Increasing Subjective Wellbeing in a Non-Clinical Population through Online Cognitive Behavioural Therapy

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Abstract

Background

Positive psychology seeks to improve wellbeing and achieve optimal human functioning (Seligman & Csikszentmihalyi, 2000). Developments in public health, such as co-production (Farmer, 2012) and the assets approach (Foot 2012) have heralded a refocus in policy and funding towards collaborative, positive mental health outcomes. Emergent psychological treatments delivered via the Internet have proven efficacy and clinical approval in the treatment of clinical populations, however, there is little evidence detailing their effect on non-clinical populations.

Objective

This study sought to explore this area by trialing the use of an online Cognitive Behavioural Therapy programme ("Living Life to the Full") on a non-clinical sample, and measuring wellbeing gains. This repurposing of clinical applications for a non-clinical population is compatible with Positive Psychology theory.

Methods

This study used an existing online Cognitive Behavioural Therapy tool called *Living Life to the Full (LLTTF)*. Changes in subjective wellbeing were measured using the *Warwick-Edinburgh Mental Well-being Scale (WEMWBS)*. Participants were recruited for both a self-selected intervention group (N = 20) and a self-selected baseline group (N = 8). The baseline group provided insight into natural fluctuations in subjective wellbeing without intervention. Intervention group participants completed the 8-module LLTTF course, filling out a WEMWBS after

every session. Additionally a final open-ended questionnaire gathered both closed and qualitative data.

Results

All 20 participants completed the 8 module course i.e. the experience was rewarding enough to maintain motivation for 100% of them. The group's mean wellbeing score was significantly higher post-intervention than pre-intervention (p = <0.0005, Cohen's d = 1.47). Furthermore, 19 of the 20 increased their individual wellbeing (a 95% effectiveness rate). Reduction in stigma and improved attitudes to those with mental health difficulties were also reported. Meanwhile, no significant increase in subjective wellbeing was found in the baseline group.

Conclusions

This study provides good evidence that there are worthwhile benefits and no apparent drawbacks to using online mental health tools such as LLTTF in the non-clinical population. This suggests that a wide-scale roll out of such a programme to increase the subjective wellbeing in non-clinical individuals could be beneficial. Future research may include modifying the programme to give clients a greater feeling of personalisation; and researching how widespread its appeal could be in the population as a whole.

Introduction

Macro-factors: Public Health and Government

Currently, mental wellbeing is being addressed in governments, medical practice, and communities, more than ever before. In line with changes within the National Health Service (NHS), mental healthcare has come under the spotlight of reform in recent times (Glover-Thomas, 2013). Previous focus on a biomedical, disease-centric model of human functioning is being readjusted to a focus on the positive mental wellbeing of our nations, and on how to improve it.

Coulter (2002) notes that there has been a culture shift of late towards empowering patients and service users to become active partners and decision-makers, both in their own healthcare, and in broader planning, organisation, and healthcare delivery. The Health and Social Care Act (2012) heralded the integration of public health and local government services, while the NHS National Colloquium (2011, p.1), called for a new approach to healthcare for a "radically new world". The model which emerged in answer to this need, named co-production, suggests that, through self-management and a readjustment of equality of power between experts and patients, the healthcare needs of each individual could be much more effectively met (Bovaird, 2007; Farmer, Hill & Munoz, 2012). Therefore we see a need for individual understanding of one's own health needs, specifically with regards to mental health. The NHS (2011, p.11) "firmly believes that co-production is the best way to deliver better health and wellbeing outcomes at the local level in a tough financial climate". Indeed, as early as 2005, Layard (2005) highlighted the socioeconomic benefits of increased individual wellbeing, such as decreases in disability and welfare costs, and decreases in the relative cost of mental ill-health on work productivity and absence, suggesting that the government should focus its economic policy on Gross National Happiness above Gross National Product (Layard, 2005; World Happiness Report 2015).

One key emerging theory is that of the 'assets approach' to health and wellbeing, such as that adopted by the Scottish Government (2010), which utilises key

research from Foot (2012) and Foot & Hopkins (2010). It examines the need for a refocus on salutogenesis in our health policies; that is, a focus on factors which support human health and wellbeing, instead of factors which cause disease (Antonovsky, 1979; 1987; Lindstrom & Eriksson, 2005). Assets are "any resource, skill or knowledge which enhances the ability of individuals, families and neighbourhoods to sustain their health and wellbeing" (Foot, 2012, p.8). Such assets can include supportive social networks, community cohesion, resources for promoting physical, social and mental health, employment security, political democracy, and social justice and equity. Co-production is now the favoured model of approach to societal health and wellbeing (NHS, 2011), and it promotes the aforementioned assets-based approach to harness the resources of communities. This new perspective opens up possibilities for positive mental wellbeing and its prominence in every individual's daily life.

Positive Psychology

Based on similar principles to the aforementioned assets approach, over the past two decades, a new psychological discipline has emerged with a focus on the positive aspects of human existence; Positive Psychology. Instead of presenting a societal view on how to avoid mental illness from the perspective of policymakers and government, this discipline delves into reasons why an individual should be motivated to develop and maintain their own positive mental wellbeing. The 1999 Positive Psychology Manifesto (University of Pennsylvania, 1999) defined the then-fledgling discipline as "the scientific study of optimal human functioning". Seligman and Csikszentmihalyi (2000, p.5) purport that, previous to this, psychology had become "a science largely about healing", working from a disease model of human functioning. Thus, one of the main aims of this discipline is to replace the common disease-remedy model of human functioning, with a wellness-enhancement model (Kristiansson, 2010) and to increase the frequencies of positive emotions, behaviours, and cognitions (Scheuller & Parks, 2012). Positive Psychology theory suggests that emphasis on these factors will not only increase psychological wellbeing, but also provide functional, social, and occupational advantages (Lyubomirsky, King & Diener,

2005), discovering and nurturing that which allows individuals and communities to thrive.

This is informed by Aristotle's concept of eudaimonia, (trans.,1985), which suggests that the goal of human functioning is to live in a manner consistent with one's true self and to pursue one's inherent goals in order to give meaning to one's life (Norton, 1976 in Waterman, Schwartz & Conti, 2008). This reflects the work of humanistic psychology, in which theorists such as Maslow (1943; 1954) and Rogers (1956; 1960) describe humans as possessing an innate self-actualising tendency i.e. a basic positive drive toward growth.

Happiness and Subjective Wellbeing

Through the lens of philosophy, achieving happiness and wellbeing has long been considered the ultimate goal of human functioning (Waterman, Schwartz & Conti, 2008). Although the notion of wellbeing is popular in contemporary literature, it lacks a common definition (Gillett-Swan & Sargeant, 2015). Kahneman, Diener and Schwarz (1999) began by defining wellbeing as simply the presence of positive affect and the absence of negative affect. However, many found this definition to be too parsimonious, arguing instead that wellbeing does not just arise from feelings of positive affect in one's current state, but also from living a life in which "one's human capacities are fully employed and realised" (Ryan, Huta & Deci 2008; in Ryan & Deci, 2011, p. 47). Now, a more widely accepted definition of well-being generally refers to "optimal psychological functioning and experience" (Ryan & Deci, 2001 p. 142). Kahneman et al.'s definition is now widely understood to refer to *happiness*, a more one-dimensional manifestation of momentary positive affect such as "buoyant mood, merriment, good cheer" (Seligman, 2011, p.10). However, in reality, both of these terms are often used interchangeably, as noted by Diener (2000, p.34) who wrote that, in practice, subjective wellbeing is "a more scientific-sounding term for what people usually mean by happiness".

Mechanisms and vehicles through which Positive Psychology can improve wellbeing have been discussed in the literature. Studies on the topic of positive interventions investigate the impact of "treatment, methods or intentional

activities aimed at cultivating positive feelings, positive behaviours, or positive cognitions" (Sin & Lyubomirsky, 2009, p.467), and have provided encouraging results in both the enhancement of wellbeing and the diminishing of depressive symptoms (Scheuller & Parks, 2012; Sin & Lyubomirsky, 2009). Online positive interventions were also found to increase optimism, which was identified as an important factor in the increasing of subjective wellbeing (Scheier, Carver & Bridges, 2001; Shapira & Mongrain, 2010) and psychological resilience (Hei, Cao, Feng, Guan & Peng, 2013).

Furthermore, the benefits of self-reflection have become a recent focal point in Positive Psychology, whereby individuals are encouraged to consciously reflect on their emotions and actions, in order to gain insight into themselves and their issues (Luthans, Avey & Patera, 2008). Such self-reflection and insight is reported by Stein and Grant (2014) to result in enhanced wellbeing. Indeed, work by Fredrickson (2001; 2009) suggests that experiencing positive emotions relating to oneself can expand our cognitive, attentional and psychological resources, while negative emotions achieve the opposite. Therefore, Rashid (2014) suggests the importance of effective recognition, labelling, and acknowledgement of such positive emotions when they occur in order to increase subjective wellbeing.

Another study suggests that the process of actively considering one's wellbeing and then engaging in intentional positive activities can in fact lead to increased happiness (Lyubomirsky & Layous, 2013). Peterson (2006) echoes this thinking in his work on strengths and virtues. He proposes that psychology should be as concerned with our strengths as with our weaknesses, with building the best aspects as with repairing the worst, and, crucially, with helping non-clinical individuals lead fulfilling lives as with resolving pathology in clinical populations. Indeed, while the majority of the aforementioned studies have been carried out on clinical populations, increasing evidence suggests that the theories and techniques of these interventions may also be applicable in addressing the mental wellbeing needs of a non-clinical population.

A non-clinical population consists of individuals who do not have a diagnosed mental health condition, as discussed in the Diagnostic and Statistical Manual (DSM), which provides the definition of clinical mental health conditions (American Psychiatric Association, 2013). Such individuals are said to be above the clinical threshold. Positive Psychology literature posits that the further we move from the clinical threshold, the closer we move towards the flourishing, thriving life of fulfilment and subjective wellbeing (Seligman, 2011). Therefore, it would appear there is great benefit to be found in the goal of strengthening non-clinical populations' overall mental wellbeing, in a proactive, rather than reactive manner, thus ensuring individuals remain above this clinical threshold.

Online Mental Health Resources

One potential avenue for pursuing this goal may be found in the emergence of online mental health resources. Such resources are founded on person-centred therapies such as Cognitive Behavioural Therapy (CBT), an evidence-based practice which is highly efficacious in treating conditions such as anxiety and depression (e.g. Hawton, Salkovskis, Kirk & Clark, 1989; NICE, 2006). Shafran et al. (2009) discuss that the need to improve the dissemination of CBT gave rise to an alternative to therapist-delivered intervention: online dissemination of psychological therapies. For CBT, the National Institute for Clinical Excellence (NICE) describe a Computerised Cognitive Behavioural Therapy (CCBT), defined by NICE Guidelines (2006, p.8) as a "generic term used to refer to a number of methods delivering CBT via an interactive computer interface [such as] over the internet or via telephone". Proudfoot (2004) notes that CBT is very well suited to delivery via computer and the Internet as it is a structured therapy with many aspects which are congruent with computerisation, such as a very clear conceptualisation.

In 2000, Eysenbach predicted the rise of the 'information-age health care system', and indeed we now see that technology is rapidly changing the face of mental health support and dissemination, altering the dynamics between clinician and health consumer (Proudfoot, 2004). While this can perhaps be attributed in part to increases in consumerism, individualism, and general

technological advancements, it also echoes a more fundamental underlying public demand for better access to psychological treatment (Proudfoot, 2004). As Levin (2012, p.35) speculates "the virtualization of healthcare delivery systems seems inevitable".

Terminology

As this is an area in its infancy, and there is as yet no agreed route of best practice, there are several terms discussed in the literature which encompass the concept of online mental health resources. Internet therapy is frequently used, as is mHealth (mobile healthcare e.g. Levin, 2012; Schulte, 2012), e-health or e-mental healthcare (Proudfoot, 2004) and more intervention-specific terms such as CCBT (NICE, 2006) and iCBT (Williams et al, 2014). For the purposes of this study, the phrase mHealth will be used, as it is judged to be the most up-to-date and relevant term.

Effectiveness

Overall, internet-delivered therapy is found to be largely clinically effective, with effect sizes comparable to face-to-face interventions (e.g. Andersson, 2009; Warmerdam, van Straten, Twisk, Riper & Cuijpers, 2008; Jacobs, Christensen et al., 2001; Wright, Wright & Basco et al., 2001). Indeed, Andersson, Cuijpers, Carlbring, Riper and Hedman (2014) found that internet-based CBT was found to be of equivalent clinical effectiveness when compared to face-to-face CBT delivery in conditions such as social anxiety disorder, panic disorder, depression and sexual dysfunction. There is substantial evidence that online mental health resources have successful outcomes in clinical conditions such as; eating disorders (McClay, Waters, McHale, Schmidt & Williams, 2013; Sanchez-Ortiz, Munro, Stahl, House & Startup, 2011), agoraphobia (Calbring & Andersson, 2006), panic disorder (Carlbring, Ekselius & Andersson, 2003), post-traumatic stress symptoms (Lange et al., 2000), insomnia (Espie, Kyle, Williams, Ong, Douglas, Hames & Brown, 2012), depression (Andersson et al, 2004) and social phobia (Carlbring et al, 2005). Furthermore, studies on mobile phone apps for mental health have shown effective increases in subjective wellbeing over short time periods (Parks, Della Porta, Pierce, Zilca & Lyubomirsky, 2012).

Cost-effectiveness

Studies have consistently shown that computer therapy is cost-effective, both in terms of service delivery costs and sickness absence cost offsets (Marks, 1999; Proudfoot, 2004). Indeed, in many cases, online mental health interventions (such as *Beating the Blues* for depression and *Fearfighter* for anxiety) were found to not only be cost-effective processes but to provide equivalent clinical outcomes (Marks, Kenwright, McDonough et al., 2003; McCrone, Knapp & Proudfoot et al., 2004; NICE, 2006; Warmerdam, Smit, van Straten, Riper & Cuiipers, 2010). However, as Rosen (1987) pointed out, it is very important that professional standards, not solely commercial considerations, influence the development and use of self-help materials.

Patient Uptake

In terms of patient uptake, online interventions have been well received and accepted (Wright & Wright, 1997) and satisfaction levels are high (NICE, 2006). Indeed, Graham, Franses, Kenwright and Marks (2000) found that a quarter of participants would prefer to use online information sources and programmes to access advice on depression than visit their doctor.

Stigma

Wahl (1999) describes mental health stigma as “negative responses to people who have been identified as having a mental illness” and Corrigan (2004) suggests that stigma is a major obstacle to recovery, as it diminishes self-esteem, reduces social opportunities, and can lead to untreated mental health conditions. Bentall (2004) further suggests that, in order to produce thriving individuals, communities, and societies, everyone needs liberation from restrictions, stigma, and prejudice. Research shows that patients perceive high levels of stigma, ostracism, and embarrassment surrounding their mental health condition, a desire to avoid a medical record detailing their condition, and an aversion to talking to others about it (Childress, 2001; Corrigan, 2004). However, previous studies have shown that positive intervention can be successful in reducing the stigma related to seeking help for a mental health problem, changing policies

relating to this, and enhancing social understanding and acceptance of mental health conditions (Knox et al., 2003). Furthermore, evidence shows that online mental health intervention provides health consumers with a private, stigma-free vehicle through which to receive clinical therapy (Chew-Graham, Rogers & Yassin, 2003; Childress, 2000; Graham et al., 2000; Oliver, Pearson, Coe & Gunnell, 2005; Proudfoot, 2004).

Time Constraints and Ease of Access

Zabinski, Ceilo, Wilfley and Taylor (2003) note that online therapy diminishes the time constraints often associated with traditional therapy, for example, the reduction in travel time to and from the therapy session. This convenience is coupled with intuitive ease-of use, 24-hour access, and the opportunity to repeat sessions (Childress, 2001; Graham et al., 2000; NICE, 2006; Proudfoot, 2004).

Issues

Although this evidence does indeed appear to be convincing, as with many fledgling theories or resources, there still exist several issues. One of the most pertinent, with regards to the practicality of usage, is that there is as yet no agreement on the most effective model for delivery (Ragusea & Van de Creek, 2003). Outcomes are therefore difficult to assess, and in the resource-strapped sphere of the NHS, this may mean that critical funding is not awarded to potentially beneficial new areas such as this. Furthermore, doubt surrounding the extent to which the NHS is embracing new tools such as CCBT has been expressed, suggesting that committed integration into NHS infrastructure is lacking (Kenicer, McClay & Williams, 2012).

Other issues impinging on the success of such resources include; lack of visual and facial cues (Mallen, Day, & Green, 2003), computer ownership and Internet access (Robinson, Flowers, Alperson, & Norris, 1999), crisis-intervention (Zigmond & Snaith, 1983) and misinterpretation or misapplication of instructions (Rosen, 1987).

Preventive Capacities of Online Mental Health Resources

Thus far, evidence for the *reactive* capacities of online mental health intervention in aiding recovery have been discussed. Natural progression through this theme would therefore suggest investigating the *preventive* capacities of such interventions. Indeed, studies relating to this topic have determined online interventions and therapy to be efficacious in preventing development of conditions such as depression and anxiety (Kenardy, McCafferty & Rosa, 2006; Seligman, Schulman & Tyron, 2007), eating disorders (Stice, Rohde, Shaw & Marti, 2012) and alcohol misuse (Paschall, Antin, Ringwalt & Saltz, 2011). Furthermore, a study by Musiat et al. (2014) showed that a web-based intervention was successful in targeting underlying mental health risk factors in university students. These studies advocate an early intervention approach to mental health and suggest providing this online to be preventively effective.

Thus, overall, the aforementioned developments in converging literature such as public health (e.g. co-production and the assets approach) and emerging psychological theories (e.g. Positive Psychology and online therapy) provide a rich background from which to examine the emerging clout of online mental health resources. However, there exists very little empirical research into these resources' effect on non-clinical populations' mental wellbeing. The literature would suggest that applying mHealth principles to a non-clinical population may increase subjective wellbeing. Therefore, this study intends to provide new evidence on emerging online mental health resources, determining to what extent they may be effective in increasing subjective wellbeing in a non-clinical population.

Methods

Design

This experiment ensured adherence to the BPS ethical guidelines and those of the University of Glasgow Ethics Committee by obtaining ethical approval via the attached form (Appendix 1). Both quantitative and qualitative methods were used to obtain data, allowing both an objective measure of any effect, and insight

into participant attitudes towards the process. For analysis of the quantitative data, a paired-sample t-test was conducted to determine whether subjective wellbeing increased as course usage progressed and a sign test provided further confirmation. Qualitative analysis was conducted using a Thematic Analysis approach, which provides a framework from which to identify, analyse and report themes and patterns within data (Braun & Clarke, 2006).

Participants

Participants were required to be over 18 years old and to have no current or previously diagnosed mental health conditions, i.e. 'non-clinical'. Participants were recruited online, via email and social media. There were 81 individuals in total who expressed an interest in participating during the recruitment process. Only 28 of this group actually began the trial. Of these 28, 20 self-selected to participate in the intervention group study and 8 in the baseline study. Within this sample, there were 10 males and 18 females, whose ages ranged from 22 to 69 years old. Participants were asked to read an Information Sheet (Appendix 2) and to sign a Consent Form (Appendix 3) to indicate their willingness to participate in this experiment.

Participants were recruited via self-selection for two study groups: an intervention group (where participants took part in an online CBT course) and a baseline group (where no intervention was undertaken). The study was designed in such a way as it was considered to provide the best fit in answering the experimental hypothesis. Firstly, a blind study could not be used, as the relevant comparison was to compare using the CBT programme with not using it: the choice any future adopters would be making. Secondly, randomisation could not be used because the motivation to complete the course and to commit to the time period was very unlikely had participants' expectations of undertaking the programme not been met. However, this study recruited a baseline group in addition to the main intervention group in order to measure the variance in subjective wellbeing without intervention and also to observe

any effect from external drivers (e.g. exams, relationships), which may have had a large effect on subjective wellbeing.

