Love & High-Quality Connections*

#### Outline:

- 1) Introduction
  - a. Review feeling, emotions, or any changes occurred during the past week
  - b. Explain session 3 overview and process
- 2) Hypnosis: Creating acknowledgement of positives and supports in current relationships (e.g. love ones and others in society)
- 3) Hypnosis: Motivating social interaction & connections
  - a. Creating or promoting the sense of helping others (act of kindness)
  - b. Encouraging positive reactions to others
- 4) Hypnosis: Cultivating sense of loving-kindness towards own-self, close persons (i.e. friends & family), acquaintances, and strangers

#### Introduction:

In today's session, we will explore the way to bring more positivity to relationships that will create high quality connections between you, your love ones, and people around you. We will practise together to enable your mind to learn about loving-kindness that you will be able to automatically apply this positive approach in your daily life.

Maybe you will also find that it is much easier for you to go along with the process, as you're familiar to it now. Just as before, that you can just let your mind flow with what I'm saying, let your thoughts and imagination flow, let your body and your mind rest and relaxed.

#### Script:

Now just settle yourself into a very **comfortable** position, and listen quietly to the sound of my voice. Just listen, **relax**, and let my voice soothe and calm you. And perhaps you would like to close your **eyes**, just close your eyes, keep them closed and relax.

As you're resting there with your eyes closed, you can begin to relax **more** and more. Apart of my voice, you might also hear sounds around you, and you may find it's

**interesting** to realise that these sounds are **drifting** further and further away, and they just **calm** and relax you as well. Perhaps you are not really listening to the sounds, perhaps you are not even listening to me, but somehow my voice just **flows** into your mind, and the sounds around just **soothe** and comfort you. And if you find other sounds coming and going, let them. If some **thoughts** come and go through your mind, let them. There's nothing to worry. Just make yourself **at ease** and focus your attention on the **rhythm** of your **breathing**, feel the slow, easy rising and falling of your chest and tummy, as you breathe **in and out**. With each breath, you relax more and more. Each breath you take makes you feel more and more comfortable, calm, and relaxed. Every time you breathe in, imagine yourself breathing in the breath of **relaxation**, complete comfort. Every time you breathe out, you can just **let go** of any tension in your body and your mind, by just think to yourself every time you breathe out, '**let go**'.

You are taking a little time out for yourself now, for this moment there's **nothing** that requires your attention, **nothing** whatsoever for you to do. Nothing can disturb you **anymore**. And as you continue to breathe in **naturally** and breathe out completely, it's wonderful that you are relaxed **deeper** and deeper, drifting in to a wonderful relaxation state. Your body is relaxed and comfy; your mind is calm and **peaceful**, just like when you are falling asleep, drowsier and drowsier, when you are in your deep sleep, **drifting** deeper and deeper.

And perhaps you may feel like drifting off **somewhere** now, drifting off into a profoundly resting state of body and mind. Somehow your mind and your imagination may start to **wander**, like when you are dreaming, just let your mind drift and let your imagination flow. Now I would like you to see yourself in a very **special** place, a place where you might have been, a **beautiful** spot in nature, or a **comforting** place in your own home or anywhere, your special place may also be an imaginary place, a place where is completely from your imagination, indoors or outdoors, it really **doesn't matter**. If more than one place come to mind, allow yourself to be with only one of them. It doesn't matter where; it doesn't matter if your imagination is vivid or bland. The only thing that matters, it is a place where you feel completely comfortable and **safe**.

I'd like you to **appreciate** this place with all your **senses**, see the views around, hear the sounds, smell the aromas, feel the air as it **caresses** your skin, **experience** the ground securely under you, **touch** and **feel** the whole environment in which you are in. What can you **see**? What can you **hear**? What can you **smell**? What can you **feel**? Notice the colours that surround you, how is the weather?, what is the temperature, is it warm, is it cold? Notice the **qualities** of the place that make it safe and comfortable for you, and look around you to see, what things are around. If there is anything else that would make this place **safer** and more comfortable and special for you, something you need to **bring in**, just bring in. Or perhaps there is something you need to **remove** from the place, to make you feel it's more **right** for you, just remove. It is

**absolutely** your place, your special place, where you can do whatever you would like to, where you can just relax and **let go**. As you are resting in this wonderful place, it's just like you're **dreaming** and floating, perhaps you're sleeping or not **sleeping**, it's just very **nice** to be here, it's just **soothing** and comforting.

And in this place, there is a door, a beautiful door that connects between two parts, between your two minds, your conscious mind, and the unconscious part, that holds the **power** to make the changes that you **desire**. And we will call it the door to the unconscious, and whenever you're ready, you can open the door, you will open the door and enter the **fascinating** world of your **inner mind**, it's as though you're floating, so easily, no effort at all, just **enjoy** the feeling of **freedom** of letting go, while your unconscious mind opens to **receive** positive suggestions, positive thoughts, use the unconscious in a more **positive** way now, opening that door to positive thinking and positive feelings.

As you enter the other part of your place behind the door, you see a room of **memories**, perhaps you can see memories of people that you know in your life, your family, your friends, your loved ones. There are series of pictures that **remind** you of good **moments** you have had with them, remind you of good **relationships** and the special **connections** that you have had. See the pictures closely, see who in the pictures are, and how they mean to you, no matter how near or far they are to you right now, at some points in your life, they're there for you and supported you. Perhaps you can **relive** those moments, just as they are with you right now in your special place, think of good moments, good times you spent together, good **supports** that you received and you gave. **Appreciate** those things and those moments, no matter how large or little, it could be just some little things in everyday life, like a smile and warm hugs they gave, a helping hand they offered, or kind words they said to you. All **positive** feelings and good **memories** are kept deeply within you. Also, think of people who are currently close to you now, what are some lovely good things that you have been **reciprocating** to each other? How does it make you feel having them in your life? Be **grateful** for good relationships and positive connections you have in life.

High quality connections can be built anywhere and anytime. Now imagine people who you see quite often, people that you meet occasionally, or even people or strangers who you just meet at whatever places you go. Just become **aware** of other **people**, more and more aware of the beauty of other individuals around you. Each person is different; each person has some positive **personalities**. As each day passes, you'll find yourself more aware of the feelings of others. You'll be deeply interested in the people around you, what they think and say. As you're **seeing** their needs, you will be able to **help** them, be able to help others to feel good and **brighten** up their day, and you're feeling good, relaxed, happy, and natural doing so.

No act of **kindness**, no matter how small, is ever wasted. Because kindness brings

such a great comfort to our lives, in little acts of kindness is the **magic** to transform our lives, **transform** the world around us into something **wonderful**. Just **believe** in the power of a touch, a smile, a kind word, a listening ear, and honest compliment, and give them to others, or you may offer your time or a helping hand to someone in need. Even the smallest action can make a **difference**; even the smallest act of kindness has the potential to turn a life around. You'll be able to help others to feel good, to help others enjoy life. And as you help others enjoy life, you'll be able to enjoy it yourself as well, more and more as time goes on. You'll be **happy**, having generous **connections** with people around you, living together with everyone in the wonderful world you can create. Deeply into your subconscious mind now, you can **love** deeply, **give** freely, **forgive** willingly, **laugh** easily, and **live** well in every single day, and so you'll be **sharing** your sense of happiness to others as well.

