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Original Research

A Qualitative Study Exploring the Impact the Self-Compassion App Has on Levels of Compassion, Self-Criticism, and Wellbeing

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Abstract

Self-guided, smartphone apps may be helpful in reducing symptoms associated with psychological distress and may boost wellbeing, and levels of compassion. To our knowledge this is the first study to examine the impact a 28-day app based on Compassion Focused Therapy and Compassionate Mind Training has on participant's levels of compassion, wellbeing, and self-criticism. The Self-Compassion App includes exercises, meditations, quotes, a daily wisdom, and audios, all of which aim to help individuals develop compassion for themselves, experience compassion from others, and be more compassionate to other people. The aim of the study was to explore participants' experiences of the app, including ease of use, preferred sessions, barriers, as well as perceived impact on well-being, self-compassion, and self-criticism. Nine members of staff and eight students from The University of Salford took part in two focus groups; one for staff and one for students approximately four-six weeks after use of the app. The analysis highlighted eight themes: (1) *Thinking of my experiences differently* (2) *Soothing the threat: Managing the three systems* (3) *Stop, reflect, and befriend the self-critic* (4) *Looking after me: The therapist within* (5) *Fears, Blocks, and Resistances* (6) *Looking back at the good things in life* (7) *Gender of Therapist* (8) *An ap(p)t App.* Following use



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of the app, participants reported that they were more supportive of themselves, connected with their compassionate self, befriended their inner critic, experienced gratitude, and in times of personal struggles, reminded themselves that the present moment was an opportunity for compassion to be applied. The COVID-19 pandemic had, and continues to have, a negative impact on the mental health of many people. Therefore considering interventions that utilise technology with the aim of boosting wellbeing, levels of compassion, and reducing self-criticism is imperative.

Keywords

Self-Compassion App; compassionate mind training; compassion focused therapy; self-compassion; self-help apps; wellbeing

1. Introduction

Compassion Focused Therapy (CFT) and Compassionate Mind Training (CMT) aim to help people cultivate compassion for self and others [1-3]. CFT was initially developed to help people respond to self-criticism and shame with compassion, and self-supportive inner voices [4, 5]. The theory underpinning CFT has roots in attachment theory [6], affective neuroscience, and evolutionary psychology [1, 4].

Cultivating compassion has been found to lead to changes in neurophysiological responses in the brain [7], the autonomic nervous system [8, 9], as well as improving psychological health and reducing shame, and self-criticism [10]. CFT is a psychotherapy used in therapeutic settings, which incorporates CMT interventions. CMT is a programme of contemplative, imaginal and body-based practices that can also be used in non-clinical populations to help people cultivate compassion [1, 4, 11-14]. CMT programmes have helped boost wellbeing and levels of compassion in a variety of populations including healthcare educators and providers [15, 16], teachers and support staff in schools [17-19], healthcare professionals enrolled on a CFT module [13], trainee therapists [20, 21], and the general public [22, 23].

1.1 Threat, Drive and Soothing System

One of the aims of CFT and CMT is to bring balance to our three emotional systems: the threat, drive and soothing systems (See Figure 1).



Figure 1 The Three-System Model of Emotion. From Gilbert, The Compassionate Mind (2009) [1], reprinted with permission from Little, Brown Book Group.

1.1.1 Threat System

This system directs attention to things that are threatening [1-5] and is motivated to protect. When there is a perceived threat, this system triggers physiological changes in the body and brain, which prepares the body and mind for action. The stress response activates the sympathetic nervous system, which prepares the body for danger.

1.1.2 Drive System

This system is activated when emotions such as joy and/or excitement are experienced. The drive systems function is to pursue resources (food, relationships, social status and sexual partners) that are advantageous [24]. Positive emotions are experienced when this system is activated, which reinforce behaviour. Both the threat and drive systems are essential for human survival. However, if people are constantly on the move, fighting, running away or pursuing they could exhaust themselves. Therefore having the ability to rest, recuperate, and slow down the busy mind and body is essential [24].

1.1.3 Soothing System

This essential system helps to bring balance to the three systems and is linked to the parasympathetic nervous system, which plays a vital role in calming and regulating the threat and drive systems. In mammals, the soothing system is linked to experiences of care and interpersonal safeness [24].

Gilbert [1-5] argues that humans have a *tricky brain* that has evolved over millions of years that can easily get caught up in unhelpful thinking-feeling loops. CFT and CMT aims to help people cultivate compassion for their own suffering in response to self-criticism and unhelpful thinking-

feeling loops. Psychoeducation about the model is key within CFT and CMT. According to Gilbert compassion is: "a sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it" (p. 19) [4]. The qualities and skills of compassion can be taught and aim to help people cultivate a compassionate mind.