Materials

The stimulus in this experiment was use of an eight module online Cognitive Behavioural Therapy programme called *Living Life to the Full* (hereafter referred to as LLTTF; www.llttf.com), developed by Dr Chris Williams of the University of Glasgow. The questionnaire used was the Warwick-Edinburgh Mental Wellbeing Scale (hereafter referred to as WEMWBS; Tennant et al., 2007), chosen as it specifically measures subjective wellbeing. The measure has been subject to substantial reliability testing and was found to be of high reliability and robustness (Bartram, Sinclair &Baldwin, 2013; Clarke, Friede et al., 2011; Foot, 2012; Lloyd & Devine, 2012; Stewart-Brown et al., 2011). It is also used as a national indicator for subjective wellbeing by the Scottish Government (2007). Permission for use of WEMWBS was granted (Appendix 4). Data was collected via email and Typeform (an online questionnaire design website www.typeform.com) and further analysis was carried out using Microsoft Excel and IBM SPSS Statistics 22.

Following each module, participants were asked to complete the WEMWBS scale and to answer four qualitative questions relating to the course and their own subjective wellbeing (as in Appendix 8). Firstly, they were asked to indicate whether they thought that their happiness had increased, decreased, or stayed the same, since the last session. Secondly, they were asked "are you able to explain why, including some examples if possible?" Thirdly, participants were asked to write down some keywords relating to how they have been feeling since the last session (positive or negative). Finally, they were asked whether they had applied any of the techniques from the last module and to give examples if possible.

Procedure

Participants were asked whether they would like to partake in the main study (undertaking eight LLTTF modules and corresponding WEMWBS questionnaires), or whether they would like to be part of the baseline study (solely completing the weekly WEMWBS questionnaire with no intervention). This method of self-selecting meant that the researcher had no control over how many or which participants were involved in each version of the study. The utilisation of the baseline sample group provided insight into the natural fluctuations in subjective wellbeing experienced by the general population when not involved in an intervention.

Participants began by completing the Initial Happiness Questionnaire (hereafter referred to as IHQ; Appendix 5), which obtained information on demographics and history with mental health conditions, thus providing a screening mechanism. Eligible participants were then emailed a registration document, including the Initial Email (Appendix 6) and information on how to access and register with the LLTTF website in the Participant Handbook (Appendix 7). Participants were encouraged to start Module 1 and to return the Module feedback document (including WEMWBS and open-ended questions; Appendix 8) to the researcher. This pattern was repeated weekly with the subsequent modules using a weekly email template (Appendix 9). Participants were encouraged to set a reminder at the same time each week on their mobile phone or elsewhere. A reminder process was in place, whereby if participants had not returned the module within a 3-day window, a reminder email was sent to them (Appendix 10). While doing one module per week was suggested, some participants adopted different spacings for them. Once participants had completed all eight modules, they were asked to fill out the final Post-Project Questionnaire (hereafter referred to as PPQ: Appendix 11), to provide feedback on their experience with the programme. In the baseline study, participants did not complete the LLTTF course. They completed one WEMWBS and open-ended question document each week (see Fig. 2) and returned it via email to the researcher.

Figure 1. Timeline for Intervention Group

Step 1
- Recruitment via Initial Happiness Questionnaire (IHQ) (81 respondents)

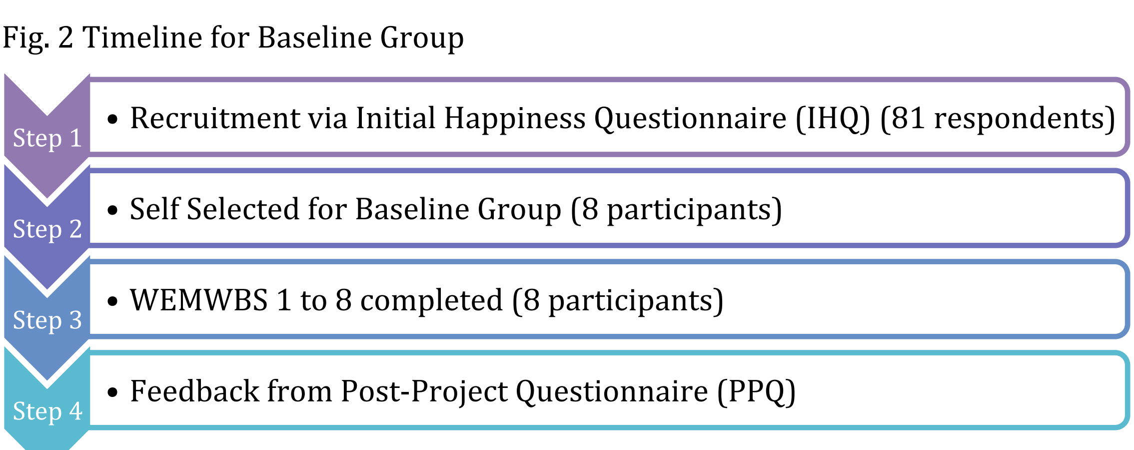
Step 2
- Self-selected for Intervention Group (20 participants)

Step 3
- Registration Email Sent

Step 4
- Modules 1 to 8 Completed (20 participants)

Step 5
- Feedback from Post-Project Questionnaire (PPQ)

Fig. 2 Timeline for Baseline Group



<u>Further Notes on Procedure</u>

Although WEMWBS measures subjective wellbeing, as mentioned by Diener (2000, p.34) subjective wellbeing is "a more scientific-sounding term for what people usually mean by happiness". Therefore, for the purposes of this study, the term 'happiness' was selected as the best fit for participant understanding and used accordingly.

In addition to the methods outlines, several semi-structured interviews were undertaken with randomly selected participants, both pre- and post-project. The pre-project interviews were used to decide the scope and direction of the subsequent weekly mini-diary questions and feedback questionnaires. The post-project interviews were conducted with the intent of securing additional information for the PPQ. However, it became clear that participants had conveyed the full extent of their views on the project within the PPQ. Therefore,

although not formally included in this study, the post-project interviews can be viewed as informal confirmation of the main points posed here.

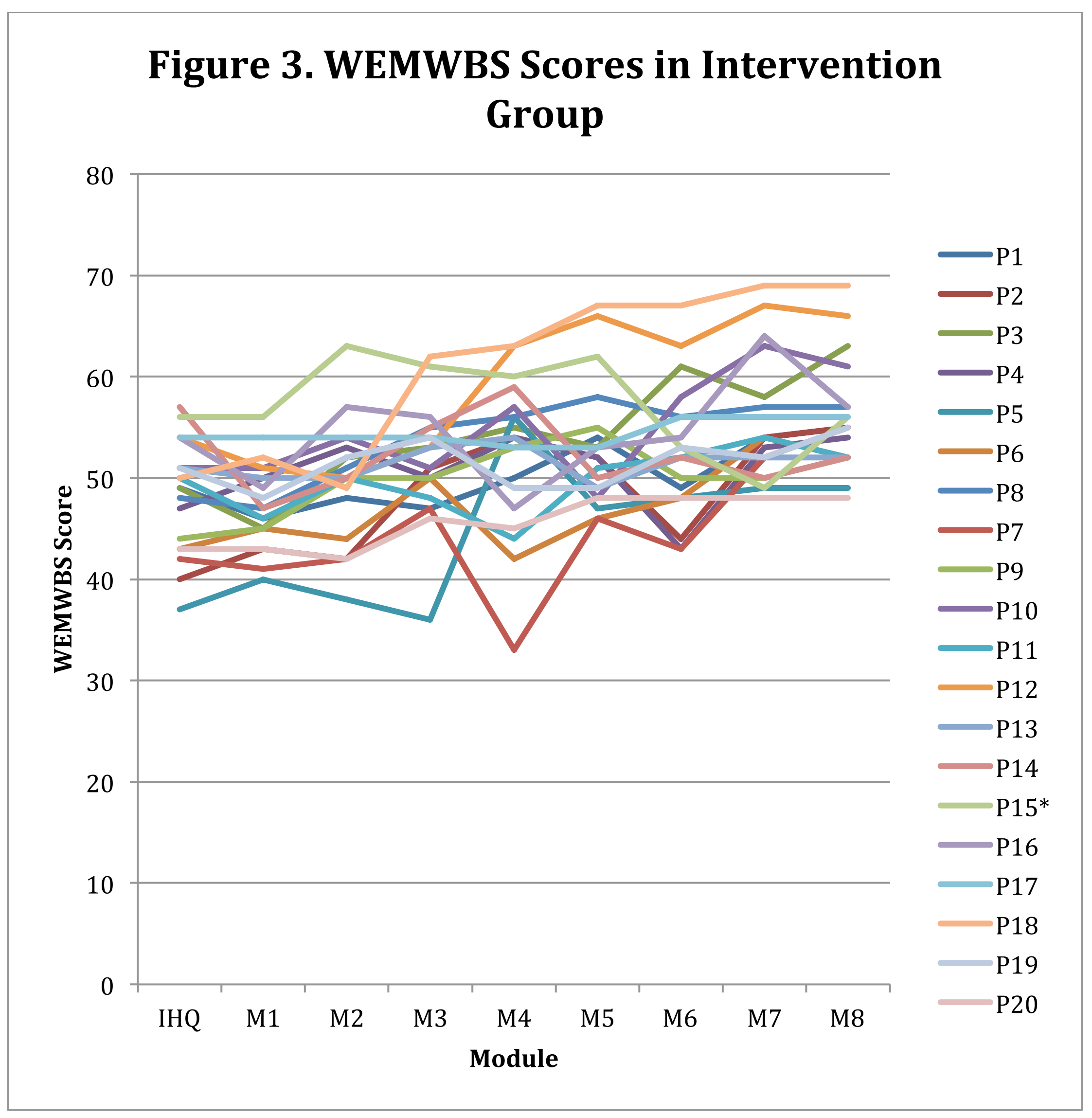
Results

Upon analysis, it was revealed that over the course of the 8 modules, 19 of the 20 intervention group participants showed an increase in subjective wellbeing. This equates to a 95% success rate in increasing subjective wellbeing through use of the LLTTF programme. Furthermore, as will be discussed in the qualitative analysis, the one participant who did not show an increase had experienced a negative external situation towards the end of the LLTTF programme: the demise of a relationship (P15, denoted with asterisk in Fig. 1).

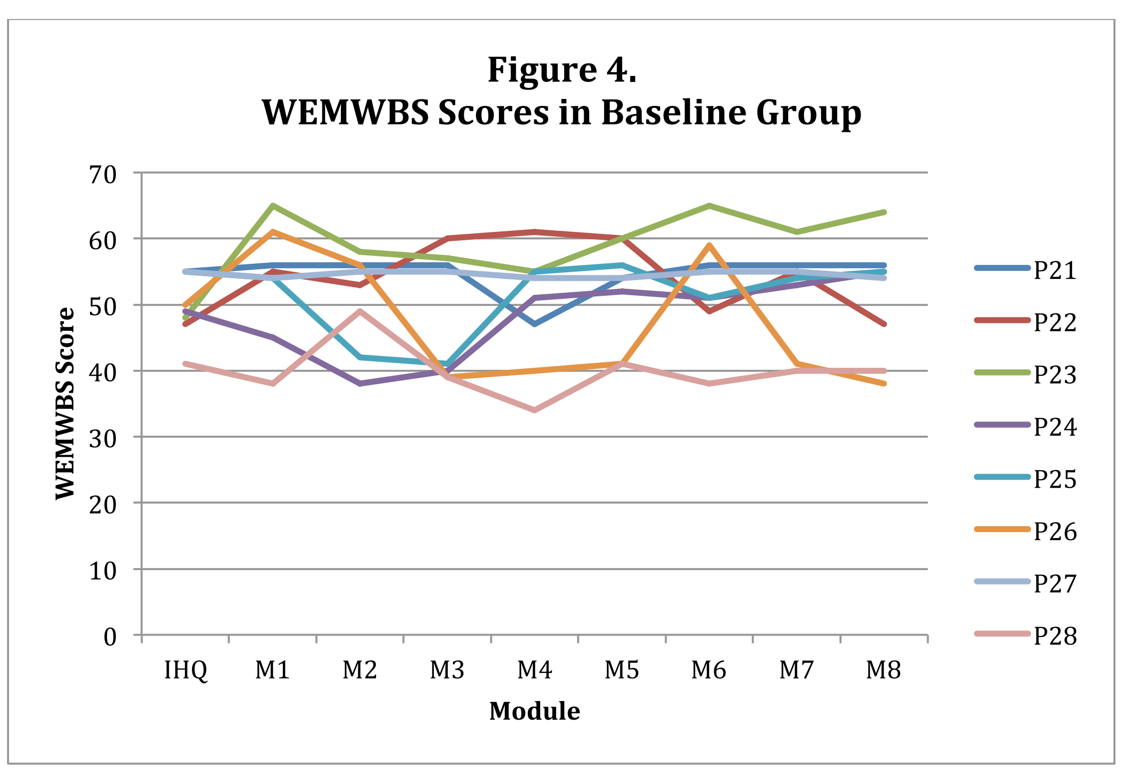
A note on codes used in Figures 3 to 8

Code	Meaning
IHQ	Initial Happiness Questionnaire (i.e. first WEMWBS completed)
M8	Module 8 (i.e. final WEMWBS completed)
e.g. P1	Participant 1
BL	Main baseline study group (completed 8 x WEMWBS throughout project)
BL2	Secondary baseline group (completed 2 x WEMWBS at beginning and end of project)

In order to investigate this result further, a paired-samples t-test was carried out. This showed a significant increase in subjective wellbeing between the initial WEMWBS questionnaire (M = 48.30, SD = 5.23) and the final WEMWBS questionnaire (M = 56.20, SD = 5.55) in the experimental group, where $t(19)$ = -6.616, p = <.0005; d = 1.47, which was found to exceed Cohen's (1988) convention for large effect (d = .80). Furthermore, a sign test confirmed this significant increase, where Z = 3.56, p = .001. These findings are illustrated in Figure 3.



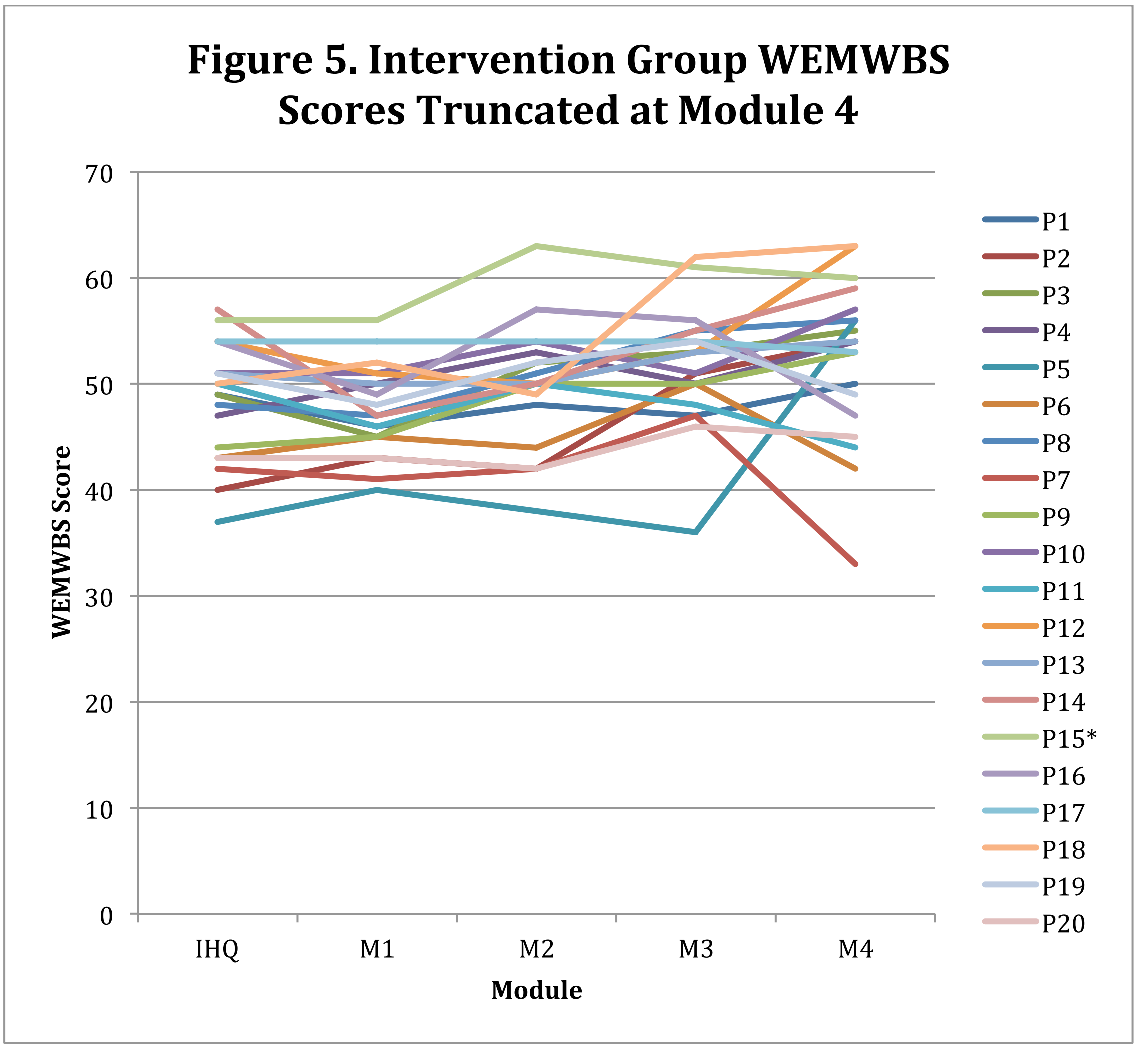
The same test was carried out on the baseline group data (Fig. 4), but the results did not reach significance. Furthermore, the difference in means was 0.082 for the baseline group, as compared to 7.9 in the intervention group. Therefore, we see a much greater increase in subjective wellbeing in the experimental group.



An independent samples t-test was carried out, examining the difference in subjective wellbeing scores from the initial time point (IHQ) to the final time point (Module 8: M8) between the two groups. The difference in each participant's summed mean was found by subtracting the IHQ score from the M8 score. The experimental study group (M=7.15, SD = 5.74) was found to have produced a significant positive difference in subjective wellbeing score at the end of the experimental procedure when compared to participants from the baseline group (M = 1.12, SD = 7.83). In this instance, $t(26) = 2.261$, p=.032. Therefore, there was a greater increase in subjective wellbeing in the experimental group than in the baseline group.