The sense of **loving-kindness** is now deeply embedded in your subconscious mind, and you will find there are a lot of things in the universe to send your loving thoughts and offer your loving act of kindness to. That's included **yourself**; your own self is the very first person for you to love and to care. As you are still resting in your special comfortable place now, **acknowledge** times in your life that may be difficult or prosperous, and you have been and are always there for yourself, your body and your mind always work together to **support** you in every situation. Feel the love that it is there inside, the love for yourself, and perhaps tell yourself '**I love you**', call your own name in your mind, and say to yourself 'I love you', it may be a bit weird in the very first time, but it doesn't matter. Just let yourself feel it, feel the love and **wishing** yourself: May I be well and **healthy**. May I be **happy** and peaceful. May I have **love** and be loved. Just **welcome** each kind thought into your heart, really listening to the message, and always keep them deeply in your mind.

And in your very special place, now I would like you to bring your awareness to **someone** who you love, perhaps your close family members, friends, or anyone who is **meaningful** to you. Invite them in; bring them into your special place as if they are in front of you right now. Think about how **special** they are to you – how much you care about them and **extend** loving kindly words and thoughts to them: May you be well and healthy. May you be happy and peaceful. May you have love and be loved. Perhaps you would like to tell them more your words of **gratitude**, or some other loving and caring words that are in your mind. Send your love to them and just imagine your loved ones being able to **accept** your loving thoughts into their **heart**. Perhaps you can see your loving, kindly thoughts being really **welcomed** by them, who **reflect** their love and kindness back to you as well.

And now let your loving kindness **extend** to someone who you might think of as being **neutral**, not somebody who you have a very strong attachment to. Perhaps someone who served you in a shop, someone you saw walking pass in town, someone who was in the same bus as you. You may even extend your love far **beyond** to those you have problems with or have some kind of negative feelings towards, as you have

forgiven them now. Just bring them into your awareness now, see them as if they are there in front of you and extend some thoughts and words of loving kindness towards them: May all be well and healthy. May all be happy and peaceful. May all love and be loved.

And perhaps in this moment, you have known already that **LOVE** is the fundamental fabric that connects all beings and energy in the universe. You will always feel it, express and extend it, sincerely from your heart to yourself and to others. You have the **power** within yourself to **change** the world, to help others, to **brighten** up everything and everyone around, to love yourself, to take care of yourself, to love others, to love the **great nature** and our world. Your subconscious has kept the positive loving kindness deeply **inside** you, and it will be very easy for you to **shine** it out. And before you're going to wake up soon, be **thankful** and say thank you to yourself that you have had **valuable** and wonderful mindful moments today; you will wake up with such a **great** feelings, and always **keep** the loving smile on your face. And in your own time, gently bring yourself back to your full **awareness** with all the positive feelings and powerful **energy** within you. Perhaps you can count up to five in your own time, open your eyes, **feeling** really great, and you will know what to do to feel **best**.

**Post-hypnotic suggestions:**

I think you will be interested to see how your mind and your heart will automatically implement the positive suggestions, and what will change for yourself and for the relationships and connections around you. Just be mindful of what's going on and let me know next time how you find it.

*Ask the participant to complete post-treatment questionnaire.*

## Experimental Treatment: PPHI

### Session 4 – Meaning of Life: Upward spiral & Flourishing

#### Outline:

- 1) Introduction
  - a. Review feeling, emotions, or any changes occurred during the past week
  - b. Explain session 4 overview and process
- 2) Hypnosis: Further acknowledging and utilising positive resources and positive habits
- 3) Hypnosis: Visualisation of positive future
  - a. Enhancing hope and optimism
  - b. Promoting self-actualisation
- 4) Treatment ending
  - a. Conclude the intervention process
  - b. Ensuring the ability of moving on and encouraging continual self-practice

#### Introduction:

Now we've come to the last session already. I hope you've been enjoying and have brought something from the previous session to apply in your daily life, and might have already noticed some changes, or have learnt something more about yourself and the way you can enhance your happiness, whatever it means to you. For this last session, we will **cultivate positive aspects for the future**, which will **promote positive feelings** of what the future will bring, develop optimism and self-actualisation. And the same as every time; it is the time for you to have a peaceful, relaxing moment.

#### Script:

Now just settle yourself into a very **comfortable** position, and listen quietly to the sound of my voice. Just listen, **relax**, and let my voice soothe and calm you. And perhaps you would like to close your **eyes**, just close your eyes, keep them closed and relax, with nothing whatsoever for you to do except to relax, **rest**, and relax. As you're resting there with your eyes closed, you can begin to relax more and more, resting and listening **clearly** and **calmly** to the sound of my voice, just like my voice is **flowing** gently into your **mind**, soothe you and comfort you. If you also hear other

**sounds** around you, it will be just like those sounds are **far**, far away, and they can just calm and relax you, **all** the sounds around also soothe and comfort you.

And now I would like you to be aware of your breathing, and **imagine** your breath **travelling** from your **nose** to each part of your body. Just imagine in anyway that you can, anyway that you would like. And now, as you **breathe** in deeply, your breath travels from your nose up to the top of your **head**. And as you **breathe** in, your breath brings in a comfortable wonderful **relaxed** feeling to the top of your head, then you can allow this relaxed feeling to **spread down** over your forehead, eyebrows, all the muscles around your eyes, nose, mouth, cheeks, chin, and jaws, **feeling** comfortably deeply relaxed. Then the sense of relaxation that is now **all over** your face spread to the back of your head, all the muscles in your **neck**, down further to your **shoulders**. Breathe in deeply into those parts of your body; let all the muscles feel limp, **loose** and relaxed. Then breathe in to your **upper arms**, forearms, wrists, hands and fingers, imagine your breath travels to those parts and help them rest and relax. Now breathe in naturally and deeply into your **chest** and your upper back. Be aware of the air that fulfils and nourish your **lungs**, and imagine it travels down into your diaphragm and your **stomach**. Now breathe in deeply, gently and naturally still, to the muscles that go down from your **upper back** to your **lower back**, each joint of your spine, the supporting muscles that go across, and just **sinking down** into the comfort beneath you. Then **all parts** of your upper body are resting comfortably and **relaxed** even more. So you can let the sense of relaxation gently **spread down** further, as you breathe into your hips, your buttocks, and your thighs. Imagine your breath travelling down into those areas and all the muscles are **fully rested** and relaxed. Then bring the **awareness** of your breath further down to your knees, shins, calves, and ankles, deeper down into your **feet**, your soles and every toe. Let the sense of relaxation spread down; let all over your body feeling limp, loose and wonderfully relaxed from the top of your **head** to every little **toe**, all the **muscles**, all the **tissues** and tendons in your **body**, they are completely **relaxed** already now. Every breath you take still makes you feel **more and more** relaxed, relaxing every nerve, every muscle in your body, from the tips of your toes, to the top of your head, **every** nerve, every muscle, relaxing and resting, perfectly **at ease**, as you're letting go, completely.