1.2 The Key Qualities, Competencies and Skills of Compassion

Gilbert [1, 2] suggests that the definition of compassion can be seen as an *algorithm*, in which there are two parts. The first part, which is sometimes referred to as the 'first psychology of compassion' involves six competencies that support the process of engaging with suffering. These are: sensitivity, sympathy, distress tolerance, empathy, being non-judgemental, and demonstrating care for wellbeing. When accessed, these help to facilitate someone noticing, moving towards, tolerating, and understanding distress and suffering (whether in self, or someone else). The second part of the compassion *algorithm* involves taking wise action to relieve and/or prevent suffering and is sometimes referred to as the 'second psychology of compassion'. These competencies and skills include: attention, reasoning, behaviour, feeling, imagery, and sensory focus - that wisely help to reduce, relieve and prevent distress in self, and others [1, 2, 24]. Figure 2 displays both psychologies of compassion – the outer circle shows the six key areas of skills training. Both CMT and CFT aim to develop these competencies.

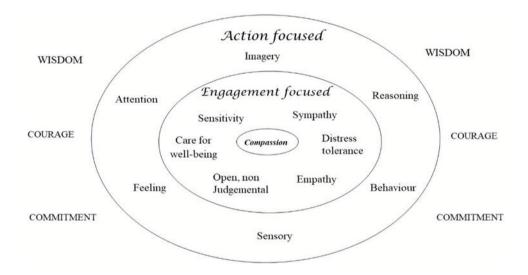


Figure 2 The key qualities, competencies and skills of compassion. From Gilbert 2022 [2], Domains for the therapeutic process. Adapted from Gilbert (2009) The Compassionate Mind with permission from Little, Brown Book Group.

1.3 Self-help Apps

With the advent of mobile technology, various smart phone apps have been created with the intention of boosting wellbeing. Research suggests that self-guided apps may be helpful in reducing symptoms associated with psychological distress, and may boost wellbeing, mindfulness, and self-compassion [25-27].

In recent years there has been an increase in the number of students accessing university counselling and wellbeing services [28, 29], with many universities having limited resources [29, 30].

Oliveira et al., conducted a systematic review and found preliminary evidence to support mobileapp based interventions in the treatment of anxiety, stress, and depression in a student population. The authors also suggest that mobile technology could be used not only to address student mental health issues, but to also help with some of the concerns related to a lack of human resources [29]. Whilst apps have the potential to help boost mental health, further robust research is necessary to test the efficacy of mobile app programmes [31].

According to Forbes, 94% of 18-33 year olds are committed to making personal improvements, creating a demand for practice-based apps [32]. With many people digesting information about mental health in different formats; via phones, online support, virtual reality programmes, and audio self-help books, this makes testing programmes that aim to boost levels of compassion and wellbeing important [32, 33]. Mobile technologies can deliver digital interventions that can offer practical, interactive exercises with users being able to track and monitor their wellbeing, and engage with practices that work best for them. Considering the impact COVID-19 has had on physical and mental health, mobile technology could play an important role in helping people cultivate compassion. Whilst COVID-19 brought several challenges to mental health services (e.g. face-to-face therapy sessions moving online), digital mental health interventions could be more readily available in routine care and not just in response to the pandemic [33].

This study took part during the outbreak of COVID-19, which has, and continues to have, a negative impact on the mental health of many people around the world [34], therefore considering interventions that utilise technology with the aim of boosting wellbeing and levels of compassion, and reducing self-criticism, is imperative.

1.4 The Self-Compassion App

The Self-Compassion App is based on the bestselling book, The Compassionate Mind Workbook [24], which has been found useful in helping individuals improve wellbeing and compassion levels. An app based on the workbook principles could potentially have a positive impact on a wider population, as individuals are looking to digest information in new formats, with many expecting easy access content via their phones [32]. The Self-Compassion App has potential to help boost self-compassion, reduce self-criticism, and improve mood. To our knowledge, this is the first commercially available app to focus on CFT and therefore it is essential that the effectiveness and acceptability of the app is examined. Whilst self-help books do have a place in helping improve wellbeing, technology can integrate content from self-help books into daily routines, which may help people challenge their behaviour and change their lives for the better. Apps also offer practical, interactive exercises such as audio meditations, videos, visuals, reflective exercises, journals and quizzes. Readers can track wellbeing and see what practices work best for them.

1.5 The Project

This study sought to investigate the effects of a self-guided, iPhone based version of The Compassionate Mind Workbook [24]. This study is the first to examine how a 28-day course, introducing new aspects of the CFT model each day, might be helpful. Another study that quantitatively evaluated the effectiveness of a CFT smartphone app found the app improved levels of self-compassion [25]. This paper reports on the qualitative aspect of the study.

1.5.1 Aims and Objectives

The aim of the study was to explore participants' experiences of the app, including ease of use, preferred sessions, barriers, as well as perceived impact on well-being, self-compassion, and self-criticism.