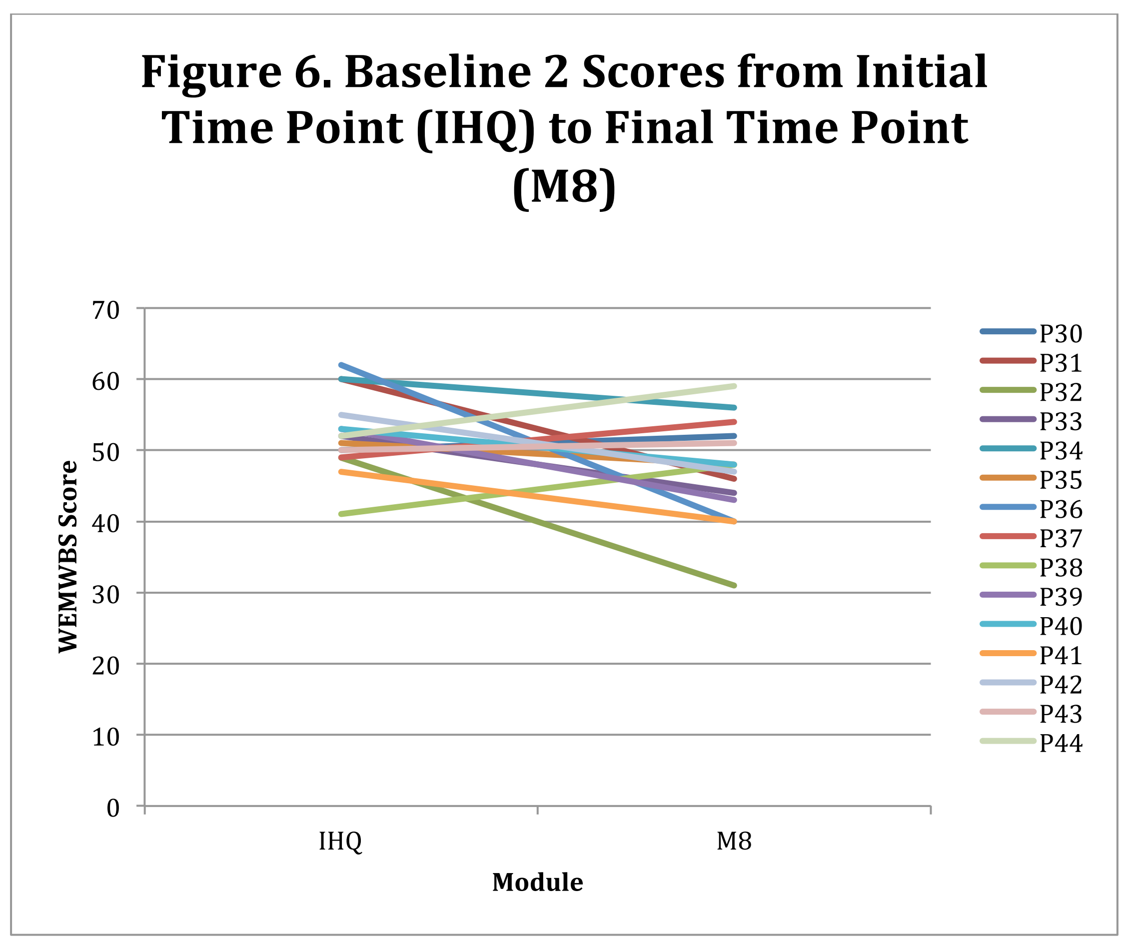
As an illustrative measure, analysis was undertaken to determine whether this same effect would have been present had the trial been truncated at Module 4 (i.e. half way through). The researcher had initially considered truncating the project at Module 4, due to anticipated problems with longitudinal participant commitment. However, full completion of the 8-module course was recommended by the developer of LLTTF (Dr Chris Williams, personal communication, April 15, 2015) and, as previously discussed, 100% of

participants did indeed complete the full programme. The original significant result shown in the paired-samples t-test was not replicated in the case of truncation (see Fig. 4), and had the project concluded at this time point, 6 (30%) of the participants would have decreased in subjective wellbeing since the beginning of the programme. This suggests that the full 8-module long course was necessary to increase subjective wellbeing in this non-clinical sample.



As previously noted, 81 individuals initially expressed interest in participating in this study, however, only 28 began the trial. The researcher re-contacted the 53 individuals who had previously shown interest and asked them to complete one final WEMWBS questionnaire, around the time that the other sample groups were completing Module 8. Fifteen responded, constituting a "Baseline 2" group and providing an illustrative snapshot of the subjective wellbeing patterns of a

sample which had experienced no contact or discussion on their subjective wellbeing whatsoever, a true glimpse at the natural fluctuations of subjective wellbeing in a non-clinical sample. As Figure 6 shows, 10 (66.7%) of the second baseline (BL2) participants had in fact decreased in subjective wellbeing score from IHQ to M8 time points. Again, this shows a similar pattern to that of the baseline group (Fig. 7), in that no overall increase in subjective wellbeing was found. This supports the hypothesis that the intervention group were indeed positively influenced by the LLTTF programme (Fig. 8), regardless of both random and systematic (e.g. time of year) fluctuations in the population.



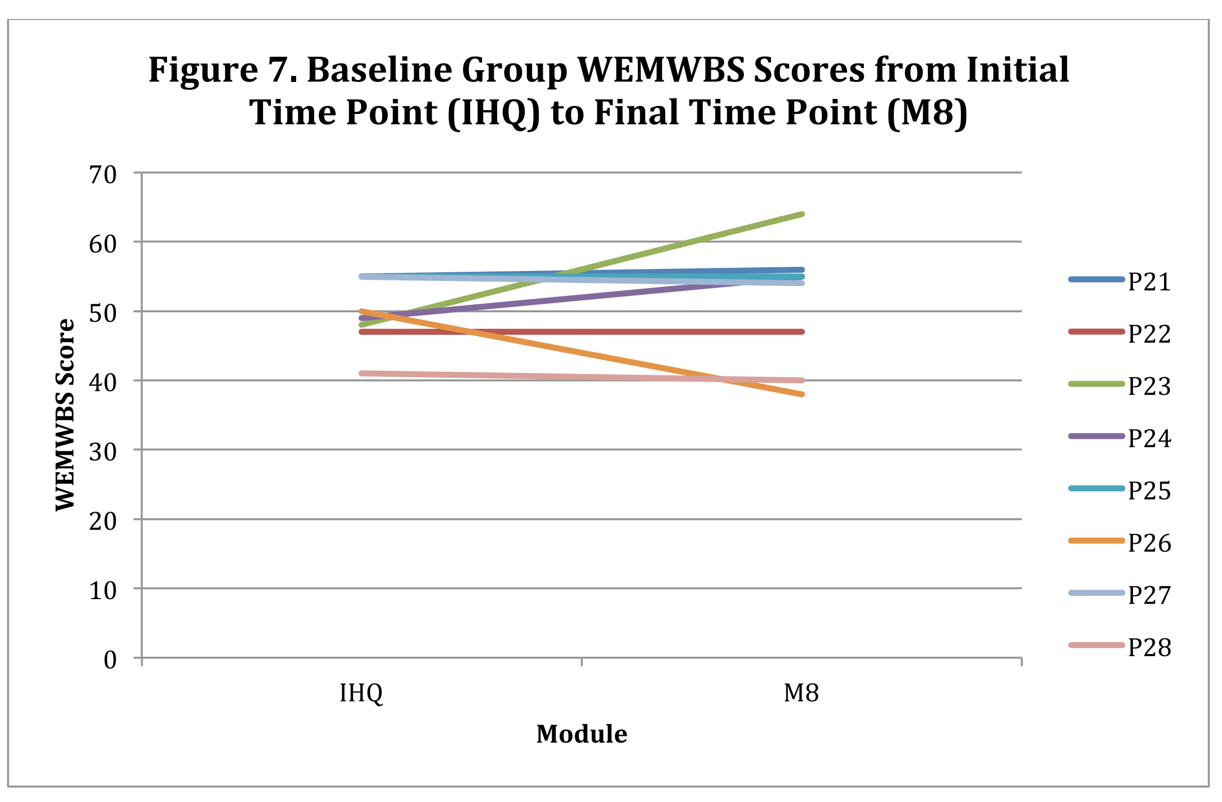


Figure 7. Baseline Group WEMWBS Scores from Initial Time Point (IHQ) to Final Time Point (M8)
WEMWBS Score
70
60
50
40
30
20
10
0
IHQ
M8
Module
P21
P22
P23
P24
P25
P26
P27
P28

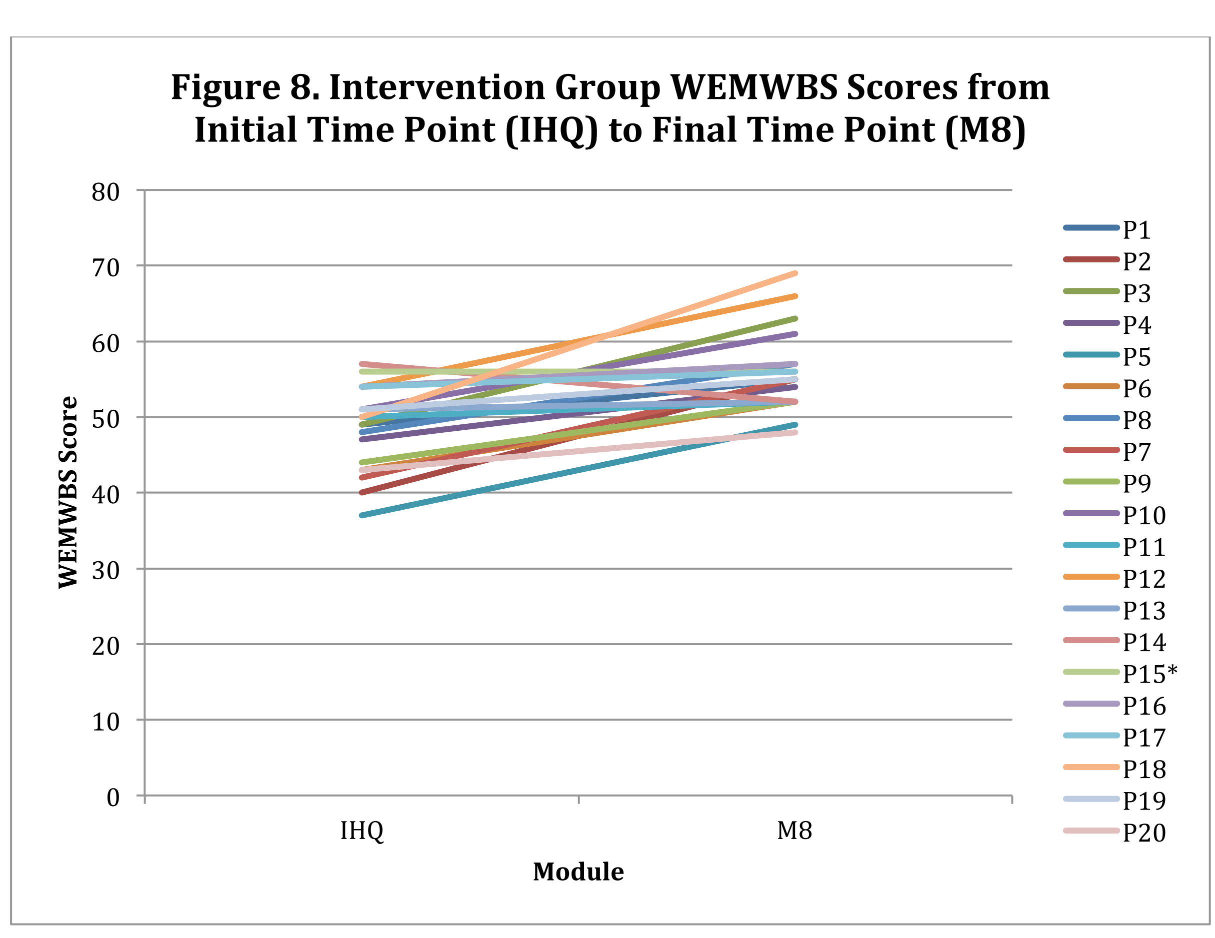


Figure 8. Intervention Group WEMWBS Scores from Initial Time Point (IHQ) to Final Time Point (M8)
WEMWBS Score
80
70
60
50
40
30
20
10
0
IHQ
M8
Module
P1
P2
P3
P4
P5
P6
P8
P7
P9
P10
P11
P12
P13
P14
P15*
P16
P17
P18
P19
P20

Qualitative Results

There were two main forms of qualitative data provided by participants; weekly mini-diary entries (Appendix 8), and a post-project questionnaire (Appendix 11).

A note on reading this section:

Code	Meaning
LLTTF	*Living Life to the Full* online CBT programme. Also referred to as "the programme" or "the course".
PPQ	Post-project Questionnaire i.e. feedback form
e.g. P9Q1	This refers to a comment made by Participant 9 in Question 1 of the PPQ. This will be followed by an Appendix number where the response can be seen in full
e.g P7M2	This refers to a comment made by Participant 7 in their Module 2 feedback.

Theme 1: Opinions on LLTTF Course Content and Delivery

<u>Positive Aspects of LLTTF for the non-clinical sample</u>

Participants were asked to discuss the aspects they had most liked and least liked about their experiences with LLTTF. Firstly, as illustrated in Appendix 12, many of the techniques were found to be relevant, relatable, and useful.

"*There are things within these lessons which are quick and easy to do and don't require much of a lifestyle change but could be a step in changing my behaviours." (P4Q9)*

In fact, all but two of the experimental group participants indicated that they intend to continue using one or more of the techniques they had learned in future, citing their ease of use (P2Q9; P3Q9; P4Q9;P17Q9; P6Q9;P13Q9) and ability to put negative thoughts into perspective and to focus on the positive

(P1Q9; P7Q9; P8Q9; P9Q9; P12Q9) as reasons for continued use (see Appendix 12).

Secondly, many participants reported they felt an overall increase in happiness upon completion of the LLTTF programme. For example, P3Q2 notes "*I think it made me happier in the way that I always used to feel I was powerless to change. I feel like I now know I can take control of everyday situations, to bit by bit improve myself and become an easier going, happier person*." The appendices provide further reports on the positive changes in happiness experienced by participants (Appendix 13) and the extent to which LLTTF addressed their needs (Appendix 14).

Negative Aspects of LLTTF

However, several participants took umbrage with certain aspects of the course. Firstly, the tone, approach and delivery of the course content were reported by 28% in the PPQ as one of the least-preferred aspects of the course (Appendix 15). P10M7 called it "*preachy*", P6M8 branded it "*borderline patronising*", whereas P7M8 felt the approach was "*like reading a lifestyle magazine*"(see Appendix 16).

It is important to note, however, that these comments pertain to different modules and different advice within these modules. Therefore, although grouped together they appear to be a substantial argument against the course, this may be better interpreted as another example of the subjectivity and diversity of individual differences. Perhaps a more balanced approach could be a quote from P20M1, who felt that "*the examples given in the module were over-simplifications of the challenges we face in real life.*"

One Size Fits All Approach

Participants noted a disinclination towards the 'one size fits all' approach of the programme. "*I feel the one size fits all approach is the biggest flaw in this programme. It fundamentally fails to recognise the nuances of each individual and their circumstances and generalises to the point of irrelevance*" (P6Q4).

They highlighted that the LLTTF programme was "*developed by someone who doesn't know anything about me*" (P6M7). This is reflected by the results from the PPQ, which state that, for 61% participants, the 'one size fits all' approach as one of their least-preferred aspects of the course (See Appendix 15).

Participants felt that their needs could have been better met through a more interactive, personalised process or programme (See Appendix 17). As noted by P12Q4: "*One thing about mental wellbeing and mental illnesses is that everyone goes through different things, and there is not one framework that can fit everyone*." P6Q12 further asserted that "*Individuals are not uniform — even if they are clinically in the same 'bracket'*."

Ultimately, however, participants created a mixed intervention for themselves, using some modules thoroughly and disregarding others entirely, according to their own needs. As noted by P7Q2:

"*Some weeks it was particularly useful, and I could identify quite easily with the information being given and apply it to certain scenarios in my life, and my own attitudes. Other times it felt a little bit off the mark, a bit patronising, and not something which I would really integrate.*"

Theme 2: Online Dissemination

One aspect of this project was to determine participants' perceptions towards using an online mental wellbeing resource. Participants found the online delivery of the course was accessible (P6Q3), private (P13Q3, P10Q10, P11Q6) and easy to use in daily life (P7Q6, P8Q10) and in allowing participants to "dip [their] toe into CBT" (P13Q3).

"*I feel that the online approach is a very viable tool for people who perhaps don't require an intense CBT course but perhaps want to concentrate on one or two key areas and also not having to be tied down to complete the modules at a certain time in a certain place makes the course more accessible to all.*" (P13Q6)

"*You can address and consider issues in a confidential environment*" (P11Q6) (See Appendix 18 for further support of online dissemination).

In fact 65% of participants reported that the privacy and convenience afforded by online CBT was one of their most-preferred aspects of the course, while 80% reported the same in terms of the convenience of access it afforded them (Appendix 15). However, there were some participants who felt the online delivery lacked human incentive "I think it [online dissemination] can help if you are motivated, but it is easy to forget about it when there is no 'real person' to let down" (P2Q6, Appendix 18).

Theme 3: Intentional Actions, Motivation, and Behaviour Changes

Many participants reported making proactive changes based on the advice they received from LLTTF. For example, P7M3 bought a bicycle to encourage her to exercise more, P13M2 cleaned out her kitchen and attic to charity, P20M3 began cooking again, while P3M3 "*followed big plan to improve relationship with parents*".

Increasing exercise was the intentional change reported most frequently in the mini-diaries (P8M2, P14M2, P11M8, P17M2, P6M3, P13M3), with P1M3 summarising this trend: "*I started exercising again which made me feel good.*"

These intentional activities are illuminating in that they show the breadth of impact that involvement in the LLTTF course had on participants' daily lives, empowering them towards positive change (see Appendix 16). As P8M3 puts it, she felt "*motivated to action*" by the course.

Future Actions

Seventeen of participants (85%) noted that they would change things or do something differently following their involvement with the programme (see

Appendix 19). Examples of the intended changes offered by participants include: intentional change in actions and behaviours (P3Q8: "*I will drink less as I know this causes some of the issues I want to change*"), change in thought patterns (P4Q8: "*I think I will think about my behaviour a bit more and perhaps try and put into practice as much of LLTTF as I can*"), self-reflective changes (P20Q8: "*At a basic level, I shall certainly examine my daily attitudes and behaviour more closely*") and happiness-related changes (P11Q8: "*I will take stock of happiness levels on a regular basis*"). This shows an increase in motivation to positive change and a shift to focus on their subjective wellbeing.

Theme 4: Self-Reflection

Table 1. presents illuminating data in which participants reported on active changes they have perceived in themselves since completing the course was also collected. Participants were notably more aware of their own mental wellbeing (79%), thought of their mental wellbeing more often (84%) and reflected on their mental wellbeing more often (63%).

Table 1. Reported changes in participants throughout programme

Regarding mental wellbeing and this course, please tick those which apply	***% participants who reported an increase***
I have found myself thinking about my own mental wellbeing more often	*84*
I feel more aware of my own mental wellbeing	*79*
I have found myself thinking of the mental wellbeing of others more often	*68*
I have an increased understanding of mental health issues	*68*
I have an increased compassion for those suffering from mental illness	*63*
I am more aware of the potential stigma associated with mental health	*63*
I have been reflecting on my own mental wellbeing more often	*63*
I have found myself discussing mental wellbeing with others more often	*42*
I have actively searched for information on mental wellbeing more often	*16*

Having time to reflect on their state of mental wellbeing was revealed as a valuable asset to participants. As mentioned in Theme 2, participants reported that they had gained new insights into their own psychological wellbeing which will inform future behaviour (See Appendix 19). Having the time to reflect and the chance to document thoughts and feelings relating to their happiness appears to be an agreeable feature of the course. Indeed a notable 100% of participants reported having the opportunity to reflect on their own mental wellbeing as one of their most-preferred features of the course in the PPQ (Appendix 15); For example, P7Q2 notes "*I think the opportunity to take time out and reflect was really valuable. Actually this isn't something we do often*".

P19Q12 observed "*This project has given me the chance to really take a step back and think about what's making me happy*" (Discussion of the self-reflective properties of the programme is further elucidated in Appendix 20). Moreover, it is worth mentioning that this narrative on self-reflection was unprompted by any information or questions from the researcher, yet many participants explicitly reported experiencing it.

An important distinction to make is that this increase in perceived self-reflection was not exclusive to the experimental study group and was the case even in the baseline group. P27M2 noted "*The questionnaire makes you really think more about your mental wellbeing and what's affecting you on a weekly basis"* This ability to reflect extends to aspect-specific contexts. For example, P26 discusses that his awareness of how loved he consistently feels, regardless of "*fluctuations*" in other areas of his subjective wellbeing, is something he "*would not have consciously taken note of this had I not written it down during each session*." (P26M8).