And in a moment I am going to count down from **ten**, all the way down to **zero**, and as I **count** from ten to zero, I'd like you to **imagine** that you are stepping **deeper** and deeper into a **wonderful** place of relaxation. Just let yourself step down slowly, one step at a time, and with each count that I make, and with each breath that you take, you're going to find yourself **drifting**, deeper and deeper still, just **letting go**, completely, and when I reach the count of zero you'll be more deeply **relaxed** than you have ever been before, just letting go, **completely**.

Ten, nine, eight, **drowsier** and drowsier, seven, six, five, getting sleepier and sleepier and you're going deeper and deeper into **calm**, into **relaxation**, into **tranquility**, four, relaxing every nerve, every muscle in you body, from the top of your head to the tips

of your toes, every nerve, every muscle, relaxing and **resting**, perfectly **at ease** and every time you breath in, imagine yourself breathing in the breath of relaxation, complete comfort, and **every time** you breath out, just think to yourself, **let go**, let go, and you can let go all the tension, all those cares, past, present, and future, let them all go, completely, and all resistance to deeper relaxation is just melting away, as you let go, **three**, now you can feel yourself getting **heavier**, and heavier, your body is feeling heavier and heavier, as you're resting there comfortably now, **two**, the sound of my voice makes you drowsier and drowsier, **sleepier** and sleepier, **dreamier** and dreamier and the more I speak, the deeper you are going to relax, so just let go, completely, **one**, almost down to a deep state now, just relaxing and resting, perfectly at ease, so **nice** to relax now, so nice to rest now, so just relax, and rest, relaxing deeper and deeper **still**, just letting go, completely, it's a **lovely** feeling, a lovely cozy feeling, and **zero**, right down now, into a deep **beautiful** relaxed state, with **every breath** that you take from now on, you are going to find yourself **drifting**, deeper and deeper still, just relax and letting go, completely.

And in a moment, your **unconscious** mind is going to suddenly **take** you, to a very special place, that's associated with feelings of **peacefulness**, and tranquillity, **safety**, and **happiness**. It may be a place you've been before, or a special place that you find yourself in for the first time. And you can just allow such a place to spontaneously **come** into your **awareness** now. And as you find yourself there, give yourself the **opportunity**, to **experience** all the **refreshing** feelings of calm, and **contentment**, **security**, and happiness, associated with this **wonderful** place. And I wonder if you've already begun to notice the fact, that as you just experience, and **enjoy** this special place, you soak up and **absorb** these wonderful feelings. And you can just allow these feelings of deep contentment, peace, calm, and happiness to **flow**, all through you, to all parts of you, just like your breath, allowing all of you to experience these **soothing** feelings. And as each moment passes in this special place, these wonderful, **invigorating** feelings increase, and become more a **part** of you. And you can **savour** this place, and your **enjoyment** of it can be heightened, with every **moment** that you spend here. And as you **rest** here, and **recharge** your energy, this experience may remind you of other places and experiences, where you've felt **happy**, and contented, and filled with peaceful and joyful feelings. *[Pause]* And in this place of **serenity** and security, things can come into perspective. You can be aware of good **resources** you have in yourself, in your life, **positive** resources that you always can **utilise**. *[Pause]* And in this special place, independent of anything that I say, you can **receive** what you most need right now. Your unconscious mind **knows** what you most **need**. It may be that you **gain** a new perspective, or just find yourself feeling differently, find your own way of **self-actualisation**. *[Pause]* Or maybe, you'll receive from your unconscious, a special **gift**, of an experience or a **memory** that gives you the **understanding** or the perspective or the feelings that you most need right now. *[Pause]* Or perhaps, you may **hear**, what you need. It may be that you hear a still voice, maybe a voice in your **mind**, or seeming to come from deep **inside** you, saying what you most need to hear, giving you the **suggestions** you



most need to receive. *[Pause]* And there's something that's going to be **embedded** and remain in your mind: you will know, that you can return to this special place of yours, the place of contentment, happiness, and tranquillity, **whenever** you need or want to, perhaps it can be each night when you go to bed, every night you'll be calm, and at ease, your mind and your body will be **calm**, and relaxed, and drift into this special place. You will know, that whenever you need to rest, or **replenish** your **strength** and energy, that you can put yourself into a deep and peaceful state, and return to this place, and soaking up these wonderful feelings, receiving what you need. And when you're ready to **awaken**, you can drift back across time and space, **bringing** these wonderful feelings, and this sense of perspective with you. And you'll awaken feeling well, **refreshed**, alert and clear-headed. And what you have experienced can remain with you. Now you can continue in this place, receiving what you need, **gathering** all the supportive energy and resources you want, for a little while more.

As you now have gathered **positive resources** that you need within you, your mind is **filled** with versatile resources that you can **utilise** in your every day life. I would like you to imagine yourself, yourself at present and future. As you continue to move **forward**, you learn to accept yourself with **grace** and ease, viewing yourself in a positive **light**, developing greater **confidence**, continue to develop your **skills**, your positive **attitudes**, and abilities. You have the **capacity** to visualise yourself in the future, **living** with a sense of **joy** and accomplishment. See yourself from now on, starting now and continue on, that more and more, you will **realise** that happiness, and unhappiness, are due to your own thoughts, **the way** you think about situations. You will be able to **shift** your thoughts to the **positive** aspects, and look at the positive aspects of living, enjoy every day. You will become more and more **aware** that if life's situations are not the way you always want them, you will work to change them, **without** frustration, without anger, without being bothered. You will work to change things that are not the way you want them, but you will do it with a calm, peaceful mind, being **at ease and at peace** with yourself and the universe. You can face problems with a **calm mind**, with strength and **resilience**, improve what you can change, and learn to accept what you can't. When you cannot change things, you will accept them calmly, you will be aware that anger and frustration do not help. You'll realise that life is too **precious** and too wonderful to waste it in being bothered over little things, little annoyances. Knowing that **life** can be so **beautiful**, no matter what problems you may face, you will be less and less worried about the future, problems of the future, no need to worry. Most of the things you worry about will not happen anyway. You'll **let** the worries **go**, you'll **enjoy** the day, you'll let yourself go, you'll enjoy yourself, as worries **drop out** of your life.