2. Methodology

2.1 Design

Authors 1 and 2 designed a 28-day app course. Participants were staff and students from The University of Salford. To evaluate the effectiveness of the app, a mixed methods research project was undertaken. This paper reports on the results from the qualitative findings.

Interpretive phenomenological analysis (IPA) was used to explore the lived experiences of those who had used the app [35]. IPA aims to explore individuals' perceptions and experiences, whilst valuing the contribution each makes towards a larger explanation of the phenomenon from a small group of people [35]. Qualitative data was collected via two focus groups, one for staff and one for students. This was done to avoid any unease when discussing potentially sensitive information. Author 3 (who did not have input into the design of the app), facilitated each focus group approximately four to six weeks after the end of the 28-day course. We chose to carry out the focus groups four to six weeks after the end of the course in response to evidence regarding the loss of effectiveness of interventions over time [36]. This approach complimented the quantitative aspect of the study, as it provided a detailed narrative of the participants' experience of the course, and how, several weeks after completing the course, it had impacted on them. Focus groups aim to make sense of the phenomenon being studied, in this instance the meanings participants associate with their experiences of using the app, and the impact it app had on them [37].

2.2 Participants and Recruitment Strategy

Initially university lecturers posted information about the research project on undergraduate and postgraduate course sites. Student and staff wellbeing services also posted information about the project on online sites and in newsletters. Purposive sampling [38] was used, as only participants who had used The Self-Compassion App and had completed the pre and post questionnaires (results from the quantitative results will be explored in a separate paper), were invited to take part in the focus groups. Nine staff (four male and five female) and eight students identifying as female agreed to take part in one of two focus groups. Staff consisted of those working in the School of Science, Engineering and Environment, the School of Arts, Media and Creative Technology, the School of Health and Society and the Salford Business School. Students participating were those undertaking undergraduate and postgraduate courses in counselling and psychotherapy, mental health nursing, midwifery programmes, social policy, and social work.

2.3 Procedure

Ethics approval was obtained from the University of Salford Post Graduate Research Ethics Panel (ref: HSR1920-085). Once participants had read the participant information sheet and had read,

signed, and returned the consent forms to the principal researcher they were given access to the app.

2.4 Data Collection

The focus groups were led by an experienced member of staff who did not have involvement with the development or writing of the app. From reviewing pertinent available literature and the first and second author's previously published workbook a set of questions were generated. Participants in both groups were asked the following questions:

- 1. What was your experience of using the app?
- 2. Was there a session or practice that was particularly helpful?
- 3. How did the app impact on your wellbeing?
- 4. How has the app impacted on your levels of self-compassion and self-criticism?
- 5. How has learning about the role your three systems (threat, drive and soothing) play impacted on you?
- 6. How easy was it to use the app?
- 7. Overall, do you think the app was useful?

Whilst the above questions acted as a template to ensure consistency across the two groups, they also prompted discussion. In keeping with IPA, the discussion focused on the sharing of individual participants' experience of the app to capture and understand the essence of their collective experience [39]. Each focus group lasted for approximately 60 minutes and were audio recorded.

The recordings of the sessions were transcribed verbatim to capture each participants' voice and perspective of the app. Initially authors 1 and 3 independently analysed the transcripts, coding the data for what each believed to be important facets of the focus group discussions. Each author then looked across both transcripts to identify uniqueness and commonalities within the data. Following this, a meeting was arranged to discuss their analysis and, through discussion, to negotiate the themes that best represented their collective findings. Themes were reviewed to enhance interrater reliability [40].

2.5 Overview of the 28-Day Training Course

The 28 day app includes exercises, meditations, quotes, a daily wisdom and practice, audios and prompts, all of which aim to help individuals develop compassion for themselves, experience compassion from others, and be more compassionate to other people. The user has the option to either read or listen to the daily wisdom in each session before moving on to the daily practice. For example, the wisdom in Session Five focuses on gaining an understanding of the threat system; why it evolved and the impact it has on mind and body when activated. The daily practice is interactive and asks the user to rate on a scale of 1-10 how often their threat system is activated, and what tends to activate it (e.g. stress at work, worrying about something, being with new people, and/or public speaking). Other daily practices focus on meditations or audio exercises. For example, Session Ten explores how we can create a place in the mind that is safe, calm and peaceful using a guided imagery exercise. Each session is usually between fifteen and twenty minutes long. Users are asked if they would like daily reminders and reflections. For example, they have the option each morning

to answer, 'what would make a good day?' Each evening the user is asked 'what are you grateful for today?' See Table 1 for an outline of each session.