Theme 5: Non-Clinical Grasp on Objective Reality

CBT was designed for those who are plagued by depression, anxiety, and other clinical conditions. Online CBT is no different in its aim to motivate such people out of these negative thought cycles. However, in this study, it is clear that, even when experiencing difficult situations, non-clinical populations maintain a firm grasp on their perspective and objective reality. For example, P26M3 manages to maintain an optimistic perspective even though current events are perceived as stressful: *"Time is passing quickly and the fear has decreased my day-to-day productivity and is causing me not to be able to think clearly [however] Next week will be better!"*

Although the demise of P15's relationship had a clear impact on her subjective wellbeing score (Fig. 1), it did not serve to extinguish her positive perspective. Although her chosen keywords for Module 8 are "*sad, distracted, disappointed, angry*", she also notes that "*I know it won't be the end of the world*" (P15 M8). P8M8 furthers this concept of objective, measured understanding of current

situations; "*You know that bad times won't last for ever, just as the good times don't either*"

Furthermore, as previously discussed, P7 experienced an evident dip in subjective wellbeing around Module 4 (Fig. 1). Upon analysis of her qualitative data, however, we encounter a very healthy evaluation of the reason for this: "*Exam period – so very stressed, unsettled and generally lower in confidence than usual. Though I wouldn't say I have a negative outlook, I think I am still overall quite positive, just tough period."* (P7M4)

Indeed, the concept of 'the future' did appear to play a large role in many participants self-reports of their current subjective wellbeing, as both a source of excitement and a source of worry (Appendix 21).

Theme 6: Social impacts: Stigma Reduction and Awareness of Others

As illustrated in Table 1, participants perceived an increase in their understanding of mental health issues (68%) and aware of the stigma surrounding mental health (63%). Furthermore, 42% noted that they now discuss mental health with others more often, while also finding themselves thinking of the mental wellbeing of others more often (68%)

This is reflected in the empathy for those experiencing mental health difficulties, as discussed in Appendix 22.

"*Listening to some of the more depressing modules made me feel great empathy for people who are actually in these situations and who find it difficult to be positive about anything in their lives*" (P13Q11)

Many professed an increased understanding of why tools such as LLTTF would be beneficial for clinical populations. Furthermore, 42% participants noted that their involvement with the course had encouraged them to discuss mental wellbeing with others. In sum, this evidence (illustrated in Appendix 22) points to the possibility that regular consideration of one's own mental wellbeing,

through a course or otherwise, can lead to increased consideration for the mental wellbeing of others too. Additionally, it was reported to be successful in increasing understanding of mental health conditions (P18Q6).

External Factors

External factors such as; the weather (P1M5 : P6M5 ; P18M5 ; P11M1), the wellbeing of others (P13Q12; P8Q12), societal structures and political elections (P6M2, P20M8), going on holiday (P19M8), getting a new job (P9M5; P10M5), money worries (P2M1; P3M1; P5M1; P10M1; P19M1), exams (P7M2; P16M2, P26M5) and interactions with others (P8Q6, P13Q12) played significant roles in many participants' responses.

Discussion

Quantitative Data Discussion

Overall, this study was successful in determining that using an existing online CBT resource can increase subjective wellbeing in a non-clinical population. This suggests that a wide-scale roll-out of LLTTF for non-clinical populations could be undertaken with little reservation, as will be further discussed.

Subjective wellbeing increased significantly in the intervention group both on average and individually in 95% of participants. Furthermore, the main baseline group (BL) did not show a significant increase in subjective wellbeing (Fig.7), nor did the second baseline group (BL2; Fig.6). This suggests that the intervention was the cause, rather than natural fluctuations in happiness which may be expected in the general population.

These findings are in line with previous studies on clinical populations, which note that online mental health resources are effective in reducing a variety of psychological issues (e.g. Andersson, 2009; Carlbring et al., 2004; McClay et al., 2013; Sanchez-Ortiz et al., 2011). Furthermore, this is also in line with research which suggests that positive interventions are successful in increasing subjective wellbeing (e.g. Scheuller & Parks, 2012; Sin & Lyubomirsky, 2009).

Qualitative Data Discussion

Theme 1: Opinions of the LLTTF Course Content and Delivery

Participant reports on their discontent with the 'one size fits all' approach to the programme may have suggested that LLTTF failed to resonate with service users' individualized concerns. Indeed, participants explicitly expressed a need for the recognition and provision for more subtle individual nuances and a more individually tailored approach. However, as noted in the results, ultimately, participants created a mixed and personalised intervention for themselves, using some modules thoroughly and disregarding others, according to their own needs

and interests. Furthermore, despite complaints on the rigidity of the 'one size fits all' approach, participants persisted in their use of the programme right through to completion. Participants did not report continuing for social desirability reasons, and were also enthusiastic about providing feedback, suggesting that they derived something inherently enjoyable from the programme and thus valued the process enough to want to discuss their experiences. Furthermore, participant subjective wellbeing did indeed significantly increase, thus, it may be concluded that the benefits experienced eclipsed their discontent towards the generalised approach.

Furthermore, as noted, online mental health tools are efficacious for clinical populations, therefore, until this point, there has perhaps been little need to address the personalisation of the programme, as results using LLTTF as it stands were already positive. However, as this was the main issue reported by participants, addressing it may lead to even more promising results in relation to non-clinical outcomes. For example, if modifications were to be made in order to make the process a more personal and interactive one, this may further increase the impact of the programme, making it more relevant to non-clinical individuals.

Interactive Personalised App

This could be addressed by the development of an LLTTF application (or 'app') for mobile devices and tablets (as promoted in the field of mHealth), whereby individuals would select the issues which are pertinent to them personally and this would shape their progression through each stage of the programme. One notable drawback of LLTTF is its incompatibility with anything other than desktop computers, which, as noted by several participants (e.g. P13Q3), was an inconvenience. Support for this proposal is provided by Levin (2012) who discusses the growing creativity in the development of apps for more personalised mental health care on more accessible devices. Indeed, some participants even alluded to the use of such ideas unprompted (e.g. P15M7: "*Luckily I have found a new app for mindfulness and it has surprisingly helped me. It would be good if LLTTF came this way too*."). These suggestions, however,

would involve the redevelopment of an already effective programme and it is important to note that, since every participant completed the full programme, it suggests LLTTF is already efficacious for non-clinical populations in its current form, regardless of criticisms and calls for personalisation. However, if such a programme was rolled out to target non-clinical populations, this may have implications for those with less pre-existing interest in guided self-help. This will be further discussed in the future research section.

Theme 2: Online Dissemination

One aspect of this project was to determine participants' perceptions towards using an online mental wellbeing resource. Support for this method of delivery was evident in the participants' qualitative responses (Appendix 14). The online delivery of LLTTF was considered accessible, private, easy to use and flexible by the non-clinical sample, with 67% selecting it as one of their most-preferred aspects of the course. Therefore, this suggests ample support for the continued use and development of online mental health resources and is in line with mHealth theory (e.g. Levin, 2012).

These results were consistent with the literature on the success of existing online mental health tools for clinical populations. Indeed, this method of delivery was found to be cost-effective (e.g. Marks, 1999; Proudfoot, 2004), popular with participants (e.g. NICE, 2006), easy to use and to access (e.g. Zabinski et al., 2003) and effective in raising awareness of mental health conditions (e.g. Graham et al., 2000).

Proudfoot (2004) also notes the importance of the 'non-specific factors' which often bring success to therapy, such as therapist empathy and regard for the patient, and ability to motivate through communication. Such aspects are indeed lacking in online therapeutic treatment. However, the question of whether such factors will be as important to a non-clinical population as to a clinical one ought to be considered. Indeed, NICE (2006, p.22) found that enabling patient choice between different methods of delivery increases motivation to comply when undertaking treatment unaided.

Theme 3: Intentional Actions, Motivation, and Behaviour Changes

The results also provided details on activities that participants chose to either engage in or desist in doing as a reported influence of the LLTTF programme. These intentional activities are illuminating in that they show the breadth of impact that involvement in the LLTTF course had on participants' daily lives, empowering them towards positive change. As P8M3 puts it, she felt "*motivated to action*" by the course. Indeed, this is in line with previous research by Lyubomirsky and Layous (2013) who found that actively considering one's wellbeing and then engaging in intentional positive activities can in fact lead to increased happiness, and by Rashid (2014) who notes that subjective wellbeing can be increased through conscious recognition and acknowledgement of positive emotions. Thus, it could be concluded that LLTTF is effective in empowering non-clinical populations towards positive change and in motivating them to action.

Theme 4: Self-reflection

A key emergent topic was that of self-reflection. As shown in Appendix 16, participants reported that their involvement with the LLTTF programme had considerably increased their reflection on both their own mental wellbeing, and that of others. It is worth mentioning that this narrative on self-reflection was unprompted by any information or questions from the researcher, yet many participants explicitly reported experiencing it.

This increase in self-refection suggests a move towards the Aristotelian concept of eudaimonia, whereby those who strive to live a flourishing life (i.e. of moderation, self-actualisation, and *reflective action*) have the highest wellbeing and therefore are the most likely to experience happiness. Thus, as discussed by Stein and Grant (2012), one's reflective abilities may increase in conjunction with one's subjective wellbeing. This exemplifies a further benefit of a non-clinical population's involvement with a tool such as LLTTF; a more reflective, informed, and insightful general population. Such results may even suggest that using a programme such as LLTTF may be a useful training tool for clinicians

interested in this applied area and in the prevention of non-clinical individuals moving towards the clinical threshold.

Theme 5: Non-Clinical Grasp on Objective Reality

It was found that intervention group participants had a firm grasp on objective reality, shown in their ability to rationalise present worries and concerns. This realistic perspective provides examples of the resilience and perhaps inherent optimism of non-clinical populations (e.g. Shapira & Mongrain, 2010). Often, a participant would discuss current low mood but mediate this with positive future assertions, thus suggesting that negative affect is often just circumstantial or temporal. This contrasts with clinical populations who have trouble conceptualising a brighter tomorrow when wrapped in the despair of that moment (e.g. A. Williams, 2001). Certainly, the importance of nurturing and enhancing this optimistic, resilient, and positive perspective on life is a key aim of Positive Psychology, as this leads to increased subjective wellbeing (e.g. Scheier, Carver & Bridges, 2001). LLTTF could therefore be said to nurture and enhance non-clinical populations' pre-existing grasp on objective reality. The increased reflection, recognition, and awareness of the importance of mental wellbeing provided by this tool benefits not only the individual, but wider society as a whole.

Theme 6: Social impacts: Stigma Reduction and Awareness of Others

As illustrated in Table 1, participants perceived an increase in their understanding of mental health issues (68%) and aware of the stigma surrounding mental health (63%). Furthermore, 42% noted that they now discuss mental health with others more often, while 68% also find themselves thinking of the mental wellbeing of others more often. In summation, this evidence (illustrated in Appendix 18) points to the possibility that regular consideration of one's own mental wellbeing can lead to increased consideration for the mental wellbeing of others too. Furthermore, rolling out a programme such as this on a large scale, and engaging non-clinical individuals in its use may serve to positively abolish stigma towards clinical patients from non-clinical individuals. This could provide increasing positive attitudes towards those with

diagnosed mental health conditions and increased general population understanding of the nature of mental wellbeing.

This is in line with aforementioned discussion on mental health within public health and policy as well as literature from Positive Psychology. Indeed, Ryan and Deci (2011, p46) suggest that happiness is fostered by “reflective, purposive living in accord with deeply held social values”. As Seligman (2011) notes, wellbeing cannot exist solely in one’s head, but also as a reflection of one’s social world. The context in which the individual exists plays an important role, and Positive Psychology recognises that inherent human capacities for growth, fulfilment, and wellbeing are often thwarted by psychological, sociocultural, and external environmental factors (Rashid, 2014). Bentall (2004) suggests that, in order to produce thriving individuals, communities, and societies, everyone needs liberation from restrictions, stigma, and prejudice. If the previously discussed literature is to be believed, wellbeing is a combination of positive affect in our current state while also deriving from building good relationships with others and a meaningful place in society. Indeed, one’s social context is deeply intertwined with one’s happiness and thus, working towards a society which understands and respects mental health may help to increase happiness and wellbeing.

Specific Cases

Although there was a significant increase in subjective wellbeing overall, several participants did show ‘dips’ (i.e. decreases) over time (Fig. 3). However, the use of qualitative data collection in addition to quantitative was very useful in providing insights into what had caused these decreases. In Fig. 3, we see, for example, a dip for P8 on Module 4. Cross-examination of the qualitative data provides a concise explanation, in that, during the fourth module, the participant was experiencing stress from university examinations, coupled with high levels of uncertainty about their future. By Module 5, however, P8 had bounced back, noting that they felt “more determined and focused”, demonstrating the mental resilience characteristic of a non-clinical individual as discussed in Theme 5.

This was also, the case with P15 (the only participant whose subjective wellbeing did not increase). The 'dip' in this case is pinpointed to be a negative external life event – in this case, the breakdown of the participant's relationship. Qualitative data provided insight into reasons for P8 and P15's unusual data which would have been otherwise inexplicable without narrative qualitative data to cross-examine.

One point worth emphasising is touched on by Ryan and Deci (2011), who discuss that the presence of negative affect does not necessarily equate to lower wellbeing. For example, becoming sad after losing a loved one may allow one to process their emotions regarding the loss and eventually lead to a healthier acceptance of the situation. This appears preferable to a veneer of simple happiness. This may indeed relate to several participants, who experienced and reported negative affect during the experiment, but whose overall subjective wellbeing quantitatively increased.

Study Design

The design of this study is considered justified, as it demonstrated that an online CBT course was successful in increasing subjective wellbeing in a non-clinical population. However, it is difficult to determine the extent to which this effect is due to the intervention itself or to positive expectations accompanying the self-selection by participants. Indeed, as noted by Seligman, Steen, Park and Peterson (2005), positive interventions are targeted at those who actively seek an increase in wellbeing. This will be discussed in the following sections, with regards to future research. However, the situation discussed in this study is one which is expected to be common in future use, in that future 'clients' show a pre-disposed interest in such a programme. Beyond individual self-help, public health and policy may aim for a further level of engagement in order to increase mental wellbeing in the population as a whole. This type of intervention could potentially be advocated and advertised in such a way that individuals feel more obliged to take part, as opposed to taking part autonomously, for one's own personal benefit.

Limitations

As an explorative study, there were several limitations experienced. Firstly, as the study progressed, it became clear that there were underlying theoretical factors which would be highly useful to measure. For example, the concepts of self-reflection, optimism, motivation, and resilience emerged as interesting sub-themes warranting further attention. Future research could measure all four factors both pre- and post-trial. Secondly, although it was suggested that participants complete one module per week to provide consistency, in practice, this often did not occur, with some participants completing one module every few days, and others completing one every few weeks. Fortunately, LLTTF's creator, Dr Chris Williams assured the researcher that this does not reduce comparability with his own previous studies, and that, in fact, completing the modules under their own impetus most likely provides the best service for participants, as some take longer to learn and internalise the process than others (personal communication, April 15, 2015).

Furthermore, it was considered pertinent to pose the critical question: had this experiment concluded two weeks earlier, or begun two weeks later, would subjective wellbeing still have increased overall? As seen in Figure 5, it appears that LLTTF would have not been successful in increasing subjective wellbeing had the project been truncated at Module 4. This reinforces the necessity of maintaining the length of this programme, suggesting there is no 'quick fix'. Indeed, critical appraisal of this project led to advice from Whitby (personal communication, June 2, 2015), who urges us to approach such new tools with caution, arguing that the success of one specific tool under trial does not automatically equate to the success of a counterpart tool. Again, this highlights the importance of moving towards a unified, tested and evidence-based prototype of the most effective version of CCBT available (Ragusea & Van de Creek, 2003). If such a tool can be created, the ability to measure outcomes and time-effectiveness and cost- effectiveness would be much improved. It certainly appears that LLTTF has the capacity to become this tool and fit comfortably into such a niche.

Future Research

This project opens up several interesting channels and its findings suggest many future research ideas.

1. New Target Populations: Borderline Clinical

Firstly, the participants in this study were categorically non-clinical, because rigorous screening had ensured that no participant had any diagnosed mental health condition, either in the past or at present. Thus, the sample population was far from the clinical threshold. An interesting further project could potentially investigate whether LLTTF would have the same positive effect on the subjective wellbeing of individuals who had expressed a need for mental health support or had sought treatment, but who remained undiagnosed, i.e. a sample who were closer to the clinical threshold. This borderline group could provide insight into the efficacy and strength of the intervention in a marginal, yet still non-clinical, sample.

2. New Target Population: Children and Young People

Another potential refocusing of this programme could bring it in line with current needs of children and young people, a population for whom computerised information dissemination is already the norm (e.g. Gross, 2004; Lee & Chae, 2007). Considering literature on the benefits of early intervention (e.g. Dadds et al., 1999; Ramey & Ramey, 1998) and also the messages from Positive Psychology, it seems pertinent that developing tools which can aid the strengthening and flourishing of children and young people's mental wellbeing could lead to a more mentally healthy and positive overall population. Evidently, this has implications for policy, government and funding, as an effort to move children and young people away from the clinical threshold at an early age could reduce potential reliance on mental health services in adulthood. Furthermore, educating children and young people on mental health at an early stage could foster an understanding, awareness, and empathy for those who experience mental health difficulties, similar to the effect seen in the present study. This could consequently produce a population who do not stigmatise or ostracise

those with mental health conditions. CBT has already proven popular and effective in use in child and adolescent mental health (Boyle, Lynch, Lyon & Williams, 2010). Suggestions on how to achieve this would centre on adjusting the LLTTF programme to become an educational tool, with CBT at its core and an engaging user interface, perhaps including sessions for parents. There already exist some web-based conceptualisations of this idea (e.g. BRAVE CCBT), however more accessibility and an intuitive interface with the ability to hold a child's attention could be the next step, for example for delivery on mobile devices and tablets.

3. Self-Select vs. Staying Power

Furthermore, as mentioned, the self-selection design of this study allowed freedom of choice between partaking in the intervention group study or the baseline study. Participants were not incentivised by payment or by any means other than the opportunity to undertake an online CBT programme. Although providing criticism of the course for some of its functions, each and every participant completed the full programme. This suggests a level of intrinsic motivation and self-insight may have driven these actions. Therefore, further research which focuses on a sample group who did not show such motivation (less interested in self-help, etc.) would provide insight into the tool's effectiveness across a wider population. For example, instead of relying on self-selection, a future project could offer payment for completion of Modules 1 and 2, stopping the incentive at that. Whether participants then chose to continue the programme through to completion after that would be a clear indicator of its ability to engage and motivate more reluctant participants.

Thus, in terms of overall future research, several factors still remain unclear. For example, a critical question for future research would be to determine how widely attractive such a programme is to the general population and to what extent the uptake and reactions would be as positive as those in this study. A further step would be to understand the self-selection aspect in more depth. For example, are participants driven by an intrinsic motivation to complete the course? Furthermore, follow up studies would be desirable to find long-term

effectiveness of the intervention in maintaining this increased level of subjective wellbeing Indeed, further studies should allow for follow up data to be collected at, for example, 3-monthly and 6-monthly intervals to measure subjective wellbeing maintenance and longevity. It is hypothesised that participants may show additional benefits of utilising this programme at such a time point, for example, increased self-reflection, optimism, and resilience.