And you are able to **enjoy** everything you do, enjoy the **people** around you, the food as you eat **moderately**, the water you drink. With **peace** of mind, calm and at ease, enjoying every aspect of the beautiful, **wonderful** world, and the great nature. You'll be able to enjoy everything you **see** and **touch**, and you'll become **more aware** of

touch and the beauties of touching. You become aware of the breeze every time it touches you. You'll become more and more aware of the fragrances and the aromas, more aware of all the beauties of your senses, as you **see, hear, touch, smell, and feel**. And you become more and more aware of people around you. You become more and more aware of their **amazing nature**, and of the **positive vibes** from everything and everyone around you in every day. **See yourself** clearly, that you're living more and more fully, more and more deeply, every day, starting now and continue on. And as you let these thoughts enter the back of your mind, you'll feel, more and more at peace, calm, and at ease, with peace of mind, **vibrant**, strong, and **energetic** physically and mentally, as much as you'd like to be. You begin to see everything in a **fresh** new way, wonderful and beautiful. You'll be able to **utilise** many resources, many **potentials** that you have. Let these thoughts now go to the back of your mind, **embedded** into your mind. Let them **guide** your life as you **wish**, see yourself living **well**, every day in every way, all as you wish.

And soon I will count from one up to five, and you will be **ready** to come back to your **full** awareness once again with all the **positive resources, wonderful feelings, and vibrant energy** in your body and your mind. All the positive suggestions have been **cultivated** deeply in every part of you, deeply into the **deepest** part of your mind, **always** be with you, for you to use **anywhere, anytime**. **One**, ready to come back and **gradually** come back now. **Two**, every nerve, every muscle, full body is **feeling vital** and energised. **Three**, the mind is **wide awoken**, so clear and so bright. **Four**, your eyes are **ready** to be open, feeling **refreshed** and alert. Soon you will hear the next number, **knowing** what you want to do to make yourself **feel great**. **Five**, open your eyes now, take a deep breath, feeling **blissfully** alive.

#### **Post-hypnotic suggestions:**

From the first session to this session, as you may also remember, we have covered positive suggestions for releasing stress and letting go of negative emotions, appreciation of good things in life, savouring and cherishment positive moments and accomplishment, positive relationship and high quality connection, loving kindness and the act of kindness, and then lastly, continual flourishing into the future.

I hope all the sessions are more or less beneficial for you. As your mind has learnt from what we've done together, it will be very good if you continue practising and applying it in your daily life. Then perhaps you can let me know how you get on.

*Ask the participant to complete post-treatment questionnaire.*

Before close, *ask the participants* if they have any question or anything more to mention.

## Appendix M – Control intervention (relaxation) outlines and scripts

### Control Treatment: Relaxation

#### Session 1 – Breathing exercise for Relaxation

##### Outline:

The therapist will guide the participant to follow simple relaxing breathing exercise to make the participants being aware of their own breaths. The breathing techniques will include:

- 1) Deeply inhale (as much as they are able to) and completely exhale
  - a. Breathe in through the nose slowly and fully, place one hand on the stomach and let the stomach expand
  - b. Breathe out through the nose slowly and fully, let the stomach contract, fully expel the air
- 2) Breath counting
  - a. As the participant continue to breathe in deeply and breath out fully, they will be asked to count each time they exhale from “one” up to “five”. When completed, start a new cycle again, counting “one” on the next exhalation.

##### Introduction:

As I mentioned before, all the sessions we will be having are deep relaxation approach. So, I hope you will be relaxing and enjoying. You can remember the process we do in each session and bring it to practise in your daily life as well.

Today we will do simple breathing techniques that could help relax you and make you feel at ease. You may use these techniques any time of the day whenever you would like.

##### Script:

Now just make yourself **comfortable** on your chair, **settle** yourself down into a very comfortable position. **Notice** if there is any **tension**, if any parts of your body still feel uncomfortable, you can **adjust** your position or move yourself a little bit until you feel most comfortable the way you are. I would like you to **keep** in that **nice** settled comfortable position, and **remember** that you can gently move yourself or **change**

your position at **anytime** if you would like. Just make yourself feel **at ease** now, and you may gently close your **eyes** now or later **whenever** you feel like. And when you let your eyes **close**, let them **rest** under your eyelids, you may find that you feel even more **relaxed** and peaceful.

Now just flow and **co-operate** with the sound of my voice, let yourself relax and **listen** quietly to the sound of my voice. As you can **clearly** hear and listening to the sound of my voice, there may be some other **sounds** that you also hear, those sounds will also **relax** you. My voice and all the sounds around are **soothing** and comforting you now. There is **nothing** whatsoever for you to think or to do, except to rest and relax.

And then I will guide you to relax your **body** and your **mind** even more, by a very simple and **easy** thing that you can do naturally, just by **breathing**.

So I would like you to bring your **attention** to your **breath** now, be **aware** of your breathing, inhale and exhale. Gently and deeply **inhale**, just as much as you can, and completely **exhale**, let all the air out. And again, **gently** and deeply inhale, as much as you feel comfortable, and **completely** exhale, let all the air out. From now on, **continue** to breathe this way, deeply inhale and completely exhale, and each time you inhale and exhale, **imagine** yourself sinking a little **deeper** and deeper into a really **calm** and comfortable state, a state of **relaxation**.

*[Pause: 1 minute]*

Continue on for a few more minutes, drifting deeper and deeper still, more and more relaxed with every breath you take.

*[Pause: 2 minutes]*

Now as you **breathe in** through your nose slowly and fully, I would like you to **notice** your breathing. Notice when the **air** enters your nostrils and travels **down** into your **chest** or perhaps further down into your tummy. You may place a **hand** over your tummy if you'd like, to **feel** a gentle **rise** as you breathe in, and a lowering as you breathe out. Continue to **breathe in** through your **nose** gently and fully, and let your tummy **expand**, feel your tummy rises. Then breathe out through your nose slowly and completely, and let your tummy **contract**, feel your tummy lowers. Continue just **focusing** on your breathing for a little while **more**, breathe in and breathe out.

*[Pause: 3 minutes]*

As you still continue to breathe in deeply and breathe out fully, now I'd like you to start **counting** each time you **exhale** from "one" up to "five". Inhale and exhale – 1. Inhale and exhale – 2. Inhale and exhale – 3. And when you have **completed** up to

“five” already, just start a new **cycle** again, counting “one” the next time you exhale. “One” ... “Five” [*Notice the participant’s breathing and help them count on each exhale for another 1 to 5 cycle*]. Continue on, counting still, and it doesn’t matter if you **lose** track of the number you are counting, you can just bring you awareness **back** to your **breathing**, and start counting from “one” again.

*[Pause: 3 minutes]*

As you’re **relaxed**, your breathing is **smoother** and steadier now. Notice the **changes** in your body, the comfort and the relaxation of your **muscles**. And you may also experience a calm, quiet **stillness** in your **mind**. Continue on for a few more moments just **remain** in the awareness of your breathing and your experience. **Reflect** on the process that you have undertaken here. And **perceive** and absorb any sense of peace, calmness, and **relaxation** in your body and mind that this moment may **leave** you with.

*[Pause: 3 minutes]*

Soon you may want to bring yourself **back** to your full **awareness**, to this room and everything around you once again. In your own time, whenever you’re **ready**, take another deep **breath**; then gently **open** your eyes and stretch.

*[Allow some time for the participant to open their eyes in their own time.  
If it may take longer than the time allowed for the session, the therapist may use the sound of meditation bell to bring the participant back to their full awareness.]*

### **Post-relaxation:**

You can bring these techniques to use in various situation and different time of the day (however, not when you’re driving!), explore how it works for you, and you can let me know next time how you find it.