Table 1 Session outline.

| Session number and topic | | | |
|--------------------------|------------------------------------|-----|-------------------------------------|
| 1. | What is compassion? | 15. | Loving kindness |
| 2. | Loops in the mind | 16. | Difficulties with compassion |
| 3. | The gift of the present | 17. | Compassionate thinking |
| 4. | The many paths to mindfulness | 18. | Getting familiar with your feelings |
| 5. | The three systems model | 19. | Accepting difficult emotions |
| 6. | The drive system | 20. | Multiple Selves |
| 7. | The soothing system | 21. | Compassionate planning |
| 8. | Using the body to support the mind | 22. | Assertive compassion |
| 9. | Space to breathe | 23. | Meeting your inner critic |
| 10. | A calm, peaceful or safe place | 24. | Compassion over criticism |
| 11. | The power of positive emotions | 25. | A letter to myself |
| 12. | Remembering compassion | 26. | The Compassionate Selfie |
| 13. | Developing your Compassionate Self | 27. | Compassionate Kit Bag |
| 14. | Your Compassionate Other | 28. | Your compassionate mind |

Figure 3 is a screenshot, which gives an outline of the first three sessions. Figure 4 is a screenshot of the toolbox that features in the app and, Figure 5 is a screenshot from Session 18, which aims to help users get familiar with different feelings.

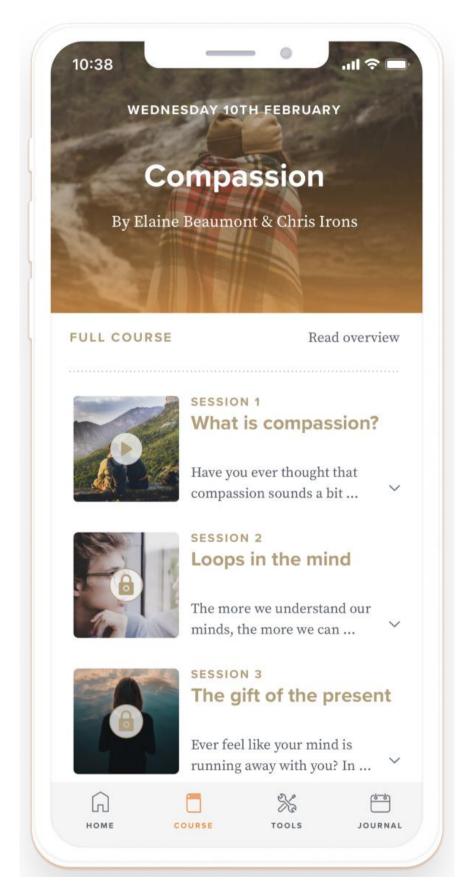


Figure 3 Overview of the first three sessions.

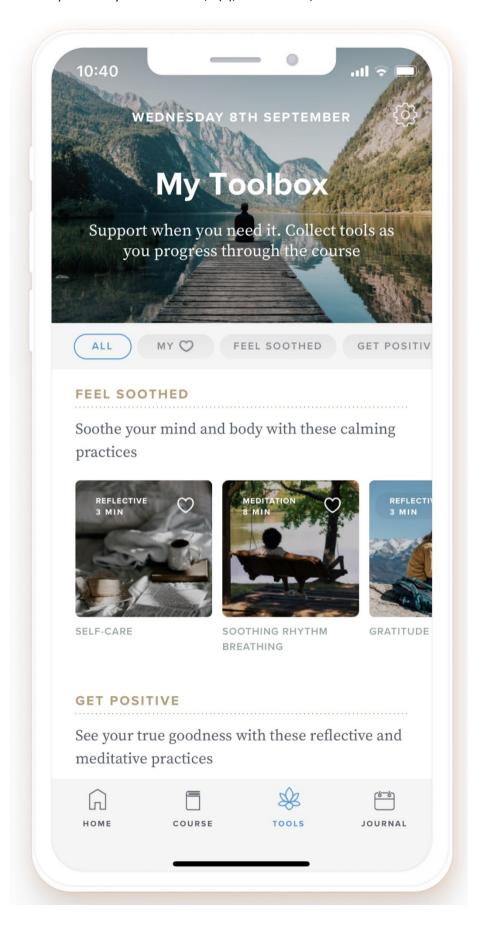
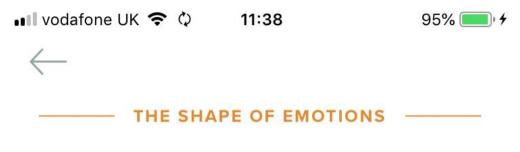


Figure 4 My toolbox.



Which facial expression goes with your anxiety?

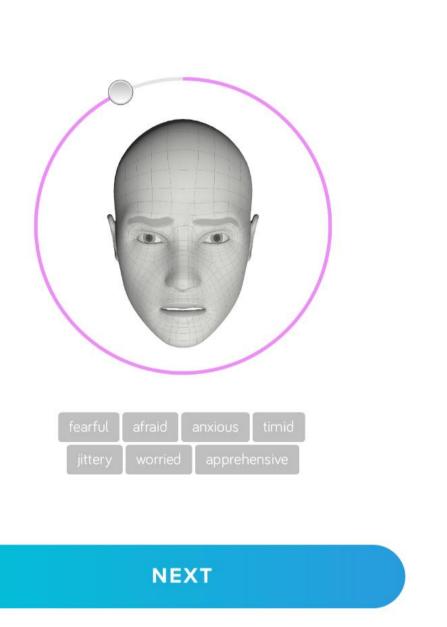


Figure 5 The shape of emotions.