Conclusions

This study has established that an existing online mental health tool for clinical populations can be effectively repurposed to fit the needs of a non-clinical population. Changes in healthcare focus at a governmental level, in response to a growing understanding of mental health needs, have led to an emphasis on the enhancement of individual and community mental wellbeing. The NHS's new co-production model, coupled with the increasing utilisation of the assets approach in government and policy, confirm a new prominence for supportive, interactive, and positive mental health care. Positive Psychology theory clarifies to the individual why this aforementioned readjustment in thinking can be beneficial on a personal level. This discipline encourages distancing oneself from the clinical threshold of diagnosed mental health conditions by focusing on the positive and striving to live a flourishing life. In providing resources to empower and inform individuals, communities, and societies on mental wellbeing, it may be possible to instil an understanding and resilience in the individual to facilitate effective handling of their own and others' mental health needs. Therefore, it would appear that there is great benefit to be found in the goal of strengthening our nation's overall subjective wellbeing, in a proactive rather than reactive manner. This focus would also lessen the strain on mental health funding and resources, becoming a bright modern beacon for the old adage that 'prevention is better than cure'. Further studies which centre on ascertaining the wider appeal of such tools in harder-to-reach populations and demographic groups may provide useful insight into the effectiveness of this tool in the variety of circumstances present in the general population. Indeed, there appears to be a niche for a unified, tested, and evidence-based mental wellbeing tool for the non-clinical population. It is suggested that this is a niche which LLTTF could

comfortably occupy and that a wide-scale roll-out of LLTTF for non-clinical populations could be undertaken with little reservation. Overall, it appears that LLTTF could be considered a classic self-improvement tool for those above the clinical threshold and could aid in the maintenance of their non-clinical status. The evidence suggests that policymakers, clinicians, individuals, and other active agents in mental health could invest a high degree of confidence in taking this concept forward. The increased subjective wellbeing and awareness it presents could benefit not only the individual, but society as a whole.

Final Comments: Future research synopsis

1. New target populations:
    a) Borderline clinical – does this have a greater or lesser effect on those who are closer to the clinical threshold?
    b) Children and young people – early intervention and its results on stigmatisation, awareness, and acceptance of mental health issues, as well as potential reductions in need for mental health support in adulthood and therefore reduction in public health costs.
    c) Less "enthusiastic" participants – i.e. this study's participants were non-clinical but self-selected to be involved, thus showed some level of intrinsic interest. Would it be as effective if presented to an unenthusiastic, non-self-selecting, non-clinical population?
    d) A special population of religious, and one of mindfulness-highly-trained. I.e. is CBT just a comparable way of processing your troubles, or distinct?

2. Longevity of effect:
    a. Does the effect last? Only immediate post-test done. Re-test at 4 weeks, 12 weeks, after completion to measure continued effectiveness (life-long skills as opposed to temporary relief). Test for well-being AND for whether they use the skills taught when needed Cf. mindfulness training.

3. Personalisation:
    a. Try to reduce their complaints about lack of (feeling of) personalisation by redesigning the app. and/or supplement it with other instructions and framing (this would require software updates etc)

4. Stigmatisation reduction:
    a. Participants noted that their opinions/attitudes have changed towards those with mental health conditions (e.g. greater awareness and empathy). Further pre/post testing necessary; implicit as well as explicit attitude tests; implications for policy, public health, and mental health awareness campaigns etc.

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Appendices

Appendix 1: Ethics Approval Letter

Professor P O'Donnell

School of Psychology
University of Glasgow
58 Hillhead Street
Glasgow G12 8QB
Tel.: +44 141 330 3606
Patrick.O'Donnell@glasgow.ac.uk

Glasgow, September 8, 2015

Ethical approval for:

Project Title: Increasing Subjective Wellbeing in Non-Clinical Populations via Computerised Cognitive Behavioural Therapy: A Positive Psychology Perspective
Application No: 300140109 Status: Lead Review
Committee: College of Science and Engineering Supervisor: Dr Stephen Draper

This is to confirm that the above application has been reviewed by the College of Science and Engineering Ethics Committee and **approved.**

However some key changes are required before the study commences. These are listed below.

"The proposal needs significant changes before being implemented. These can be technically described as minor since they involve mainly changes to the subject information form and to the subject screening process. The proposal is thus approved but conditional on making the following changes.

1 On the information sheet it has to be made very clear to the participant this is a positive psychology intervention and not a remedy for mental illness or serious unhappiness. Saying it involves 'a non- clinical population' is not explicit enough.

2. Subject screening: the screening questionnaire does not make explicit who will be ruled out as a participant. A criterion should be set of the participant having no mental health history of any kind. This should be made clear to the participants on the information sheet.
It should be stated on the information that "No participants will be chosen who have had any form of treatment for mood, anxiety, or for a psychiatric disorder, now or in the past". This statement should be placed under heading 4 in the information sheet. Participants should also be told this intervention will not cure mood or anxiety etc. symptoms.
3. Ambiguity of the Website as to whether this is a non- clinical intervention. The Website the participants are asked to attend gives the appearance of targeting CBT solutions to people with problems possibly of a psychiatric nature. The Website has a button called "Why does me feel so bad" and also a' Panic' button. This does not speak Positive Psychology. The site also offers links to CBT practitioners.

There is not much you can do about it but this is another reason for ensuring that the participants do not see the CBT intervention as a form of treatment for severe distress or for a mental health problem."

Good luck with the research.

Sincerely,

P O'Donnell

Professor Paddy O'Donnell

Ethics Officer

College of Science and Engineering

University of Glasgow

Appendix 2: Information Sheet

Information Sheet

1. Study Title and Researcher(s) Details

Increasing Subjective Wellbeing in Non-Clinical Populations via Computerised Cognitive Behavioural Therapy: A Positive Psychology Perspective by Cara Wilson and Dr. Steve Draper.

Thank you for expressing interest in participating in this research study. In order for you to fully understand why this research is being conducted and what it will involve, please read the following carefully.

3. What is the purpose of the study?

This study aims to ascertain whether the use of online Cognitive Behavioural Therapy tools will increase the subjective well-being (i.e. general happiness) levels of non-clinical participants (i.e. people who have not been diagnosed with a mental health condition). This is a positive psychology intervention, not a remedy for mental illness or serious unhappiness.

4. Why have I been chosen?

You have been chosen due to your willingness to take part in the 8-week long online CBT study and your non-clinical mental health status. No participants will be chosen who have had any form of treatment for mood, anxiety, or psychiatric disorder, now or in the past. This study does not provide a cure for mood or anxiety symptoms.

5. Do I have to take part?

If you decide against taking part in the experiment, you are free to withdraw at any point and any information or data you have thus far provide will not be used in the study.

6. Will my taking part in this study be kept confidential?

All information you provide to the researchers will be kept strictly confidential. All group results will be anonymised and all interviewees will be discussed using a pseudonym.

7. What will happen to the results of the research study?

The results will analysed and then reported and discussed in dissertation format and submitted to the University of Glasgow by August 2015. All results will be made freely available to participants.

8. Who can I contact if I want more information?

If further information is required, such as a summary of results or a copy of the final dissertation, please do not hesitate to contact the researchers by email: Cara Wilson (2155053W@student.gla.ac.uk) or Dr Steve Draper (s.draper@psy.gla.ac.uk).

Appendix 3 : Consent Form

Title of Project: Increasing Subjective Wellbeing in Non-Clinical Populations via Computerised Cognitive Behavioural Therapy: A Positive Psychology Perspective

Name of Researcher (s): Cara Wilson and Dr Steve Draper

If you agree to participate in this study then please read the following statements and sign your name below to indicate your consent.

- *I consent to participation in this experiment as explained in the Information Sheet [hyperlink to Information Sheet will be inserted here].*
- *I agree to participate in this study regarding online Cognitive Behavioural Therapy courses and their influence on the subjective wellbeing of non-clinical individuals (that is, those without a diagnosed mental health condition).*
- *I agree to attempt to commit to this project for the full duration of time for which it will run (1 hour per week for 8 weeks), however;*
- *I understand that my participation in this study is voluntary, and that I can withdraw from the study, at any time and for any reason, without having to give a reason to the researcher;*
- *I understand that I may omit any questions that I would prefer not to answer;*
- *I understand that my participation in this project is for the purposes of research, and is not an evaluation of me as an individual;*
- *I consent to being audio recorded as part of the project if I am asked to, and then further agree to, give an interview*
- *I understand that any information recorded in the investigation will remain confidential from external parties not involved in the experiment design and that no information that identifies me will be made publicly available;*
- *I understand that I can contact the researcher(s) for this project by e-mail to receive more information and/or a summary of the anonymised group results.*

_________________________ __________ ____________________

Name of ParticipantDateSignature

Appendix 4: Permission to use WEMWBS

Thank you for completing this registration. If there are any issues regarding your proposed use of WEMWBS, a member of the team will be in touch within 2 weeks. If you do not hear from the team within this time, you have permission to use WEMWBS in the manner detailed in your submission shown below:

Question: Name:
Answer:
Cara Wilson

Question: Email address:
Answer:
2155053W@student.gla.ac.uk

Question: Institution/Organisation
Answer:
University of Glasgow

Question: Name:
Answer:

Question: Email address:
Answer:

Question: Institution/Organisation
Answer:

Question: Type of Study
Answer:
Intervention study (WEMWBS before and after)

Question: Description of proposed project:
(For translations, please state the language concerned)
Answer:
I'm writing to request permission to use WEMWBS in a student research project I am currently undertaking at the University of Glasgow on the MSc. Psychological Studies. My dissertation aims to determine whether the use of online CBT programmes may foster an increase in subjective wellbeing in a non-clinical population. As such, I'd like to use WEMWEBS to measure my participants' subjective wellbeing before, during, and after the experiment. I would be much obliged to be permitted to do so. Please do not hesitate to ask should there be any further information you require. Best Regards, Cara Wilson

Question: Description of participants
Answer:

Adults (aged 18+) all of whom are non-clinical.

Question: Location
Answer:
Glasgow

Question: Gender
Answer:
Male and female

Question: Ages
Answer:
from 18 to ~80

Question: Approximate Start Date
Answer:
04/03/2015

Question: WEMWBS version
Answer:
14 items

Question: Expected number of people to be studied
Answer:
Tentatively ~60

Question: Other information as relevant
Answer:

Question: Are you willing for us to share top level details of your research
Answer:
No

Appendix 5: Initial Happiness Questionnaire (IHQ)

Screen 1 – Information Sheet

Thank you for expressing interest in participating in this research study. In order for you to fully understand why this research is being conducted and what it will involve, please read the following carefully.

Study Title and Researcher(s) Details:

'*Increasing Subjective Wellbeing in Non-Clinical Populations via Computerised*

Cognitive Behavioural Therapy: A Positive Psychology Perspective' by Cara Wilson. Supervised by Dr. Steve Draper.

What is the purpose of the study?

This study aims to ascertain whether the use of online Cognitive Behavioural Therapy tools will increase the subjective well-being (i.e. general happiness) levels of non-clinical participants (i.e. people who have not been diagnosed with a mental health condition). This is a positive psychology intervention, not a remedy for mental illness or serious unhappiness.

Why have I been chosen?

You have been chosen due to your willingness to take part in the 8-week long online CBT study and your non-clinical mental health status. No participants will be chosen who have had any form of treatment for mood, anxiety, or psychiatric disorder, now or in the past. This study does not provide a cure for mood or anxiety symptoms.

Do I have to take part?

If you decide against taking part in the experiment, you are free to withdraw at any point and any information or data you have thus far provide will not be used in the study.

Will my taking part in this study be kept confidential?

All information you provide to the researchers will be kept strictly confidential. All group results will be anonymised and all interviewees will be discussed using a pseudonym.

What will happen to the results of the research study?

The results will be analysed and then reported and discussed in dissertation format and submitted to the University of Glasgow by August 2015. All results will be made freely available to participants.

Who can I contact if I want more information?

If further information is required, such as a summary of results or a copy of the final dissertation, please do not hesitate to contact the researchers by email: Cara Wilson (2155053W@student.gla.ac.uk) or Dr. Steve Draper (s.draper@psy.gla.ac.uk)

Screen 2 – Consent Form

If you agree to participate in this study then please read the following statements and click 'Yes' to indicate your consent.

1. I consent to participation in this experiment as explained in the preceeding Information Sheet Ÿ
2. I agree to participate in this study regarding online Cognitive Behavioural Therapy courses and their influence on the subjective wellbeing of non-clinical individuals (that is, those without a diagnosed mental health condition).

3. I agree to attempt to commit to this project for the full duration of time for which it will run (1 hour per week for 8 weeks), however; Ÿ

4. I understand that my participation in this study is voluntary, and that I can withdraw from the study, at any time and for any reason, without having to give a reason to the researcher; Ÿ

5. I understand that I may omit any questions that I would prefer not to answer; Ÿ

6. I understand that my participation in this project is for the purposes of

research, and is not an evaluation of me as an individual;   Ÿ

7. I consent to being audio recorded as part of the project if I am asked to, and then further agree to, give an interview   Ÿ

8. I understand that any information recorded in the investigation will remain confidential from external parties not involved in the experiment design and that no information that identifies me will be made publicly available;   Ÿ

9. I understand that I can contact the researcher(s) for this project by e-mail to receive more information and/or a summary of the anonymised group results.

Please click 'Yes' if you consent to the above.

<u>Screen 3 – Questionnaire</u>

Q1: What is your name? Feel free to use a nickname.

Q2: What is the best email address form you?

Q3: What is your gender?

Q4: What age are you?

Q5: Which country are you from?

Q6: Which country do you live in?

Q7: What is your occupation?

Q8: Please answer the following questions about your mental health status:

a) Have you ever been diagnosed with a mental health condition, now or in the past? Yes/ No

b) Have you had any treatment for mood, anxiety or psychiatric disorders, now or in the past? Yes/No

c) Have you ever seen a mental health professional regarding your mental health?

   - For example, have you ever seen a counsellor or therapist?
   - If so, was this voluntary or were you referred, for example, by your GP?

d) Have you ever used guided self-help in relation to your mental health? This could include, for example, self-help book, online programmes or websites.

   - If yes, please provide details

Q9: Please answer the following questions about how you would like to participate

a) Would you be interested in trying a short guided self-help programme?

The programme is called 'Living Life to the Full'. It is used by the NHS and was originally developed for people with mental health concerns (referred to as *clinical populations*). However, I would like to apply it to those who have no mental health concerns (referred to as *non-clinical populations*) in order to determine whether the programme can increase general happiness levels. The emphasis here is on Positive Psychology. Hopefully, it will give you a valuable insight into your thought processes and offer positive ways to improve in certain areas.

Positive Psychology is a newly emerging area of psychology. It was developed in response to the tendency in other areas of psychology to focus on disorder and the negative aspects of mental health, instead of the positivity, optimism, and happiness many of us are capable of experiencing. Positive Psychology

therefore proposes that it is not only those with mental health issues who can benefit from mental health support, but that everyone can benefit from some guidance and information. Hopefully we will be able to determine whether the techniques developed for people who need professional mental help may also be of benefit to those who are simply interested in increasing their happiness from OK to better!

The project will run for eight weeks and participants will be asked to complete one module from the website per week. Each module takes around 30 minutes to complete, followed by a 5-10 minute questionnaire on your happiness.

If you would like to participate in the main study, please click 'Yes' and go to Question 11 and complete the first of our happiness scales!

This is the main body of the study and would therefore be the most helpful area to participate in! However, if you are perhaps unable to commit to the time, please see the next section.

b) If you are unable to partake in the main study, would you instead be interested in being part of the baseline group?
   This solely involves completing a 5-10 minute questionnaire on your happiness once per week, over the eight week period. This will help determine whether happiness naturally fluctuates or whether the online CBT course does indeed have a positive impact. If so, fantastic! Please complete the below questionnaire.

Q10: this is our first Happiness Questionnaire! Below are some statements about feelings and thoughts. Tick the box that best describes your experience of each, over the last week. Please answer as honestly as possible.

I’ve been feeling optimistic about the future
I’ve been feeling useful
I’ve been feeling relaxed
I’ve been feeling interested in other people
I’ve had energy to spare
I’ve been dealing with problems well
I’ve been thinking clearly
I’ve been feeling good about myself
I’ve been feeling close to other people
I’ve been feeling confident
I’ve been able to make up my own mind about things
I’ve been feeling loved
I’ve been interested in new things
I’ve been feeling cheerful

Q12: Out of interest, do you think that increasing your everyday happiness is something which may be possible through an online tool?

Final Screen:

Thank you (name) !

If you said you'd like to participate in the CBT programme, I will email you very

soon with details on how to register and use the website.

If you said you'd like to be part of the baseline group, I will email you next week with the next happiness questionnaire.

If you have any questions, please feel free to contact me at 2155053W@student.gla.ac.uk. I'd love to hear from you.

Appendix 6 : Initial Email Template

Hello!

Firstly, thank you for your interest in participating in this project!

This is a Masters dissertation project which aims to determine whether using an online mental health support tool will increase happiness in people who do not have diagnosed mental health conditions.

The site we will use is called '*Living Life to the Full*'. It is a cognitive behavioural therapy (CBT) website, which provides guided self-help on issues which can arise in our mental health. It is used and recommended by the NHS and was developed by Dr Chris Williams of the University of Glasgow to provide confidential mental health support.

Hopefully, the course will show you how to make positive changes in your thought processes and move from OK to even better!

So, let's get started! The registration process and use of the site is quite straightforward, but I have attached a Participant Handbook which will take you through the registration process step-by-step, if you would like some guidance.

A few extra notes:

1. Although this course was originally designed for individuals with mental health issues, the lessons within the course are relevant for all of us. Therefore, when it discusses mental "problems" and "issues", this is directed at those with mental health conditions. As someone without such mental "problems", you could instead try to apply these techniques to areas of your life you would perhaps like to work on and see positive change in. For example, learning to be more patient, or learning how to

feel more confident about yourself. Try to think about how you would apply these techniques to your everyday life! You don't have to divulge this topic or area to anyone, but try to keep it in mind as you work through the modules, as it will give you an area to focus on and hopefully work towards changing for the positive!

2. The modules often talk about the 'Little Books' (short ebooks or workbooks) on which the programme is based and you are sometimes encouraged to buy them. For the purposes of this research, you are not required to purchase anything. However, there are links to the first three books within Modules 1, 2 and 3 themselves. I have spoken with the programme's developer, Dr Chris Williams, and he has very kindly offered us free access to the Little Books for the duration of the project. So, please use the first three books as directed in the Modules, and in Week 4, I will send you a link to the subsequent books! Please note, the course can be completed without using the Little Books, as they are designed to simply support and facilitate use of the Modules. You don't need to use them if you don't want to.

3. It would be very helpful if the modules could be completed at the same time every week to keep consistency. However, I understand that this is not always possible or convenient. I'm finding that setting a weekly reminder alarm on my phone is really useful. If you can't manage to complete the module at the same time every week, don't worry. The main thing is that you have time to think about the topics covered in the course. I will also be sending reminder emails to you to keep us on track. When you are working on the module, it would be most effective to do so in a quiet environment, free from distraction and noise.

So, when you are ready, please click the following link to get started! Please use the handbook to guide you through the registration process and to Module 1. Once you have completed Module 1, please complete the attached Happiness Questionnaire and send it back to me.

Living Life to the Full: www.llttf.com

If you have any further questions, please don't hesitate to contact me on the number or email address below.

Thanks again for your participation in this project. It is very much appreciated!

Cara Wilson

2155053W@student.gla.ac.uk

07788620264

NB: If you feel you have been affected by the topics covered in this project at any time and would like to talk about it, please call Samaritans on 0845 7 90 90 90 (24 Hours).

Appendix 7: LLTTF Participant Handbook (Created by Researcher)

The following will give you a detailed overview of how to register with and use the Living Life to the Full website. Living Life to the Full is a cognitive behavioural therapy website, used by the NHS. It was developed by Dr Chris Williams of the University of Glasgow and provides confidential mental health support. There are three steps in total.
If you have any remaining queries following this, please feel free to contact me at 2155053W@student.gla.ac.uk or 07788620264.