*Ask the participants to complete ‘after-treatment’ form.*

## Control Treatment: Relaxation

### Session 2 – Relaxation with music

#### Outline:

- 1) The therapist will ask the participant to deeply inhale and completely exhale as practised in session 1.
- 2) Soothing music will be played for 15 minutes. The therapist will ask the participant to listen to the music while continue their breathing exercise.
  - Using relaxation music “Delta”

#### Introduction:

Today we will be implementing the breathing techniques that we did in the previous session, along with some relaxing sounds of music, which is relaxation music. The music normally helps your to relax and focus better. However, if you find that you prefer silence, you can also let me know anytime.

And as we emphasise on the technique today, you will learn more about how to bring in the sense of relaxation to your body and mind. Just let yourself absorb the feelings in this session, and then you could bring the method to use in your daily life.

#### Script:

Now just make yourself **comfortable** on your chair, **settle** yourself down into a very comfortable position. If you still feel uncomfortable even just a little, you can just slightly **change** the position you’re sitting until you **feel** most comfortable the way you are. And remember that you can gently **move** yourself or change your position at **anytime** to make yourself more comfortable if you would like. You may gently **close** your eyes now or later whenever you feel like, and you may find that you will be even more comfortable and **relaxed** when your eyes are closed, when you let them **rest**.

In the **previous** session, I introduced you, the relaxing **breathing** technique, which I invited you to bring your **attention** to your breath, be aware of your breathing, inhale and exhale. Perhaps you can **remember**, but it doesn’t matter if you don’t. Now I would like you to just **rest** and do the relaxing breathing once again. Naturally deeply **inhale**, just as much as you can, and slowly completely **exhale**, let all the air out. As you continue to breathe this way **further** on, you will be relaxed more and more. And each time you inhale and exhale, **imagine** yourself drifting a little **deeper** into a really calm, **peaceful** and comfortable state, a state of **relaxation**.

Soon I will turn on **soothing**, relaxing **music**. You can just make yourself **comfortable** and keep breathing the same way further. As you hear the music, just let yourself **flow** with the relaxing sounds that you hear. It doesn't really matter if you will **listen** attentively, or not even listen. If you also hear other sounds from **outside**, from anything around, they will just **relax** you as well. Now continue to breathe in deeply and breathe out completely, be **aware** of you breath and listen to the music quietly and **peacefully**.

*[Turn on music for 2 minutes]*

Let the sounds of music comfort you, let the **harmony** of voices relax you, let yourself completely **rest** in this **moment**, where nothing can disturb you, where you can just **rest** and relax. If you'd like, you can move a little, flow or hmm along with the music too, whatever you feel like.

*[Continue the music for 5 minutes]*

If you find your mind wander, if thoughts come and go, it's just normal. You can just bring your awareness back to your breathing, or to the harmony of music once again. Breathe in fully, deeply, gently, and breathe out completely. Feel the air that enters and leaves your body. Flow with the sounds, the harmony that you're hearing.

*[Continue the music for 5 minutes]*

As you're completely relaxed now, just **notice** how you are feeling, how your body is feeling, how your mind is **feeling**, notice your **experience**. You may experience a **comfort** in your body. You may experience a **calm**, quiet stillness in your **mind**. You can just continue relaxing and resting in this moment, take your time for a little while **more**, relaxing, resting, and flowing.

*[Continue the music for 3 minutes]*

And soon, whenever you would like, you may want to bring yourself **back** to your full awareness, to this room and everything around you once again. In your own time, whenever you're **ready**, you can gently **open** your eyes, and slightly stretch.

*[Allow some time for the participant to open their eyes in their own time. If it may take longer than the time allowed for the session, the therapist may use the sound of meditation bell to bring the participant back to their full awareness.]*

**Post-relaxation:**

The same as last time, you can bring this techniques to use in various time in your day, and it could be with any kind of music that you like, or even just with the sound of nature or any sounds around you, experiment how it works for you, and you can let me know how you find it.

*Ask the participants to complete 'after-treatment' form.*



## Control Treatment: Relaxation

### Session 3 – Progressive relaxation

#### Outline:

- 1) The therapist will ask the participant to deeply inhale and completely exhale as practised in previous sessions and focus on his or her breathing.
- 2) The therapist will guide the participant to relax his or her body part by part, starting from feet gradually up to head. The process aims to release tension and relax the participant's muscles thorough his or her body, which may also help calming the participant's thoughts and mind.

#### Introduction:

Today we will be doing progressive relaxation, which I will guide you to use the breathing technique to relax your whole body, part by part. As you go along the process, explore how your body and your mind feel, absorb the feelings in this session, and then you will be able to bring the method to apply in your daily life.

#### Script:

Now just let yourself feel **comfortable**, peaceful, and calm. Settle yourself down into a very comfortable **position**. If you still feel uncomfortable even just a little, move yourself a bit, slightly **change** the position you're sitting, until you feel most comfortable the way you are. And remember that you can gently **move** yourself or change your position at **anytime** to make yourself comfortable if you would like. As you are now **completely** comfortable, you may want to just **resting** there with your eyes closed **now**. Let your eyes gently **closed** and relaxed, as you are now starting to rest and **relax**. / replenish / restore

As you're resting there with your eyes closed, just relax and **co-operate** with the sound of my voice, **listen** to the sound of my voice. As I continue talking to you, as you are hearing and listening to my voice, your **relaxation** will gradually **increase**. If you hear any other sounds, voices, or noises, now or later, it's just like they are **far**, far away. My voice relax you, **all** the sounds around relax you. **No sounds** can disturb you, **nothing** can disturb you, nothing is important right now, **nobody** wants anything, and it is the **moment** for you to just **relax**.

**Breathe in** through your nose, take in a nice **deep** breath, and **breathe out** slowly and **completely**. Now become **aware** of your own breathing – **feel** the air enters and

leaves your **nostrils**, **feel** the air enters and leaves your body, feel the rising and falling of your **chest** and your tummy as you breathe in and out. And with each breath that you take, it will just **help** you to relax more and more, more deeply and **comfortably** with every breath. As you **continue** breathing in deeply and breathing out completely, the sense of relaxation will get more and more, **deeper** and deeper. You might even **notice** as you begin to experience the feelings of relaxation that are developing in your **body**. You may be wondering what part of your body will relax **first**, whether it's going to be your left **leg** or your right leg, your left **hand** or left arm, or your right hand or right **arm**, you may even begin to wonder **when** your breathing will **change** to be smoother and steadier.