3. Findings

The analysis highlighted eight themes: (1) Thinking of my experiences differently (2) Soothing the threat: Managing the three systems (3) Stop, reflect and befriend the self-critic (4) Looking after me: The therapist within (5) Fears, Blocks & Resistances (6) Looking back at the good things in life (7) Gender of Therapist (8) An ap(p)t App.

3.1 Thinking of My Experiences Differently

There was consensus across both the staff and student group that psychoeducation, CFT theory, and the science that underpins the model gave participants a different understanding of the human mind and was a positive aspect of the app:

"To actually have the root understanding...so actually learning in simple terms...the psychology that was accompanying whatever and then putting in facts this was very different to other apps...it set it apart from me." (Staff P3)

Another reflected:

"For me, it wasn't a particular session [that was helpful]. It was all the like psychoeducation that went with the session...the language that was used." (Staff P8)

One participant described how learning about 'the tricky brain' helped them realise that whilst this is 'not their fault' they do have the capacity to do something about it:

"I loved it when the app took a little bit more of a closer look to science...something I really love was the explanation about your brain is tricky...and you didn't create it that way. It's not your fault, you know, but there are things you can do about it." (Student P3)

Participants highlighted how developing an understanding of the evolutionary model helped them begin to cultivate self-compassion:

"[Learning about] the threat, drive and soothing systems for me was the most helpful thing... like the constant reminder that there is like an evolutionary biological explanation for why you are having certain thoughts and feelings, and that is the biggest step I had towards starting to be more compassionate with myself." (Staff P4)

They also reflected on how they could use the model in their client work:

"I will use the psychoeducation...with more or less every client...that basic grounding of understanding what's actually happening. When they're going through those anxious points in time, why the body is responding the way it is and what's happening with them is really valuable for everybody that I've shared the information with. But I'm very, very careful...because some clients are so self rejecting they can't accept compassion in any way and that's why I start with the psychoeducation so that we can build up." (Student P7)

3.2 Soothing the Threat: Managing the Three Systems

Participants reported that learning about the threat, drive and soothing system and *learning to manage the three systems* had a positive impact on them:

"The three different systems I found that really, really helpful cos it kind of gave me a map and it helped me realise like I'm not going to get anywhere if I stay in like the stressed out system...the nice thing from that was that I did understand how you should be breathing. So I would set my phone aside and kind of breathe that way, that would actually calm me down a lot and through the

weeks because I was working on my Masters paper just learning how to breathe better was super helpful." (Student P3)

There was an acknowledgement amongst participants that they recognised when their threat and drive systems were activated, but realised they had little understanding of the soothing system:

"I discovered that I literally don't do much soothing at all...and again, that was a bit of a revelation... so through using the app, finding those ways to actually factor that in as part of the Holy Trinity [threat, drive, soothing] as it were, was important for me." (Staff P3)

Another reflected:

"Threat was something I was very aware of from me... I feel like we're always talking about how fight and flight is kind of a process...but the soothing one is never talked about...so that was kind of really interesting for me to sort of learn these tools of counteracting the threat system and about how they support each other and the pros and the cons...But yeah, definitely the soothing one for me was a really interesting kind of addition to the course and getting that out was useful." (Staff P6)

Participants reported that they became more supportive of themselves after learning about the three systems. This was helpful when experiencing difficulty because there was a chance to respond to threat and self-criticism with compassion. One participant reflected on how she used imagery to help her to regulate the three systems:

"My drive system was attempting to regulate my threat system and how it was doing it was by wanting to go to the fridge and sooth. I was wanting to do all the things that the app was not saying to do, you know...so I noticed this, and this was a big plus for me...I did use some of the imagery exercises and one of the things that I found myself doing is that my compassionate self was actually growing because instead of telling myself off... you know that critical voice that shames me and says, oh, you've gone to the fridge again to eat chocolate or whatever the case may be...I like that image...I was doing something to help my soothing system change so it was working for me. It was really working for me." (Student P6)

3.3 Stop, Reflect and Befriend the Self-Critic

Self-reflection was an important theme and came up in both student and staff groups. Participants reported how the app helped them stop, reflect and befriend the self-critic:

"My compassion for myself has increased after using the app because it kind of kick started that greater self-awareness...and I made a note, because what I liked was the exercise around befriending the self critic, and I now see my self critic as a protector with issues, and we care for each other...my self critic looked a bit like the Grinch...I've not reached self-actualisation fully yet, but I feel that it had a positive impact in terms of my own and self-criticism." (Staff P5)