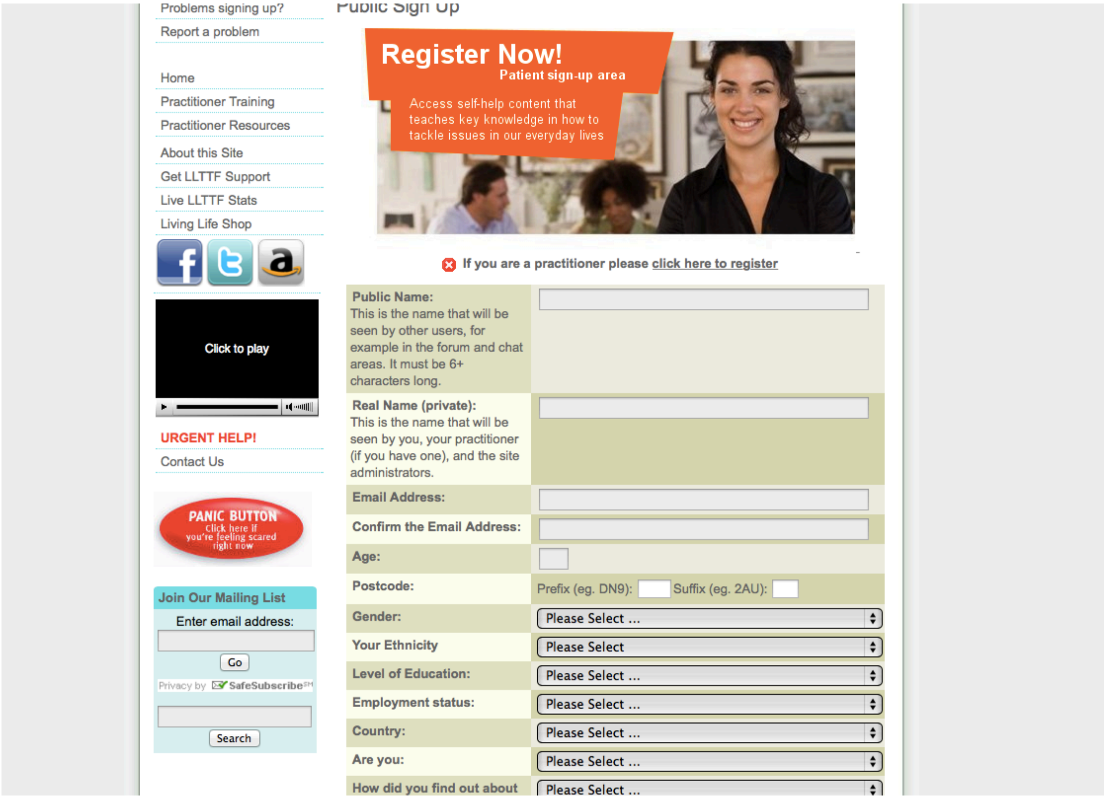
Step 1: Access Website

In your web browser, go to www.llttf.com
The site below will appear.
Please click on the "Sign-up free now" link at the top left corner of the page.

<u>Step 2: Register</u>

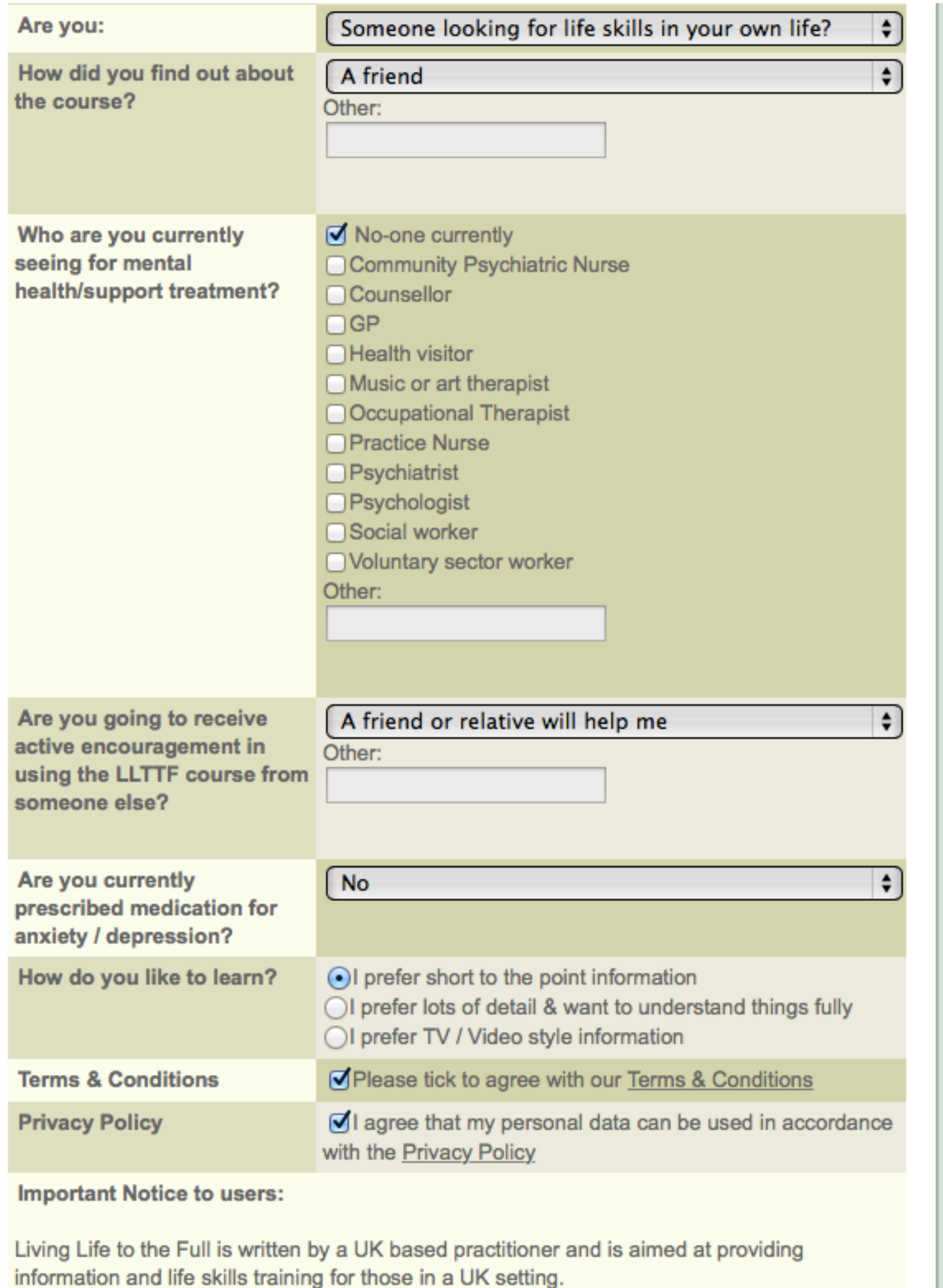
2.1) The screen below should then appear.

Follow the steps on the screen and fill out your personal information for Living Life to the Full registration.



2.2) After your information has been entered, please fill out the remainder of their form. The screen below shows an example of what seems to be the most appropriate answers for the purposes of this research, however, you are of course free to fill in the registration form as you wish. Please note, however, that you are eligible to undertake this study as you have stated your current mental health status to be "non-clinical", meaning you are not diagnosed with a mental health condition, nor are you taking any medication for mental health needs. If this is no longer the case, no problem! But please do contact me as soon as possible.

Please make sure you have fully read and understood the site's Terms and Conditions and Privacy Policy before accepting them. You can also delete your account on their site and any data linked to it using the 'Delete account' link at any time if you wish



Are you:	Someone looking for life skills in your own life?
How did you find out about the course?	A friend Other:
Who are you currently seeing for mental health/support treatment?	☑ No-one currently ☐ Community Psychiatric Nurse ☐ Counsellor ☐ GP ☐ Health visitor ☐ Music or art therapist ☐ Occupational Therapist ☐ Practice Nurse ☐ Psychiatrist ☐ Psychologist ☐ Social worker ☐ Voluntary sector worker Other:
Are you going to receive active encouragement in using the LLTTF course from someone else?	A friend or relative will help me Other:
Are you currently prescribed medication for anxiety / depression?	No
How do you like to learn?	◉ I prefer short to the point information ○ I prefer lots of detail & want to understand things fully ○ I prefer TV / Video style information
Terms & Conditions	☑ Please tick to agree with our Terms & Conditions
Privacy Policy	☑ I agree that my personal data can be used in accordance with the Privacy Policy

Important Notice to users:

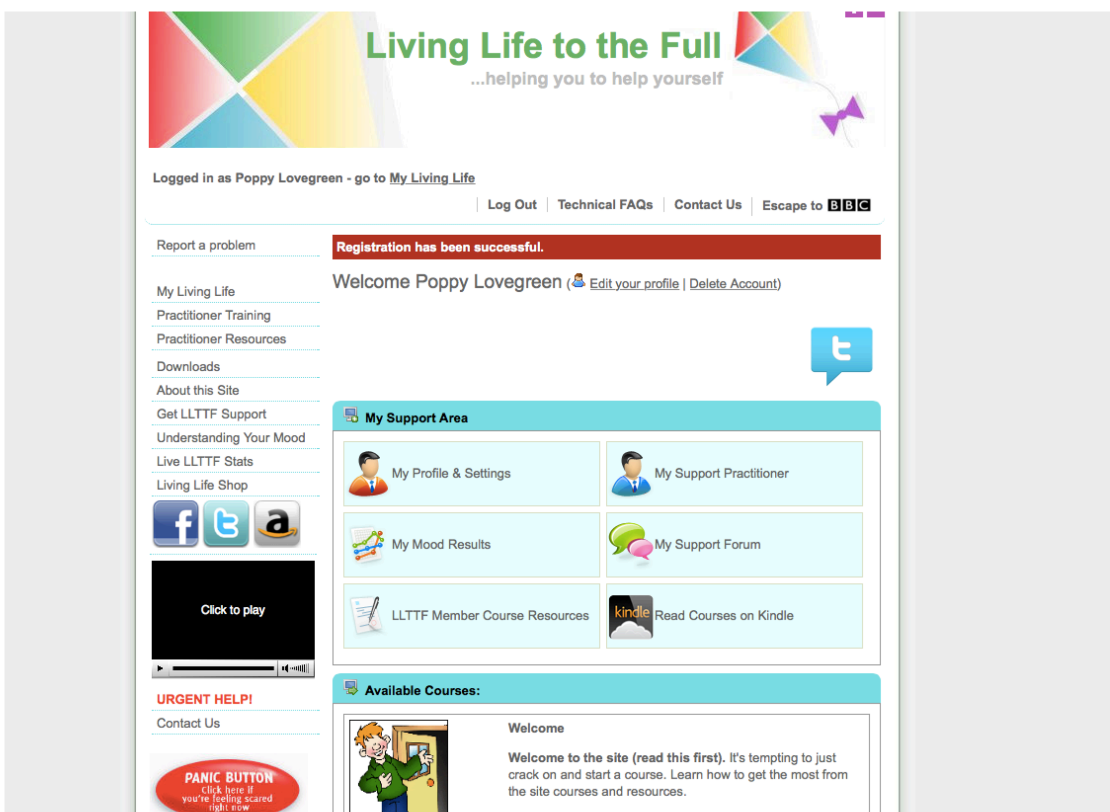
Living Life to the Full is written by a UK based practitioner and is aimed at providing information and life skills training for those in a UK setting.

2.3) You will now receive an email from the Living Life to the Full website, providing you with a temporary password, as below. Please follow the instructions in the email you receive in order to create your own password for the site.

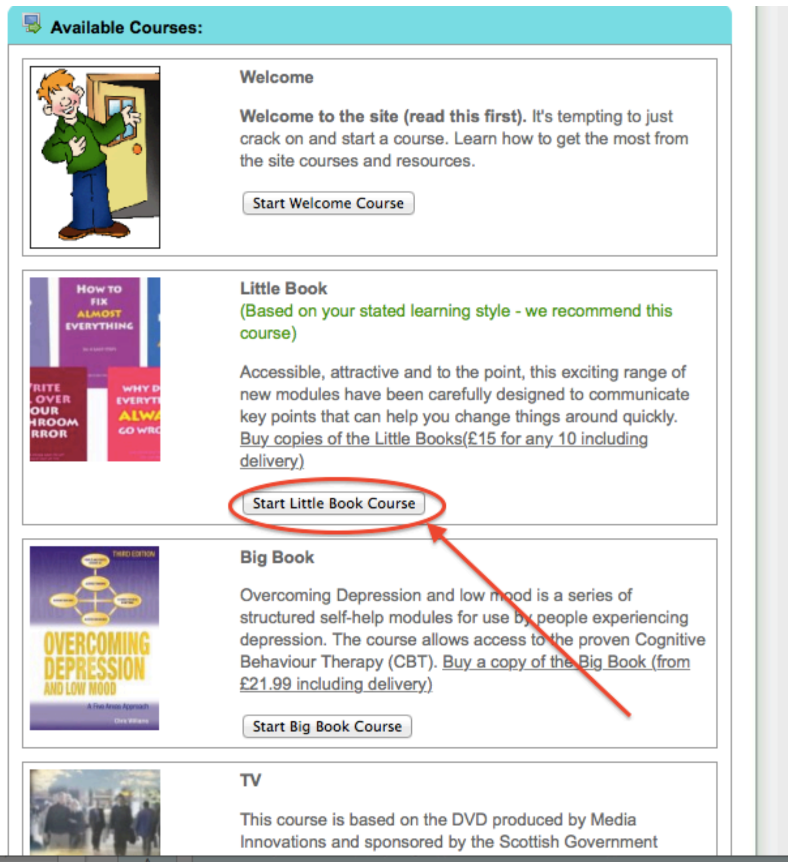
You will also receive weekly support emails to help encourage you to use the course for the next twelve weeks. I will personally be sending you a little reminder for the course, so you can turn the site's reminders off if you like, using the 'My Profile' and 'Settings' area when logged in.

Step 3: Familiarising Yourself with and Using the LLTTF Site

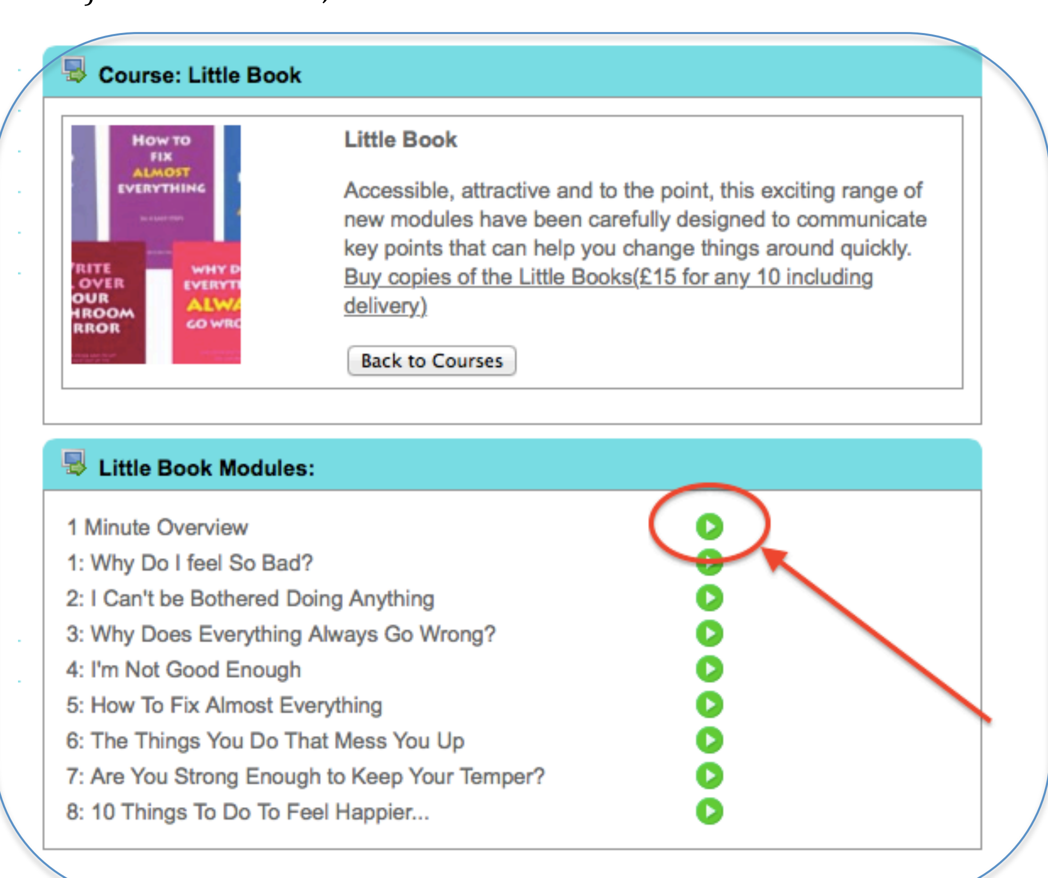
3.1) Once you have registered, the screen below should appear.



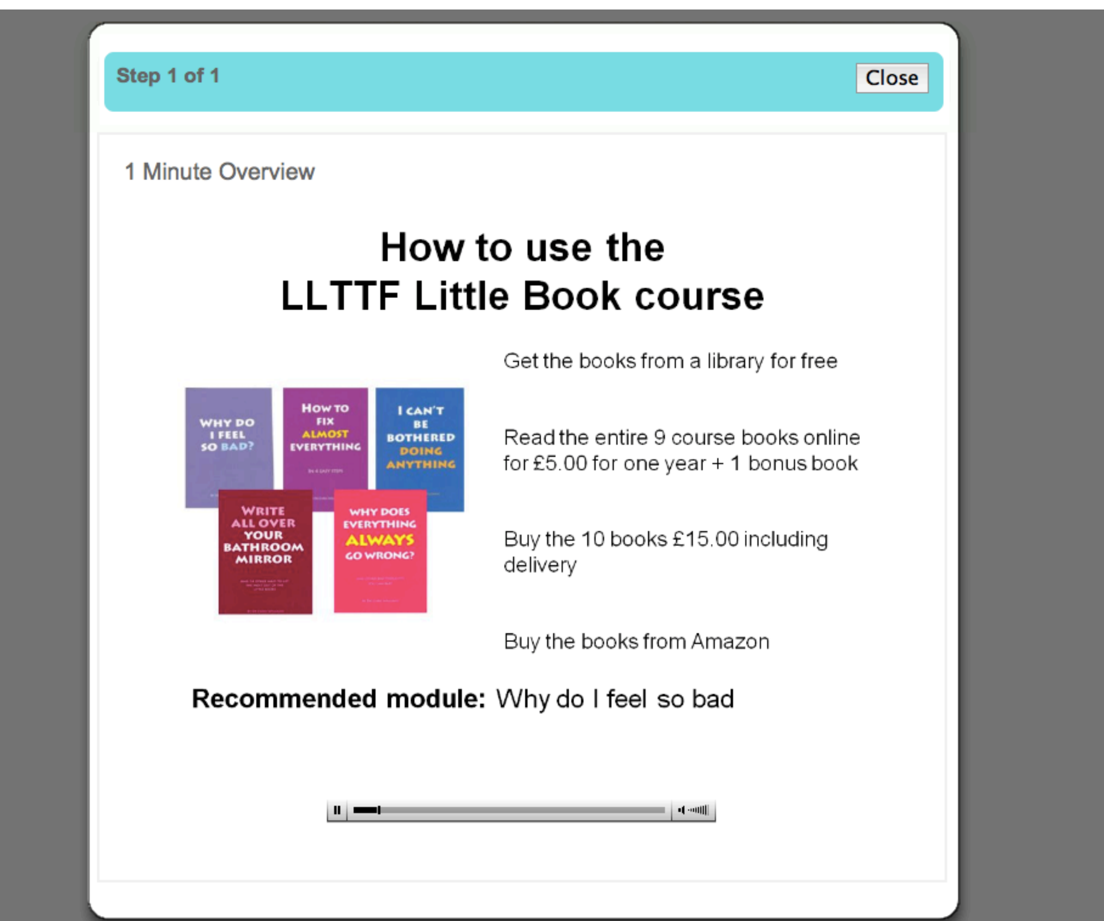
3.2) Scroll down to the "Little Book" option on this page and click the link, which says "Start Little Book Course"



3.3) Click on the link, entitled “Minute Overview”



3.4) The screen below will appear and an audio file will play, introducing you to the course. It discusses the benefits of buying the accompanying ebooks for this series, however, for the purposes of this research, you do not have to purchase anything. However, there are links to the first three books within Modules 1, 2 and 3 themselves. I have spoken with the programme's developer, Dr Chris Williams, and he has very kindly offered us free access to the Little Books for the duration of the project. So, please use the first three books as directed in the modules, and in Week 4, I will send you a link to the subsequent books! Please note, the course can be completed without using the Little Books, as they are designed to simply support and facilitate use of the Modules. You don't need to use them if you don't want to.