As you are still being aware of your breathing, now I would like you to **imagine** your breath **travelling** from your **nose** to each part of your body that I will be guiding you. Just imagine in anyway that you can, anyway that you would like. And now, as you **breathe** in deeply, your breath travels from your nose up to the top of your **head**. And as you **breathe** in, your breath brings in a comfortable **relaxed** feeling to the top of your head, then you can allow this relaxed feeling to **spread down** over your forehead, eyebrows, all the muscles around your eyes, nose, mouth, cheeks, chin, and jaws, **feeling** comfortably deeply relaxed. Then the sense of relaxation that is now **all over** your face spread to the back of your head, all the muscles in your **neck**, the muscles that go down the sides of your neck and back of your neck, down further to your **shoulders**. Breathe in deeply into those parts of your body, the very top part of your body; let all the muscles feel limp, **loose** and relaxed. As your shoulders sink down a little more, become aware of your **upper arms**, forearms, wrists, hands and fingers feeling limp, loose and **relaxed**. Imagine your breath travels to those parts and help them rest and relax. Now breathe in naturally and deeply into your **chest** and your upper back. Be aware of the air that fulfils your **lungs**, and imagine it travels down into your diaphragm and your **stomach**. Think of all the muscles between your ribs, stomach muscles and stomach feeling **calm**, relaxed and comfortable. Now just think of all the **muscles** in your back, breathe in deeply, gently and naturally still, to the muscles that go down from your **upper back** to your **lower back**, the supporting muscles that go across, just **sinking down** into the comfort beneath you. Then **all parts** of your upper body are resting comfortably and **relaxed** even more. And let the sense of relaxation gently **spread down** further, as you breathe into your hips, your buttocks, and your thighs. Imagine your breath travelling down into those areas and all the muscles are **fully rested** and relaxed. Then bring the **awareness** of your breath further down to your knees, shins, calves, and ankles, feeling limp, loose and relaxed. As you may **aware** that both of your legs are completely relaxed now, just continue to breathe in deeply like your breath is travelling deep down into your **feet**, your soles and every toe. Let the sense of relaxation spread down; let all over your body feeling limp, loose and relaxed.

From the top of your **head** to every little **toe**, all the **muscles**, all the **tissues** and tendons in your **body**, they are completely **relaxed** now. Every breath you take still

makes you feel **more and more** relaxed, relaxing every nerve, every muscle in your body, from the tips of your toes, to the top of your head, **every** nerve, every muscle, relaxing and resting, perfectly **at ease**. As you are resting there, your body may feel **heavy**, may feel **light**, numb, tingling, or even **no feelings** at all. No matter there is or is not any feelings; you are just **being aware** and resting. As you are **experiencing** a comfort in your **body**, you may also experience a calm, quiet stillness in your **mind**. So continue on for a few more minutes remain in the awareness of your breathing and awareness of your relaxing body, remain in the awareness of your peaceful mind. **Reflect** on the process that you have undertaken here, **perceive** and absorb any sense of **peace**, calmness, and relaxation in your body and mind that this moment may **leave** you with.

*[3 minutes]*

Soon you may want to gently bring yourself back to your **full awareness**, to this room and everything around you once again. In your own time, **whenever** you're ready, take another deep breath and gently **open** your eyes, then slightly **stretch**.

*[Allow some time for the participant to open their eyes in their own time.  
If it may take longer than the time allowed for the session, the therapist may use the sound of meditation bell to bring the participant back to their full awareness.]*

### **Post-relaxation:**

As I mentioned at the beginning of the session, this is the technique that help you to relax yourself completely, both body and mind. In everyday life, you can do this relaxation briefly or fully whenever you would like. Then you can notice how you feel afterwards and how you feel when you do it regularly.

*Ask the participants to complete 'after-treatment' form.*

## Control Treatment: Relaxation

### Session 4 – Visualisation for relaxation

#### Outline:

- 1) The therapist will ask the participant to deeply inhale and completely exhale and focus on his or her breathing as practised in previous sessions.
- 2) The therapist will invite the participant to imagine and visualise preferred safe, comfort, and peaceful place, particularly natural scenery or a 'special place' of their choice. The therapist will invite the participant to imagine the scenery in details including views, sounds, scents, and feelings that they might feel (what they can see, hear, smell, and feel). The visualisation aims to induce sense of relaxation in the participant's body and calm the participant's mind.

#### Introduction:

Now we've come to the last session already. I hope you've been enjoying and have brought something from the previous session to apply in your daily life.

Today I will guide you to do a visualisation, which will help your brain, your mind, and your body learn to de-stress, feel more peaceful and relaxed. To apply it in your daily life, you don't need to remember all the exact words that I will be saying or the exact process you will be doing. Just let yourself be in this moment, flow with the process and be aware, be mindful of what's happening to your mind and body, that's the way you can allow yourself to remember and learn.

#### Script:

Just **the same** as every time, let yourself feel **comfortable**, peaceful, and relaxed. Settle yourself down into a very comfortable **position**. If you still feel uncomfortable even just a little, move yourself a little bit, slightly **change** the position you're sitting, until you feel **most comfortable** the way you are. And remember that you can gently move yourself or change your position at **anytime** to make yourself comfortable if you would like. And perhaps soon you may would like to just **resting** there with your **eyes closed**. You can gently close your eyes and let your body and your mind rest and **relax**.

As you're resting there with your eyes closed, you can begin to relax more and more, you might **hear** sounds around you, and you may find it's interesting to **realise** that these sounds are drifting **further** and further away, and they just **calm** and relax you.

Perhaps you are not really **listening** to the sounds, that you are not even listening to **me**, but somehow my voice and the sounds around just **soothe** and comfort you. So if you find other sounds coming and going, **let them**. If thoughts come and go through your **mind**, let them. You see, with your eyes closed, you remain **aware** of many things. Be aware of the **surface** beneath you; be aware of all the **sounds**, the feelings that you are experiencing, the **position** of your arms and legs, the position of your body. **Focus** your attention on the **rhythm** of your breathing, feel the slow, easy rising and falling of your diaphragm and chest, as you breathe in, and out, with each breath you relax more and more. You can naturally and deeply inhale, and completely exhale. Focus on the slow **steady** rhythm of your breathing. Each breath you take makes you feel more and more **comfortable**, calm, and relaxed. Every time you **exhale**, you can just **let go** of any tension in your body and your mind. Every time you **breath in**, imagine yourself breathing in the breath of **relaxation**, complete comfort, and every time you breathe out, just think to yourself, '**relax**'.

It's so wonderful to rest there, to not to have to **think**, or move, or analyse, and just being aware of the slowing down and **easiness** in your mind, your mind beginning to get **more** comfortable just as your body can get more comfortable. You are taking a little **time out** for yourself now, for this moment there's **nothing** that requires your attention. Nothing can disturb you anymore. And as you continue to breathe in naturally and breathe out completely, you are **relaxed deeper** and deeper, deeper and deeper in to relaxation state. Your body is relaxed and comfy; your mind is calm and peaceful, just like when you are **falling asleep**, when you are in your deep sleep. Notice that the breathing is **automatic**, even when we are deep asleep our breathing continues **naturally**.