Other participants reflected on how the app helped them be kinder to themselves:

"Being a friend to yourself...that was really useful...you know cos I'm not kind to myself...I'm always the person that had been lovely to everybody else, but I'm not actually the person that's actually kind to me. It was like almost like a bit of a friend... you knew every day you had it there, even if you didn't go on it every day, it was still there." (Staff P1)

There was consensus between participants when they reflected on self-criticism. Participants reported that they felt they had previously been *'mean'* or *'critical'* of self, but had started responding to self-criticism with compassion:

"Using the app made me see that sometimes I am quite mean on myself...cos you just like do things and say things to yourself that you would never do or say to anyone else that I just haven't even noticed. It showed me that it's important to take time to properly care for yourself, like I care for my friends or my family. It massively improves my mental health like it really, really helps [my self-critic]." (Student P8)

Another reflected on her inner dialogue and how that had changed:

"It definitely definitely helped me because my mind-set previously would have been...God, you are so stupid. How have you let that that happen? I would naturally have gone into a...I'm going to give myself a hard time about this and I found that I was just, just more compassionate to myself." (Student P1)

One participant discussed how grounding and mindfulness exercises helped her pause and take a break, and were quick, easy skills to carry with you:

"I think the grounding exercises that I did really helped...so like the mindful drinking water and things...they are still things I do, and it kind of helps me to just stop at certain parts of the day and say...OK I can deal with this now and like actually have a breather when I feel like I haven't for ages, so they're just like easy quick skills to carry with you which I liked." (Student P8)

3.4 Looking After Me: The Therapist Within

Participants in both groups discussed how the app had impacted on their wellbeing. Within this theme participants reflected on how they learnt to compassionately respond in times of difficulty. One participant referred to an internal therapist:

"I am much more compassionate with myself now. So I think it's actually had very positive impact...But whilst I was navigating through [loosing 4 days academic work] in my mind I was I was saying it's gonna be fine...you'll be alright, and I was compassionately responding...I felt like I had an internal therapist with me...I say that the best feature for me was the journaling each day cos that was the bit that I did more often and as a result...I do believe that I'm kinder to myself." (Student P1)

Participants reflected on self-care and the importance of practicing what they preach:

"It's kind of like someone gave me therapy even though it's through an app and I give this therapy to other people so this app has enabled me to sort of practice what I preach." (Staff P8)

"I love the fact that it incorporated other aspects of...caring for yourself or looking after yourself...self-care. I think for me you know, start looking after myself again, my mental health, my well-being...I definitely benefited from it." (Staff P7)

Other participants reported that imagining a safe place and compassionate other were their personal favourites:

"The compassionate other I just I loved that one. It kind of surprised me how much of an affect it had on me actually...so I think that's something I've taken away from it, which has been very very beneficial." (Student P3)

"Both [safe place and compassionate other] kept me grounded...it [the app] stabilised me." (Student P6)

Numerous comments focused on a variety of interventions that boosted wellbeing. The discussion was useful in helping participants realise that what works for one person may not work for another. For example, for some the grounding exercises helped:

"I found it really did help with things like well-being...did help in terms of calming your mind down cos my mind never stops...it's always on the go...it [the app] sort of if you like grounded me." (Staff P1)

For other participants, becoming more mindful of their breathing, body posture and facial expression helped them feel grounded and boosted wellbeing:

"The way it [the app] focused on the body and the posture and how you hold yourself and your facial expression...that really made me feel a lot more grounded...and focusing on the belly breathing that really did help to ground me...that had more or less [of an] immediate effect within a few days, and thankfully I've been able to remember to occasionally dip into that." (Student P7)

"The breathing exercises were particularly good for me and I used the heart rate exercise every day. That was absolutely excellent for me to be able to relax before going to sleep. And what I was finding was that it was bringing my anxiety levels down. On a daily basis, I was really pleased." (Student P6)

Participants discussed how the app reduced their anxiety levels:

"The whole app in general benefited my anxiety so much...just like even doing little things in the day, like when I'm going outside...and I'd be like listening to the noises around me, like feeling like the wind and stuff and like that just gave me time to like not be worrying about things and I just liked it...liked focusing on basic things...I've taken that with me and found that it's so beneficial to be honest." (Student P2)

In addition to having a positive impact on their own wellbeing, staff members reported vicarious benefits. For example, participants reported that family members and students benefited from the app:

"I didn't just benefit from it...my family have benefited as well cos what I did with the daily activities was I shared it at home with the members of my family..." (Staff P9)

"My students benefited from it and my kids as well." (Staff P2)

3.5 Fears, Blocks & Resistances

Within this theme participants discussed how their initial fears, blocks or resistances created barriers in using the app. Participants reflected on how in the short term the app triggered anxiety because it was another thing to juggle:

"I think short term, it definitely added to my anxiety a little bit...purely just because it was the 30 day trial thing and I felt that I had to get everything done. Since then I've spent more time looking after myself, just like taking little moments every day to...like give myself some care which I never really did before and that's something that has really stuck with me...and I do want to do that because the app showed me how important it is." (Student P8)

Another participant reflected:

"I reflected on that cos we teach nurses and social workers and I reflected on that quite a lot...and I said to myself, you've got to reflect...cos I didn't have enough time to do it [use the app] so I stopped using it...and then I thought that's ridiculous...It's ridiculous that you won't give yourself half an hour a day just to stop, and so I made myself do it and I loved it." (Staff P2)

Participants shared how they managed to change their mind-set and behaviour to overcome barriers to using the app:

"Yeah, yeah, it did confront me in a way I hadn't expected that kind of mindfulness or compassion based app to do...I thought it will be lovely, gentle, and kind and a big kind of hug of an app really. But actually that point of confrontation I found surprising and therefore difficult at first...as I used it I realised I needed to change my mind-set to get into the use of the app...because what I realised is I needed this app...so the message of that quite early in was really useful for me, because actually instead my behaviour changed and in a way that enabled me to settle in to using the app. But you know, maybe there's some some thoughts there in terms of how you coax resistant users in at the outset." (Staff P3)

One student shared her personal experiences of therapy with a word of caution that exercises such as mindfulness are not universally helpful:

"I came across a lot of services which promoted mindfulness...I have a lot of kind of bad memories associated with them. Certain exercises...so it's kind of important to know that they're not universally acceptable for everyone, like they don't help everyone." (Student P4)

3.6 Looking Back at the Good Things in Life

Both staff and students discussed how gratitude and focusing on positive experiences each day impacted their wellbeing:

"What did help me was kind of looking back at the end of the day. Of what's gone well...because it was almost kind of forcing me to be positive...not ruminate and I was thinking, well, actually, yeah, there is good stuff that has happened today despite that." [a bereavement] (Student P5)

"I really appreciated the reflections at the end of the day because it just helped me appreciate what happened as opposed to just going through day-to-day without really thinking about it and trying to avoid thinking about what had been going on." (Staff P8)

Another reflected:

"The best feature for me was [the exercise which focused on] what would make today a good day and then reflecting at the end of every day. Sometimes this was so powerful because even when I had had a really stressful day and things hadn't gone right, I was still able to be thankful for something and that instantly changed the way I thought about the day." (Student P1)

3.7 Gender of 'Therapist'

The two people delivering the training via the app were female and male. Participants commented how useful it was to have the option of both a female and male voice:

"What I found very valuable was the choice of either listening to Elaine or Chris on the audio. What I found most valuable, of course, was the audio...being able to just to relax and listen to somebody soothing me." (Student P6)

Staff members discussed their preferences:

"The male and female voice was something...I really value having the choice...and similarly I gravitated towards the female voice...don't know why." (Staff P3)

"I love the fact that you did have a choice of voices cos we can see there's been a mix. I tend to go for a man's voice...I don't know why...maybe it's to do with the opposite sex or something..." (Staff P7)

3.8 An ap(p)t App

Participants were asked about the design, technology, and acceptability of the app itself and reflected on what they found most useful:

"I like the reflections and the goals at the start of the day. I think for me it was more the design of it...the app was simple like with scales rather than having to spend a lot of time writing things down." (Student P4)

"I found it very user friendly, it's very well organised, and clean...I really love the idea of that app...where you used the tool where you would put your thumb and it would measure your heart rate." (Student P3)

"I think overall for an app it was a very well produced, well put together considered application, which I thought was very helpful." (Staff P4)

4. Discussion

Participants' comments regarding their experiences of using The Self-Compassion App suggest that they became more supportive and reassuring of themselves, connected with their compassionate self, befriended their inner critic, experienced gratitude, and in times of personal struggles, reminded themselves that the present moment was an opportunity for compassion to be applied. CFT is grounded in attachment theory [6] and aims to help people create a secure base using their compassionate mind [1-5, 13]. The findings highlight the role of compassion in helping participants soothe, respond to difficulties with compassion rather than criticism, and regulate emotion, which echoes the work of Beaumont et al.[13], Bell et al. [21] and, Maratos et al. [17]. This was particularly true for one student who was able to connect with her compassionate self after losing four days of university work, which suggests that participants were able to bring their compassionate self to the fore.