3.5) Once you have listened to the Minute Overview, please move onto Module 1: 'Why Do I Feel So Bad?'

You can use the controls at the bottom of this screen to play and pause the audio, and the "Back", "Next", and "Close" buttons at the top right of the screen to move through the module.

3.7) Now the registration and commencement of the course is complete! Please go ahead and try Module 1. Once you have completed Module 1, please fill in the Happiness Questionnaire for this week and send it back to me at 2155053W@student.gla.ac.uk .

From now on, you can complete one module per week and its accompanying subjective wellbeing questionnaire, and send them to me. It may be helpful to note when you completed the first one, and perhaps aim to complete them at the same time each week, in a quiet, undisturbed environment.

3.8) One final point to note: upon signing in, you may be asked to fill out some questionnaires on the site (below), in order to keep note of your progress. As these questionnaires are designed for those suffering from anxiety and depression, you are not required to fill them out, so just press “Skip”. If you would, however, like to fill them out, you are welcome to do so!

Message

It's time to do the PHQ9 Mood Test!
The PHQ-9 is a widely used scale that rates the severity of low/depressed mood. The PHQ-9 questions are each scored between "0" (not at all) to "3" (nearly every day) and then added up to give a total score out of 27.

You have been sent to this page because it is recommended that you complete this Questionnaire every 7 days.

You can skip completing this questionnaire by clicking the Skip button, but upon your next login you will be asked again to complete this.

Skip

PHQ-9 Mood Test - what is this?

Part 1

Over the *last 2 weeks*, how often have you been bothered by the following problems? Choose the answer most relevant to each question.	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
Little interest or pleasure in doing things?	⦿	○	○	○
Feeling down, depressed or hopeless?	⦿	○	○	○
Trouble falling/staying asleep, sleeping too much?	⦿	○	○	○
Feeling tired or having little energy?	⦿	○	○	○
Poor appetite or overeating?	⦿	○	○	○
Feeling bad about yourself - or that your are a failure or have let yourself or your family down?	⦿	○	○	○
Trouble concentrating on things, such as	⦿	○	○	○

Appendix 8: WEMWBS Questionnaire and Qualitative Questions

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

Below are some statements about feelings and thoughts.

Please put an 'X' the box that best describes your experience of each statement over the last week

Mini-Diary Questions

Statements	None of the Time	Rarely	Some of the Time	Often	All of the Time
I've been feeling optimistic about the future					
I've been feeling useful					
I've been feeling relaxed					
I've been feeling interested in other people					
I've had energy to spare					
I've been dealing with problems well					
I've been thinking clearly					
I've been feeling good about myself					
I've been feeling close to other people					
I've been feeling confident					
I've been able to make up my own mind about things					
I've been feeling loved					
I've been interested in new things					
I've been feeling cheerful					

Your answers can be as detailed or brief as you would like.

Question 1.

Do you think your overall subjective wellbeing has increased or decreased since the last session? Please underline your response.

Increased Stayed the SameDecreased

Question 2.

Are you able to explain why, including some examples if possible?

Question 3.

Please write down some keywords relating to how you have been feeling since the last session. These can be positive or negative and relate to anything that impacts on your mood.

For example; feeling content, frustrated, some money worries, going on holiday, productive, excited about new job, praise at work etc.

Question 4

Have you applied any of the techniques you have learned from *Living Life to the Full* since the last module? If so, can you give an example of how this made you feel?

Appendix 9: Weekly Email

Hello (name/nickname),

You are now ready for this week's Living Life to the Full Module!

Please work on the next module by logging on at www.llttf.com, then complete the attached happiness questionnaire.

Remember to focus on the area in your life you would most like to work on/ see a positive change in.

One thing to note: upon signing in, you may be asked to fill out some questionnaires on the site. As these questionnaires are designed for those suffering from anxiety and depression, you are not required to fill them out, so just press "Skip".

Thanks again for your continuing participation in this project. It is very much appreciated!

Many thanks,

Cara

2155053W@student.gla.ac.uk

07788620264

NB: If you feel you have been affected by the topics covered in this project at any time and would like to talk about it, please call Samaritans on 0845 7 90 90 90 (24 Hours).

Appendix 10: Reminder Email

Hello (name/nickname)

Looks like you haven't yet completed your next Living Life to the Full Module for this week!

This is a little reminder to ask you to work on the next module by logging on at www.llttf.com, and to complete and return the attached happiness questionnaire.

Remember to focus on the area in your life you would most like to work on/ see a positive change in.

If, for any reason, you are unable to complete this week's module, or you have any questions regarding the project, just let me know.

Thanks again for your continuing participation in this project. It is very much appreciated!

Many thanks,

Cara
2155053W@student.gla.ac.uk
07788620264

NB: If you feel you have been affected by the topics covered in this project at any time and would like to talk about it, please call Samaritans on 0845 7 90 90 90 (24 Hours).

Appendix 11: Post-Project Questionnaire (PPQ)

Screen 1: Post-Project Questionnaire

Firstly, thank you for participating in this project!
I would love to hear your thoughts on it.
I'll ask a few demographic questions and then move on to questions about how you felt the course impacted on your thoughts, feelings and behaviours.
Please remember to be as truthful as possible. All comments, whether negative or positive, are truly valued!

Screen 2: Questions

1. What is your name?
2. What is your email address?
3. Are there any important or unusual factors which may have had an impact on your overall happiness during the 8 weeks, external to the course? For example, exams/redundancy/bereavement?
4. Have you had any personal experience with mental health concerns, for example, with a family member or close friend?
5. Are you a psychology student?
6. Are you in a relationship?
7. Let's begin by asking a broad question; what did this process mean to you?
8. Would you say that the content of the LLTTF Programme was successful in increasing your happiness?
    a. Yes / No / Stayed the Same
    b. Please give details
9. Which aspects did you like most about the programme? Tick all that apply. Please give details.
    a. Opportunity to reflect on mental wellbeing
    b. Mode of delivery (audio)
    c. "One size fits all" approach

d. Privacy in using online tool
e. The techniques discussed
f. Tone and approach of narrator
g. Relevance of the content to your mental wellbeing

10. Which aspects did you like least about the programme? Tick all that apply. Please give details.
    a. Opportunity to reflect on mental wellbeing
    b. Mode of delivery (audio)
    c. "One size fits all" approach
    d. Privacy in using online tool
    e. The techniques discussed
    f. Tone and approach of narrator
    g. Relevance of the content to your mental wellbeing
11. Did you feel the course was successful in pinpointing issues which were relevant to you? Please elaborate…
12. Having completed the course, do you think that increasing your everyday happiness is something which is possible through an online tool? Please discuss...
13. Having completed this course, would you be more interested or less interested in using other online mental wellbeing tools (such as mindfulness apps)? Please give details
14. In terms of your future behaviour, do you think you will do anything differently from now on?
15. Are there any techniques from the programme which you will continue to use in your daily life?
16. Regarding mental wellbeing and this course, please tick those which apply:
    a. I have found myself discussing mental wellbeing with others more often
    b. I have found myself thinking about my own mental wellbeing more often

c. I have found myself thinking about others' mental wellbeing more often
d. I have actively searched for information relating to mental wellbeing more often
e. I have increased compassion for those suffering from mental illness
f. I have an increased of available mental health conditions
g. I have been reflecting on my mental wellbeing more often
h. I feel more aware of my mental wellbeing

17. To what extent would you say that the advice in this programme has increased your: (Measured from 1 = Decreased, 2 = Stayed the same, 3 = Increased a little, 4 = Increased quite a lot, 5 = Increased substantially)

a. Awareness of your own mental wellbeing
b. Ability to reflect on your own mental wellbeing
c. Ability to talk to others about mental wellbeing
d. Ability to recognise mental health concerns in others
e. Feelings of being in control of yourself
f. Feelings of closeness to others
g. Feeling that you have the ability to do and achieve things
h. Interest in evaluating your thoughts, feelings and behaviours?
i. Awareness of your thoughts, feelings and behaviours?
j. How often you evaluate your thoughts, feelings and behaviours?

18. If there is anything else you would like to add about the programme, your experience, or anything else whatsoever, please do so here.

Appendix 12: Reasons for Continued use of LLTTF as reported in Post-Project Questionnaire

Question 9: Why would you choose to continue using the techniques you have mentioned?

Participant	Response	Theoretical Area	%
P1	I have automatic negative thoughts occasionally and identifying seemed to relieve me		
P2	They are simple and easy to remember. I have made notes on my phone, and feel they are easy to use in a hectic every day setting.		
P3	These were the ones I felt are easiest to remember (as some could slip my mind if I didn't study them) and they are most applicable to the issues I feel most strongly about correcting.		
P4	There are things within these lessons which are quick and easy to do and don't require much of a lifestyle change but could be a step in changing my behaviours.		
P6	These are things I generally do anyway. The vicious circle was interesting and the diagram they used in the module was a helpful visual representation that I hadn't thought of before. The chunking, however, is definitely common sense.		
P7	I think it helps to break down any problems or negative moods, makes the situation seem more objective and just something to overcome. Helps to see beyond negative emotions!		
P8	As I said before, good to not letting worrying thoughts make you ill. Not easy but going to try and keep this up. Also 'chunking' good idea in principle.		
P9	I think they're beneficial to helping me put things in perspective - I really liked the idea of 'Chunking' things down (couldn't remember		

	the term before!)
P10	Because they are helpful to my happiness
P11	Because they are relevant
P12	I find the two are the most helpful and I remember them the most. I would certainly use the techniques in the future in case I have low mood or negative thinking.
P13	I think these are techniques i already use but subconsciously and not so rigorously so they are familiar to me. They really just make you aware of how you deal with situations already and perhaps encourage you to take a bit more time to think about situations and issues and if you could deal with them better than you are.
P14	-
P15	Because not everyone thinks about your good and bad attributes everyday. It's also easy to get into the habit of filtering out positive things about you because it's a lot easier to feel defeated about yourself.
P16	Sometimes I face some daily life problem and these techniques helped me to solve problems easier
P17	They aren't complicated, are easy to remember and seem doable in my daily life.
P18	They are the most relevant to me.
P19	They addressed an aspect of my life which I need to work on and were relevant to me personally
P20	They enhance my quality of life and help me manage my psychological wellbeing.

Appendix 13: Reports on increased happiness from Post-Project Questionnaire

Question 2: Would you say that your participation in the LLTTF course was successful in increasing your happiness?

Participant	Response	Theoretical Area	%
P1	With everything that's going on in your life and with emotions are changing all the time it is difficult to know if one element improve your happiness. The course also seemed to me to be more focused on getting you from unhappy to content then content to happy.		
P2	Following the course gave me reminders each weak to think about the way I feel and react to things, my specific goal was to reduce worrying and following the course and advice from it definitely helped with that.		
P3	I think it made me happier in the way that I always used to feel I was powerless to change - I always felt that I would be the way I am because that's how I'm made, even though my behaviour sometimes makes me unhappy. I feel like I now know I can take control of everyday situations, to bit by bit improve myself and become an easier going, happier person.		
P4	I believe the program was great in looking at things which may have been impacting me negatively and thus increasing my mood. I may not say it was increasing my happiness but it helped me feel less bad if I did feel bad. Perhaps it did increase my happiness but if it did llttf may have done it in a subtle way.		
P5	I thought it was really disappointing. The buy this - this is free stuff is annoying.		
P6	I feel like the CBT course when made personal and interactive can be a brilliant tool in helping tackle some of the harmful thoughts or behaviours that impact upon wellbeing. However, whilst I enjoyed the novelty of self-evaluating my own wellbeing during the first few weeks of the course - the novelty soon wore off. I consistently felt that the course was		

	not relevant to me - especially during some of the latter, more specific modules (eg anger). I struggled to keep engaged with the programme because it was clearly targeted at an audience that were made of a already diagnosed 'clinical' population. I felt that most of the advice and tips given were common sense and on occasion found the narrator to be borderline condescending in how 'dumbed down' the modules were.
P7	Some weeks it was particularly useful, and I could identify quite easily with the information being given and apply it to certain scenarios in my life, and my own attitudes. Other times it felt a little bit off the mark, a bit patronising, and not something which I would really integrate.
P8	Although I found parts of the course useful, I came to the realisation that I do have quite good mental health anyway. Perhaps it is because I feel loved and valued and that I have coped with very stressful situations in the past and survived. Perhaps this is an age thing. It might be because I have a disabled son, who was very ill when he was young with lots of operations etc. My husband and I are a great unit and we are good at coping with what life throws at us. I know that if I reactive positively to a situation, it tends to improve the outcome.
P9	I don't know if it necessarily increased my happiness, I think a lot of other factors played a part in that, but I would say it helped me prioritise my feelings, especially when I wasn't so happy!
P10	Yes, I liked the way it was laid out in simple easy to take in format
P11	it made me consider which issues were addressable and how to make improvements
P12	There are some part of the programme that I still remember and even implement until now to help me cope with challenges if that ever occurs, and it certainly helps a lot. But there are also other events in my life, such as the

	opportunity to make other people happy, when I received good news or compliments that boost my confidence and what not, that makes my overall well-being and happiness increases, so I don't really know whether I can quantify that.	
P13	I was happy before I undertook the course and am still happy after.	
P14	taking time out to think how you're feeling on a weekly basis makes you evaulate more and appreciate things	
P15	It's hard to say because I don't let things upset me easily and I have learnt to deal with problems a long time ago	
P16	Sometimes I forget to think about it. When I am stress, I find some techniques useful. For example, the one about "bad thoughts"	
P17	'Eating an elephant in chunks' helped me feel more in control of my finances. The first vicious circle analogy has given me a nudge to exercise or do something active when I'm not feeling great.	
P18	I think it could have been successful. But I had quite a few problems over the past few months which may have masked any good that it was doing! I think that there were some very beneficial bits on coping with problems, and I especially liked the part about nutrition in the last one because they are easier to do. It is easier to start a new routine by doing easy things like eating a banana a day than actively changing how we think. So it is easier to break a 'vicious cycle' by changing a behaviour first. I did have trouble with motivation, but maybe that was because I didn't have a particular goal. Whereas people seeking help might have a more defined goal and therefore more motivation?	
P19	Although I feel that I already carry out many of the techniques suggested from the course, I feel that there is at least one session that	

	would benefit every individual. Personally, I was able to take points from the session on confidence and aim to make use of what I gained from that module from now on.		
P20	I believe the skills and techniques learned on this course will continue to be useful in a variety of settings. The course itself is a valuable resource to be revisited and revised. As with physical posture, it's easy to slip into psychological bad habits, so a reminder to self-reflect is really helpful.		

Appendix 14: Reports on relevance of content from Post-Project Questionnaire

Question 5: Did you feel the course was successful in pinpointing issues which were relevant to you?

Participant	Response	Theoretical Area	%
P1	Identification of negative thoughts was very good		
P2	Yes. Breaking down issues into chunks and dealing with losing my temper were both very relevant to the issues I set out to think about during the course.		
P3	Yes. I realised I drink too much and that I don't take enough control over my personality. It made me feel better about specific issues I have, particularly with anger and being able to stop myself from beating myself up about things.		
P4	Because it was a one size fits all approach it couldn't pin point anything but I think there could be a lot of subtext you could take out of each lesson which you could apply to other aspects of your life.		
P6	I feel like some of the year modules were more relevant - particularly during the early part of		

	the course. I like the session on the vicious circle and recognises some behaviours and patterns that I could see in myself.
P7	It was a bit hit or miss. I think a lot of the time it wasn't so relevant, I could hear the advice he was giving and was already aware of the ideas/ didn't feel like I needed help on that specific part. However a couple of weeks were particularly useful, for example the one about not losing your temper, although personally I don't consider myself to have a temper issue I did find it particularly relevant to be reminded about not rising to issues and techniques on how to manage conflict.
P8	Yes, I think it is important that we do all change the script in our head. That we think of all the good things about ourselves and try not to be too caught up in what others think. Also being a carer and a mother, I do worry about my children more than myself, but the course has taught me to try and leave worrying thoughts alone and not dwell on them and I have been finding this useful.
P9	Yes I would like to think so anyway. The idea of sorting your feelings into groups of how relevant they really are in your life hit a chord with me. I have a tendency to get stressed or worried about things that I really shouldn't be - for instance, I worry a lot that I might of offended/upset people when I really haven't!
P10	Yes the elephant eating and breaking down exercise was fantastic as was the listing of positive things people say about you.
P11	The issues were known, it helped consider how to deal with them.
P12	I think it was successful, in a way that it teaches me to break down bits and pieces of my thoughts process and identify my own emotion, where I rarely do because we live in a fast-pace world, where everything goes by without us taking a second to think about it.

P13	Somewhat. in module 3 the ABTBP was interesting and i found the mind reading idea quite useful. i think mainly it made me realise that i actually spend very little time doing anything for myself.
P14	main issue is always lack of energy, pinpointed this
P15	In some parts yes. Especially with the topic on controlling your temper...
P16	About the bad thoughts, as I am about to complete my master degree and when I am worried about the deadline. I can be very negative. I find the techniques useful
P17	Yes, the 'eating an elephant in chunks' and vicious cicle techniques in particular. I found them easy to apply to every day problems and therefore remember as a sort of coping technique.
P18	Yes. I found particular use in the E4sp?Esp4? (breaking down problem into chunks) technique because it allowed me to do exactly that for my dissertation.
P19	I think that the course identifies the many reasons why people end up with a mental illness, however, personally, I felt that a very small section was relevant to my life.
P20	Unexpectedly, there were at least two or three points of interest in each session - perhaps thanks to the very broadness of the course. I felt all of the sessions were interesting and I learned something from each one. Certainly, making chunked plans, not putting things off, not over-consuming sweets and caffeine, eating bananas, making time for interests, methods of anger management and mindful walking are all useful in my everyday life.

Appendix 15 Most- and Least-preferred aspects of LLTTF programme

Theory	*Response Description*	*%*
Which aspects did you like most about the programme?		
	Opportunity to reflect on mental wellbeing	100
CBT-Specific	Relevance of content to your mental wellbeing One size fits all approach Techniques discussed	17 22 83
Online-specific	Privacy in using online tool	67
LLTTF-Specific	Mode of delivery (audio) Tone and approach of narrator	22 39
Theory	*Response Description*	*%*
Which aspects did you like least about the programme?		
	Opportunity to reflect on mental wellbeing	6
CBT-Specific	Relevance of content to your mental wellbeing One size fits all approach Techniques discussed	17 61 11
Online-specific	Privacy in using online tool	0
LLTTF-Specific	Mode of delivery (audio) Tone and approach of narrator	17 28

Appendix 16: Participant responses from Module open-ended questions

Participant	Response
	Criticism of LLTTF
P10M7	I feel annoyed that LLTTF Dr Chris keeps preaching about not using anger as a motivator but instead avoiding it – but I assume this is for extreme cases which is probably right etc. I think that sometimes it can be harnessed and used in a positive way.
P6M8	P6: Not really. Some of the ten steps in the final session were borderline patronising – e.g. put on your wow glasses?! How does this guy know whether I take things for granted? They just all seem like common sense to me and by presenting these as if they are totally revolutionary makes the tips quite annoying, especially if these are things you already do! Also, a slight aside, but telling people to drink 5 smoothies a day to 'cheat' your way to five a day is terrible health advice!