*[Pause 1 minute]*

And perhaps you may feel like drifting off **somewhere** now, drifting off into a profoundly resting state of body and mind. **Somehow** your mind and your imagination may start to wander, like when you are **dreaming**, so just let your mind drift and let your imagination **flow**. Now I would like you to see yourself in a very special **place**, a place where you might have **been**, a beautiful spot in **nature**, or a comforting place in your own **home** or anywhere, your special place may also be an **imaginary** place, a place where is completely from your imagination, a place in fairytales, indoors or outdoors, it really doesn't matter. If more than one place come to mind, **allow** yourself to be with **only one** of them. It doesn't matter where; it **doesn't matter** if your imagination is vivid or bland. The only thing that matters, it is a place where you feel completely comfortable and **safe**.

**Appreciate** this place with all your senses, **see** the views around, **hear** the sounds, **smell** the aromas, **feel** the air as it caresses your skin, **experience** the ground securely under you, **touch** and feel the whole environment in which you are in. **What** can you **see**? What can you **hear**? What can you **smell**? What can you **feel**? And now **notice**

what you are wearing, what **time** of the year it is, what the **season** is, how is the **weather**, what is the temperature, is it warm, is it cold? And what time of the **day**, whether you are alone or with another person or **people**, no matter near or far they are to you. Notice the **colours** that surround you, notice the **qualities** of the place that make it safe and comfortable for you, and **look around** you to see, what things are around. If there is **anything** else that would make this place **safer**, more comfortable for you, and more special for you, something you need to bring in, just **bring in**. Or perhaps there is something you need to **remove** from the place, to make you feel it is more **right** for you, just remove. It is **absolutely** your place, your **special** place, where you can do whatever you would like to, where you can just rest, relax, let go of all the tension, and restore your energy.

Then notice how your body **feels** in this place, and now **take some time** to be with the feelings of safety and comfort in your special safe place. It is the place that is just for you, where you find **complete** comfort, complete relaxation, and complete **safety**. Just **notice** your feelings and experience. As you're **resting**, floating, and drifting, you can remain **relaxed**, peaceful, and calm. Continue on for a little while more, rest and relax in your special, safe, comfortable, and **peaceful** place.

*[Pause 3 minutes]*

You can continue to rest and **stay** for a little longer, or you can allow the image of your safe and special place to begin **fading** away, knowing that you can come back to this special safe comfortable place of yours at anytime that you'd like to rest and restore your energy.

Now, in your own **pace**, in your own time and **whenever** you are ready, you can gradually bring your awareness **back** to this room, to the surroundings around you here once again. And whenever you are ready, you can gently **open** your eyes, and then slightly **stretch**.

*[Allow some time for the participant to open their eyes in their own time.*

*If it may take longer than the time allowed for the session, the therapist may use the sound of meditation bell to bring the participant back to their full awareness.]*

### **Post-relaxation:**

As you may have seen, this is a creative technique that could help you to have a very good time. It doesn't matter what exactly you think about in that moment or how vivid your imagination is, just let it be whatever you feel like, you will know more about the good way you like to do it. Continue to implement what we've done together, and perhaps you can let me know how you get on with everything.

*Ask the participants to complete 'after-treatment' form.*

**Appendix N – Pre and Post-treatment scores of each participant in all groups and all measures (OHQ, DASS-21, SWLS, SPANE)**

**Pre and Post Oxford Happiness Questionnaire Scores from PPHI Group**

<b>Participant ID</b>	<b>Pre-OHQ</b>	<b>Post-OHQ</b>	<b>Change</b>
6	3.17	5.21	2.04
8	4.31	4.62	0.31
13	4.97	4.79	-0.18
14	3.55	4.45	0.9
16	4.03	3.79	-0.24
17	3.14	5.28	2.14
20	3.93	3.79	-0.14
22	4.17	4.03	-0.14
24	4.34	4.72	0.38
35	3.59	3.86	0.27
36	4.38	4.59	0.21
42	4.93	5.17	0.24
43	4.62	4.38	-0.24
44	4.41	4.55	0.14
50	4.45	5.07	0.62
54	4.24	4.24	0
57	4.90	4.93	0.03
60	5.28	5.24	-0.04
64	3.59	4.79	1.2
66	3.66	5.28	1.62
67	2.83	3.45	0.62
<b>Average</b>	<b>4.12</b>	<b>4.58</b>	<b>0.46</b>

*\*Maximum scores = 6; minimum scores = 1. The higher scores, the higher level of happiness*

**Pre and Post Oxford Happiness Questionnaire Scores from Relaxation Group**

<b>Participant ID</b>	<b>Pre-OHQ</b>	<b>Post-OHQ</b>	<b>Change</b>
9	4.10	3.86	-0.24
10	5.03	5.45	0.42
11	5.07	4.52	-0.55
12	5.31	5.17	-0.14
18	3.83	5.03	1.20
19	4.97	4.69	-0.28
21	3.10	3.41	0.31
25	3.93	5.41	1.48
27	3.72	3.45	-0.27
29	3.24	3.03	-0.21
33	3.66	4.07	0.41
39	3.14	4.86	1.72
45	3.69	4.48	0.79
53	3.76	3.59	-0.17
55	3.66	4.03	0.37
56	4.62	4.14	-0.48
58	2.86	3.55	0.69
59	3.38	3.86	0.48
63	3.86	3.55	-0.31
68	3.52	3.38	-0.14
<b>Average</b>	<b>3.92</b>	<b>4.18</b>	<b>0.25</b>

*\*Maximum scores = 6; minimum scores = 1. The higher scores, the higher level of happiness*



**Pre and Post Oxford Happiness Questionnaire from Control Group**

<b>Participant ID</b>	<b>Pre-OHQ</b>	<b>Post-OHQ</b>	<b>Change</b>
2	3.17	2.55	-0.62
3	2.34	2.14	-0.20
4	4.03	4.48	0.45
5	3.21	3.31	0.10
7	3.76	3.72	-0.04
15	5.31	5.34	0.03
26	4.07	4.45	0.38
30	3.66	3.79	0.13
31	4.86	5.38	0.52
34	3.72	3.83	0.11
37	3.93	2.34	-1.59
38	3.76	3.76	0.00
40	5.10	4.86	-0.24
41	5.21	5.24	0.03
46	4.59	5.07	0.48
49	5.17	5.86	0.69
51	5.24	4.76	-0.48
52	4.97	5.21	0.24
61	4.38	3.97	-0.41
62	4.76	4.45	-0.31
65	3.59	3.24	-0.35
<b>Average</b>	<b>4.23</b>	<b>4.18</b>	<b>-0.05</b>

*\*Maximum scores = 6; minimum scores = 1. The higher scores, the higher level of happiness*

**Pre and Post DASS-21 Scores from PPHI Group**

<b>Participant ID</b>	<b>Pre DASS-21</b>	<b>Post DASS-21</b>	<b>Change</b>
6	112	18	-94
8	18	12	-6
13	16	18	2
14	18	22	4
16	22	6	-16
17	4	6	2
20	2	36	34
22	34	24	-10
24	32	20	-12
35	48	34	-14
36	14	8	-6
42	28	14	-14
43	22	14	-8
44	20	24	4
50	22	8	-14
54	16	14	-2
57	4	14	10
60	2	2	0
64	0	6	6
66	22	6	-16
67	90	58	-32
<b>Average</b>	<b>26.00</b>	<b>17.33</b>	<b>-8.67</b>