P7M8	This last session I thought was a little bit disappointing as it felt someone reading aloud a section of a lifestyle magazine, and came across as a bit patronising. I think that as a whole the tool has been useful for specific issues, but that sometimes the tone is a bit patronising and can be off putting
P6M4	P6: No, not really. I find that whilst I am doing the course I think about the techniques, however, I don't really think about it outside of this context. Perhaps because some weeks appear to be more relevant to the non-clinical population i.e. there were some aspects of this week which I 'zoned' out for because I did not find it relevant to my own circumstances. I found it quite repetitive this week and found myself wanting them to just get to the point. Also some of it was quite simplistic and the language was quite dumbed down. Totally understand that it's designed to be accessible but I feel this actually underlines why a one size fits all approach does not work – it ended up annoying me more than helping me become more self-aware.
P5M8	- The advice is really facile... it's Ok for someone who is just feeling a teeny bit down but it's really not good enough for anyone with any real depression (but allied with a course of Prozac, I guess it might be useful). - The Wow glasses are just embarrassing. I do know people who love all that new-age stuff and they might like this a bit, but it's not for normal folk!
P20M1	I also felt that the examples given in the module were over-simplifications of the challenges we face in real life
	Intentional actions implemented by participants relating to LLTTF
P7M3	P7: I bought a bicycle! Decided to act on something that I enjoy but for some reason didn't make time for, so I bought myself a gem of a second hand bicycle. It definitely bought me some energy and optimism last week.
P13M2	P13: Felt very happy as have cleared clothes out to charity and have embarked on clearing kitchen cupboards out. Tasks which have been needing done for a long time.
P20M3	I've been cooking a lot more. Happy and productive
P8M2	I went swimming today – more like doing exercises in the water as realised this would help our aches and pains and it did have the knock on affect of improving both our moods.
P14M2	The resolution of some practical academic and financial issues compounded with a sense of imminent future potential of satisfying employment. In addition to this starting a new physical

	pursuit (indoor climbing) gives a sense of empowerment
P11M8	P11: Partly through increased in physical exercise, partly through making progress with items that have been on my 'to do' list.
P17M2	I forced myself to go back to the gym on Sunday when I didn't have any plans and felt much better about myself. I also made my lunch on Sunday evening for work on Monday and therefore reinstated my usual routine. This week I have made an effort to be organised with lunches the night before and early rises for the gym and I am glad to have my daily routine back. I feel more in control with a sense of purpose.
P6M3	P6: One of my aims from last sessions was to get back into some of the things I enjoy – seeing friends, cooking and doing sport. Doing one or two of these made me feel so much better and like I had achieved something!
P13M3	Yes I stuck to my big plan which was to get back into swimming and to try to go at least 3 times a week and get to 20 lengths. I was very pleased with this as I also added a 20 minute walk in the gym with my husband before each session.
P8M3	After writing the diary and scoring for pleasure, achievement, closeness etc, it made me phone my dad and arrange to visit him on Arran the next day. Motivated me to action.
	Non-clinical grasp on objective reality
P26M3	Time is passing quickly and the fear has decreased my day-to-day productivity and is causing me not to be able to think clearly. The cost of the course and end presentation is also weighting on my mind. Next week will be better!
P15M8	P15: Feelings have stayed the same because the process of 'losing' someone takes a while to get over. Obviously, knowing myself I will eventually move on a lot sooner than later. It's just a matter of taking time to myself to really think things clearly and positively. I know it won't be the end of the world!
P8M8	Maybe it is an age thing, as I have said before, you know that bad times won't last for ever, just as the good times don't either.

Appendix 17: Responses regarding need to tailor mental wellbeing tools from Post-Project Questionnaire

Participant	Response
P6Q2	I feel like the CBT course when made personal and interactive can be a brilliant tool in helping tackle some of the harmful thoughts or behaviours that impact upon wellbeing. However, whilst I enjoyed the novelty of self-evaluating my own wellbeing during the first few weeks of the course - the novelty soon wore off. I consistently felt that the course was not relevant to me - especially during some of the latter, more specific modules (eg anger). I struggled to keep engaged with the programme because it was clearly targeted at an audience that were made of a already diagnosed 'clinical' population. I felt that most of the advice and tips given were common sense and on occasion found the narrator to be borderline condescending in how 'dumbed down' the modules were.
P11Q11	Given that a big contributor to happiness is at the relationship interface would a tailored version of this course not be an extremely powerful tool when used by two or more willing participants. Areas such as marital niggles, workspace difficulties could be brought into the open and tackled in the same course structure.
P11Q3	Once an issue has been selected it would probably be beneficial to have a sub section that was tailored to this area of concern
P2Q4	Although I like that it fits with more than one set of issues, maybe a choice of more specific topics could be valuable as the modules progress.
P3Q4	Re the 'one size fits all' approach, I know this is unavoidable, but it might be nice to be able to tailor some of the problems discusses a little further
P6Q4	It fundamentally fails to recognise the nuances of each individual and their circumstances and generalises to the point of irrelevance
P12Q4	One thing about mental wellbeing and mental illnesses is that everyone goes through different things, and there is not one framework that can fit everyone. A person might going through the same thing as the next person but they might be on a different level so if the programme seems to be pushing it too hard or too low then it might not be that effective for that specific person.
P5Q10	I don't mind the online - but it needed to be far more thought provoking and interesting (perhaps with case studies about others you could identify with).

P16Q10	I would prefer Face-to-face because it will be tailored to the issues that I have
P18Q10	I like the social interaction and it also means that I don't get distracted which I did when it was online. There is also an agenda to maintain and I would be more inclined to do 'homework' if I knew someone was expecting it.
P6Q12	I fully understand the need to be accessible but this, for me, again highlight how a one size fits all approach does not work. Individuals are not uniform -even if they are clinically in the same 'bracket'. With a face to face approach a common language can be found and dialogue formed - this was a one-sided approach where there was no shared power or learning. The narrator was in complete control and there was no adaptation for individual needs. This I think was the main failing of the course.

Appendix 18: Responses regarding online dissemination of LLTTF from Post-Project Questionnaire

Participant	Response
PPQ	**Positive Responses**
P12Q1	I've always wanted to try a self-help programme, what's with lots of self-help book and online courses nowadays, but I'm a little bit skeptical about it I like face-to-face interaction better. But going through this programme within my own time with full flexibility, without any judgment from anyone, is kind of nice, and I like the idea of getting the help, whether to increase our own happiness or to cope with mental illness is something that we can reach out whenever we want, with easy access.
P10Q2	Yes, I liked the way it was laid out in simple easy to take in format
P6Q3	The online tool undoubtedly made it more accessible - I would never have had the opportunity to undertake the course of it hadn't been in this format.
P9Q3	The fact that it was online made it a lot easier that say reading a book or going to a meeting of some sort.
PPQP13Q3	Certainly the online privacy aspect is advantageous if you feel you would like to 'dip your toe' in the cbt water without feeling you will let anyone down if you feel it's not for you. Felt that some of the techniques were useful even if you feel you have worked most of them out for yourself in living life. the 1,2,3 chill

	would be useful for everyone and not always doing, doing, doing. I liked the way the narrator delivered the course although it would have been useful to access on the ipad.
P7Q4	Whilst it is good that it is online and it is very easy to follow I would of thought that the whole layout could be a lot better. Maybe it just needs updating?!
P7Q6	I think the online tool offers an excellent way to personally reflect on your own thoughts and behaviour. In some ways I found this easier to do with an online tool that if it had been someone there. I think this comes down the fact that with an online tool you aren't considering another person's perspective or understanding of you, it's only you!
P10Q6	As long as I remember to actually do them....maybe an app would help remind me
P11Q6	You can address and consider issues in a confidential environment
P13Q6	I feel that the online approach is a very viable tool for people who perhaps don't require an intense CBT course but perhaps want to concentrate on one or two key areas and also not having to be tied down to complete the modules at a certain time in a certain place makes the course more accessible to all.
P17Q6	Yes, I think an online tool can fit very easily into regular daily life. E.g. you could stick your headphones in on your lunchbreak or quite easily do a module at home on the sofa
P18Q6	The online format however is really good because it gets away from problems like stigma and shame.
P19Q6	I feel that the online course is a good start as it raises awareness of the reasons why people experience low moods and provides strategies to deal with this.
P20Q6	If the participant engages with the online tool, yes. I think having a real person as a supporter - in my case, this would be the researcher - is also helpful, because it motivates the participant to continue.
P2Q10	I am more keen to have it online now, but maybe with some more case sensitive advice.
P3Q10	A mixture of both would be ideal. I don't want to go and see someone every week, so the online course is perfect for keeping mindfulness up on mental wellbeing, but the face-to-face option is good for a more personalised discussion.
P7Q10	I think for this level online is absolutely fine. I think if I was in need of more serious help, or was less willing to use an online tool, then face-to-face would be a better solution

P8Q10	On line is good as it is easier to fit in to my everyday life. Don't need to make a special effort to go somewhere etc
P9Q10	Ideally I think everything is better face-to-face, whether it's a chat a meeting or even a break up! But in reality I think, in this day and age, online is the easiest tool and can really work.
P10Q10	I think Online offers a level of privacy but also you have to be driven to do it yourself. Meet targets. More physical work than actually just chatting to someone
P14Q10	personally i'd prefer online as sometimes feel its easier to be more honest and speak more freely than face to face
P17Q10	Online so that it is more anonymous
P12Q7	as long as it is interactive and interesting. I found so many mindfulness books for example in bookstores and I find it really interesting. But nowadays we want everything fast, reachable, light, and small. So something mobile and accessible through online would do just it
P20Q10	Internet advice is more general, easily accessible and perhaps less intimidating. If I can solve something with a little information and self-knowledge without relying on a third party, I would like to do so self-reliantly, using the online resource.
PPQ	**Negative Responses**
P4Q3	I would prefer to air out my sadness with a person face-to-face. That way the feedback or the questions you're asked are tailored to my personality or mood. This would be a great supplementary tool
P2Q6	I think it [online dissemination] can help if you are motivated, but it is easy to forget about it when there is no "real person" to let down. If someone knows that you are skipping a session it becomes easier to follow through.
P4Q6	The online tool would be a good catalyst but at the end of the day I believe it needs to come down to the individual to seek out assistance or activities or support from like minded people
P6Q6	I think, like most things, it is a question of context. For me it wasn't a method that worked. I enjoyed the privacy of this tool and perhaps if I ever suffer from mental health problems I may come back to this type of tool and use it again for it's privacy
P6Q10	I understand that online tools are more accessible and have privacy benefits but they lack the ability to personalise the discussion to an individual. I believe that all experiences of mental health issues are deeply individual and therefore any attempt to generalise advice is not going to be anywhere near as effective as a face to face session with a trained individual. Even speaking with friends and family may be more helpful.

P18Q10	face to face. I like the social interaction and it also means that I don't get distracted which I did when it was online. There is also an agenda to maintain and I would be more inclined to do 'homework' if I knew someone was expecting it.

Appendix 19: Responses on ways in which LLTTF will influence future behaviour – from Post-Project Questionnaire

Question 8: In terms of your future behaviour, do you think you will do anything differently from now on?

Participant	Response	Theoretical Area	%
P1	Possibly try and stay more active		
P2	I always try to be aware of how my thoughts affect my behavior, and hope I will continue to use some of the lessons I learned from the course.		
P3	I will drink less as I know this causes some of the issues I want to change. I will also try to fly off the handle less. I will exercise more as it does make me feel better and this course helped me connect that up.		
P4	I think I will think about my behaviour a bit more and perhaps try and put into practice as much of LLTTF as I can.		
P5	no, but I was aware of the vicious circle thinking and other things before i did the course, and work to do things to improve my mood.		
P6	I doubt it. I think I'll continue to use the methods and techniques I always have used to maintain or improve my wellbeing levels. Some of these do correspond to things espoused on the course but I wouldn't say that I would be doing anything significantly differently at the moment.		
P7	I can't say there is anything that will massively change for me, I do think I learnt a few		

	techniques and will just be more conscious of the negative cycle of thoughts, behaviours etc.
P8	I think I will try to be kind to myself and not strive to get 10 out of 10. I think I will try and break problems down more into manageable steps. I am going to try and continue not to give bad thoughts/worries too much attention.
P9	I'd like to think that I'll try and be less worried and maybe not let things get on top of me as much as they were with regards to my job and work ethic. I think I'm generally quite a happy person as is, but I'd like to work on my temper and control issues a wee bit more.
P10	I will eat better, exercise more and be more positive due to the list
P11	Take stock of happiness levels on a regular basis
P12	I wouldn't say that it changes my behaviour, but it manage to make me think differently about certain things. Of course it depends on the situation and other factors that influence me whether I want to act on it or not.
P13	I will definitely use 1,2,3 chill. in module 8 I already do most of the 10 things i would definitely take the mind reading aspect on board if worried about other people's reactions and also like the E4SP although i think it's probably how i already deal with issues.
P14	possibly take time out more to evalutate and appreciate
P15	YES
P16	Somewhat likely
P17	I think I'll be more aware of (not) losing my temper and won't simply accept that I am always skint!
P18	i would like to think that I will step away from problems a bit and break them down, rather

	than get overwhelmed. But then there is a side of me that doesn't want to because when I do get overwhelmed, I become super productive and it almost speeds up the process of getting the problem sorted.
P19	I will continue to maintain my current outlook on life, keeping a positive mindset and appreciating all that I have. My aim is to continue to grow in confidence and I will use some suggestions from the course in order to do this.
P20	Yes. At a basic level, I shall certainly examine my daily attitudes and behaviour more closely. I've also begun a '3 best things about my day' diary, which is a pleasure to re-read. The planning, breaking spirals of thought, identifying bad thought and anger-management strategies are all very useful.

Appendix 20: Responses on increases in self-reflection form Post-Project Questionnaire

Participant	Response	%
P4Q1	This process meant a type of self-reflection on which of my own behaviours may be affecting me without me noticing.	
P8Q1	This process made me look at my own mental health in more detail than I would have if I had not done the course.	
P9Q1	It meant I had to think a lot more about how I react and how my emotions balance/unbalance my life which I've never really put much thought into!	
P11Q1	It is useful to regularly review your level of happiness	
P14Q1	It was interesting and made me think more about my feelings on a weekly basis	
P17Q1	The process meant a chance to look at my own personal happiness and wellbeing, something which I've never actively reviewed.	

P20Q1	Hmm... This course enabled me to examine my daily attitudes and behaviours and make positive adjustments. For me, this process was a useful self-reflection providing training in widely-applicable skills and techniques.
P6Q2	However, whilst I enjoyed the novelty of self-evaluating my own wellbeing during the first few weeks of the course - the novelty soon wore off. I consistently felt that the course was not relevant to me
P14Q2	Taking time out to think how you're feeling on a weekly basis makes you evaluate more and appreciate things
P20Q2	I believe the skills and techniques learned on this course will continue to be useful in a variety of settings. The course itself is a valuable resource to be revisited and revised. As with physical posture, it's easy to slip into psychological bad habits, so a reminder to self-reflect is really helpful.
P7Q3	I think the opportunity to take time out and reflect was really valuable. Actually this isn't something we do often, and even acknowledging that some aspects wasn't necessarily so applicable was insightful in itself.
P9Q3	As I've mentioned already I found it really interesting to reflect on my own mental wellbeing.
P3Q6	I think if you can create the habit of perhaps once a week spending time online to focus on your feelings, it most certainly wouldn't do anyone any harm. It should be encouraged, and I will try to do this following the programme.
P9Q6	More [beneficial] just taking a wee moment to take a step back and think about how you are really feeling.
P20Q6	It seems to me the whole course is a beginning - a springboard for self-regulated reflection and learning. This self-regulated learning is key to the success of the techniques introduced by the course.
P7Q7	In particular I think I've come to appreciate the time to reflect, and so this is why it has made me a bit interested to try mindfulness
P8Q7	I did overall enjoy the regularity of taking time out every week to think how things were going in my life.
P20Q7	Actually, an advantage of this course is its finite syllabus and emphasis on self-reflective homework.
P2Q8	[From now on] I always try to be aware of how my thoughts affect my behaviour, and hope I will continue to use some of the lessons I learned from the course
P14Q8	[Now I will] possibly take time out more to evaluate and appreciate

P9Q12	This project has given me the chance to really take a step back and think about what's making me happy. I think almost every week i said that I felt loved and that's something that I am really, really grateful for, but that I've probably taken for granted.
P10M8	*"I would say that **documenting** this has really helped me benchmark my emotional progress"*
P27M2	The questionnaire makes you really think more about your mental wellbeing and what's affecting you on a weekly basis
P26M8	I have been consistently aware of how loved I have felt, regardless of fluctuations in my happiness in other areas. I would not have consciously taken note of this had I not written it down during each session.
P12Q11	Even though some of the techniques in the programme doesn't apply to me, but it makes me think about others that have a much more serious problem that might find this helpful. It makes me reflect on my own well-being and makes me grateful

Appendix 21: Responses regarding future concerns from Modules

Participant	Response	Theoretical Area	%
	Positive		
P18M6	"Eager for the future to start"		
P22M6	"Cause things are getting done, plans are being made for the future, and it makes me happy"		
P6M6	"Excited about future directions and possibilities"		
P9M6	"Feeling excited for the future(new job, holidays etc)"		
P18M6	"Motivated to write dissertation and eager to start next chapter of my life"		
	Negative		
P1M1	"frustration over the future course I see to take"		
P2M6	"Worried about finding a job related to my		

	degree, which then makes me worry about "everything"
P7M6	"Been trying to make decisions about work and future plans which can be quite exhausting. "
P5M7	"Not at all sure what direction to go in next. Worried I will make an arbitrary choice (as usual)."

Appendix 22: Responses pertaining to increased consideration for mental wellbeing of others from Post-Project Questionnaire

Participant	Response	%
	Increased Empathy & Compassion	
P13M2	The first module made me feel quite down thinking about how some people must feel a lot of the time.	
P13Q11	Also listening to some of the more depressing modules made me feel great empathy for people who are actually in these situations and who find it difficult to be positive about anything in their lives.	
P10M2	I find that when I am watching these videos and because I don't have major mental health issues that I come across problems or things I have never really considered about getting depressed about! So when Dr Chris is going through some of them it's making me sad! I hope there comes a time when he starts giving us ways to not feel sad.	
P8?		
	Understanding of why it would be helpful for clinical populations	
P12Q3	This programme makes me reflect on not just my own mental wellbeing but also others that might suffer from mental illnesses.	
P12Q11	Even though some of the techniques in the programme doesn't apply to me, but it makes me think about others that have a much more serious problem that might find this helpful. It makes me reflect on my own well-being and makes me grateful.	
P17Q12	At points I could see where the tools would be more relevant to those with mental health issues, however, I was pleasantly surprised at how relatable they were to me.	
P19Q12	It has been very interesting following the programme and I can see that it would be extremely useful to someone suffering from a mental illness	
P13Q12	I think that the programme would certainly be a valuable tool for people who need some positive guidance in how to deal with what life throws at you and how to have confidence in yourself to enjoy your life and the people in it.	
	Talking about mental wellbeing with others	
P13Q11	Certainly I have been discussing mental well being and	

	happiness as i have been involved in the programme and most people i talk to are very interested in the issues brought to light
P8Q12	However, the course has made me more aware of other people's mental health and I have shared some techniques with them.
P19Q1	I also find mental health very interesting and was intrigued to find out the content of the sessions in the course. As a result, I have been able to discuss modules with my mum who suffers from depression.
	SWB dependent on SWB of others
P8Q6	I feel my everyday happiness is more affected by those around me. If my husband and children are happy then I am, if they are having problems it is more likely to bring me down
P13Q12	It did feel strange just concentrating on aspects just concerning myself as most of my ups and downs tend to be associated with how my family are dealing with their lives and if they need support or advice. Most of the time I am too busy dealing with situations which are not about me and I am happy with that.