*\* Maximum scores = 126, minimum scores = 0. The lower scores, the lower symptoms of depression, anxiety, and stress*

**Pre and Post DASS-21 Scores from Relaxation Group**

<b>Participant ID</b>	<b>Pre DASS-21</b>	<b>Post DASS-21</b>	<b>Change</b>
9	8	14	6
10	6	0	-6
11	22	22	0
12	18	16	-2
18	32	12	-20
19	4	4	0
21	16	12	-4
25	32	10	-22
27	32	36	4
29	66	40	-26
33	24	30	6
39	22	8	-14
45	8	6	-2
53	10	16	6
55	22	10	-12
56	10	10	0
58	52	14	-38
59	16	8	-8
63	14	20	6
68	30	22	-8
<b>Average</b>	<b>22.20</b>	<b>15.50</b>	<b>-6.70</b>

*\* Maximum scores = 126, minimum scores = 0. The lower scores, the lower symptoms of depression, anxiety, and stress.*

**Pre and Post DASS-21 Scores from Control Group**

<b>Participant ID</b>	<b>Pre DASS-21</b>	<b>Post DASS-21</b>	<b>Change</b>
2	22	36	14
3	50	40	-10
4	12	20	8
5	64	56	-8
7	10	24	14
15	2	8	6
26	34	16	-18
30	20	18	-2
31	22	12	-10
34	42	50	8
37	42	60	18
38	8	40	32
40	26	16	-10
41	4	0	-4
46	12	10	-2
49	0	0	0
51	18	18	0
52	16	6	-10
61	10	16	6
62	0	12	12
65	58	34	-24
<b>Average</b>	<b>22.48</b>	<b>23.43</b>	<b>0.95</b>

*\* Maximum scores = 126, minimum scores = 0. The lower scores, the lower symptoms of depression, anxiety, and stress*

**Pre and Post Satisfaction with Life Scores from PPHI Group**

<b>Participant ID</b>	<b>Pre-SWLS</b>	<b>Post-SWLS</b>	<b>Change</b>
6	6	23	17
8	10	18	8
13	27	29	2
14	15	23	8
16	23	23	0
17	5	35	30
20	8	13	5
22	19	25	6
24	21	30	9
35	17	21	4
36	30	29	-1
42	24	22	-2
43	21	21	0
44	8	13	5
50	33	34	1
54	22	23	1
57	31	31	0
60	34	33	-1
64	16	13	-3
66	19	25	6
67	28	19	-9
<b>Average</b>	<b>19.86</b>	<b>23.95</b>	<b>4.10</b>

*\*Maximum scores = 35, minimum scores = 5. The higher scores, the higher level of life satisfaction.*

**Pre and Post Satisfaction with Life Scores from Relaxation Group**

<b>Participant ID</b>	<b>Pre-SWLS</b>	<b>Post-SWLS</b>	<b>Change</b>
9	15	18	3
10	30	34	4
11	31	31	0
12	32	24	-8
18	21	25	4
19	32	29	-3
21	23	14	-9
25	13	19	6
27	20	15	-5
29	20	14	-6
33	25	17	-8
39	17	25	8
45	25	29	4
53	21	19	-2
55	16	22	6
56	21	16	-5
58	14	24	10
59	16	12	-4
63	9	11	2
68	10	12	2
<b>Average</b>	<b>20.55</b>	<b>20.50</b>	<b>-0.05</b>

*\*Maximum scores = 35, minimum scores = 5. The higher scores, the higher level of life satisfaction.*

**Pre and Post Satisfaction with Life Scores from Control Group**

<b>Participant ID</b>	<b>Pre-SWLS</b>	<b>Post-SWLS</b>	<b>Change</b>
2	17	10	-7
3	13	7	-6
4	30	28	-2
5	13	15	2
7	24	27	3
15	31	28	-3
26	21	22	1
30	13	19	6
31	23	24	1
34	11	15	4
37	13	9	-4
38	10	17	7
40	28	29	1
41	26	23	-3
46	22	25	3
49	29	34	5
51	27	27	0
52	22	23	1
61	29	24	-5
62	31	22	-9
65	14	16	2
<b>Average</b>	<b>21.29</b>	<b>21.14</b>	<b>-0.14</b>

*\*Maximum scores = 35, minimum scores = 5. The higher scores, the higher level of life satisfaction.*

**Pre and Post SPANE-B Scores from PPHI Group**

<b>Participant ID</b>	<b>Pre SPANE-B</b>	<b>Post SPANE-B</b>	<b>Change</b>
6	-11	19	30
8	2	5	3
13	13	13	0
14	7	11	4
16	5	8	3
17	21	22	1
20	4	9	5
22	5	11	6
24	8	11	3
35	2	2	0
36	9	15	6
42	10	11	1
43	13	13	0
44	4	6	2
50	3	20	17
54	11	13	2
57	13	15	2
60	19	21	2
64	3	0	-3
66	-1	13	14
67	-11	3	14
<b>Average</b>	6.14	11.48	5.33

*\*Maximum scores = 24, minimum scores = -24. The higher scores, the higher negative and positive affect balance.*



**Pre and Post SPANE-B Scores from Relaxation Group**

<b>Participant ID</b>	<b>Pre SPANE-B</b>	<b>Post SPANE-B</b>	<b>Change</b>
9	8	8	0
10	22	24	2
11	5	6	1
12	15	16	1
18	8	14	6
19	22	16	-6
21	4	8	4
25	7	19	12
27	0	2	2
29	1	-3	-4
33	5	13	8
39	6	19	13
45	6	13	7
53	5	7	2
55	11	17	6
56	2	1	-1
58	1	8	7
59	5	17	12
63	4	4	0
68	3	2	-1
<b>Average</b>	<b>7.00</b>	<b>10.55</b>	<b>3.55</b>

*\*Maximum scores = 24, minimum scores = -24. The higher scores, the higher negative and positive affect balance.*

**Pre and Post SPANE-B Scores from Control Group**

<b>Participant ID</b>	<b>Pre SPANE-B</b>	<b>Post SPANE-B</b>	<b>Change</b>
2	-2	-1	1
3	1	0	-1
4	18	13	-5
5	-2	-1	1
7	11	9	-2
15	21	18	-3
26	1	12	11
30	8	12	4
31	10	13	3
34	1	-3	-4
37	0	-6	-6
38	7	5	-2
40	15	16	1
41	19	15	-4
46	10	10	0
49	18	22	4
51	24	21	-3
52	22	21	-1
61	10	0	-10
62	17	15	-2
65	-1	1	2
<b>Average</b>	<b>9.90</b>	<b>9.14</b>	<b>-0.76</b>

*\*Maximum scores = 24, minimum scores = -24. The higher scores, the higher negative and positive affect balance.*