In line with previous research [13, 17], psychoeducation about the CFT model, including learning about the threat, drive and soothing system and managing these, had a positive impact on participants, giving them a different understanding of the human mind. Participants reported how the app helped them *stop*, *reflect*, *and befriend the self-critic*. Sessions 23, 24 and 25 of the app focused on learning to understand and reflect on self-criticism and explored how to cultivate compassion for the inner critic. In keeping with previous research, which explored the impact CMT had on students and educators [13, 17, 20], the findings suggest that participants were able to respond to their self-criticism using their compassionate mind, with one reporting how they learnt to befriend their self-critic and respond to the critic with kindness, whilst acknowledging its need to play the role of protector. Acknowledging and exploring the role the inner critic plays, and trying to meet the critic's needs by responding with a compassionate mind is an important cornerstone in CFT [2, 5, 24]. Using an app based on the CFT model appeared to initiate greater self-awareness, self-kindness, and self-compassion, and helped participants work toward befriending their self-critic, which supports the findings of Andersson et al. [25], who found that compassion training via a smartphone application improved levels of self-compassion.

Throughout the sessions, daily wisdoms and practices encouraged participants to use interventions that promoted self-reflection and self-practice. Being aware of one's own self-doubt and self-criticism appeared to lead to the promotion of self-care and self-reflection. This echoes the work of Bennett-Levy and Lee [41] and Kolts, et al. [42] who suggest self-reflection and self-practice

help build resilience. Participants used compassionate imagery to create 'a compassionate other' [24, 43], an image of something or someone that had their best interests at heart. One staff member stated, 'I felt like I had an internal therapist', which supports the work of Beaumont et al. [13] who found mental health practitioners were able to support themselves with the help of a 'compassionate other'. Results also support the findings of Bell et al. [21] who found trainee CBT therapists were able to regulate emotion with the help of their 'compassionate internal supervisor'. The role of self-support appeared to help people prioritise their wellbeing. Acknowledging the importance of self-care and having 'time out for self' enabled participants to use their compassionate mind in difficult situations. The findings suggest that the app had a positive impact on wellbeing, with some participants reporting that it helped 'reduce their anxiety' and bring balance to their lives. For two staff members there were vicarious benefits as they spent family time practicing some of the exercises with their families, who also benefited from the app.

Gratitude and focusing on *the* positives were considered helpful for a number student participants. Session 11 of the app explores gratitude practices, but participants were also asked daily *'what could make today a good day?'* promoting reflection on the day. This appeared to be an important facet of the app, as participants reported feeling appreciative and thankful when focusing on the things they were grateful for. This supports previous research, which suggests that focusing on gratitude can have a positive impact on wellbeing [44]. Focusing on gratitude was particularly helpful for participants during the early stages of lockdown due to the COVID-19 pandemic.

Fears, blocks, and resistances to compassion is an important concept to explore within CFT [45, 46]. Fears of compassion often relate to compassion being seen as weak, self-indulgent, or self-pitying. Blocks to compassion relate to time pressures and situational factors, whereas resistances occur when people simply do not want to engage in compassion, maybe because they do not think they deserve it [24, 42]. Some participants reported an initial increase in self-criticism because they were juggling many different things and had committed to trial the app. A common misconception within CFT is that compassion is fluffy and kind, and not challenging. This was experienced by one of the participants who reported that they were not expecting the app to be challenging, believing compassion would be 'gentle' and a 'big kind hug' rather than assertive and courageous. Compassion is considered: "a sensitivity to suffering in self and others, with a commitment to try to alleviate and prevent it" (p. 19) [4]. Therefore when instigating behavioural change, it helps to access the compassionate self; the self that is wise, strong, and courageous in the face of difficulties.

Some participants reported that having a choice of listening to either a male or female voice was helpful with some stating their preference. This is interesting because male participants reported that they tended to prefer the female voice, whilst some female app users reported a preference for the male voice. As far as the authors are aware, there is no existent research regarding the use of gendered audio guides in the context of mindfulness and compassion exercises, but may be worthy of further exploration.

The final theme *An ap(p)t App* explored participants views of the design and production of the app. Participants reported that they liked the interactive exercises and reflections in the app, and also reported that the design, structure, and the simplicity of it made it user friendly and well organised. This fits with Chandrashekar [27] and Bakker et al. [47], who argue that in order to be effective, self-help apps should combine science, regulation, a user friendly design, and a simple, intuitive interface. As technology continues to evolve and change, testing apps based on therapeutic interventions, and scientifically backed modalities such as CFT is important. Apps have the potential

to boost wellbeing and users can see what practices work best for them; tailoring use and exercises to meet their own personal needs [25, 27, 29].

4.1 Limitations

The current study involves a number of limitations. Part of the study was in progress during the outbreak of COVID-19 and focus groups had to be conducted via Microsoft Teams (a video conferencing programme). This can be difficult and requires good facilitation to ensure all those who want to speak get the opportunity to do so. The first author worked with a number of those participating in the focus groups (as a lecturer for some of the students and co-worker for some of the staff), and this may have led to their discussion being biased to what they thought she wanted to hear. However, to minimise risk of 'social desirability' both focus groups were facilitated by a member of staff who did not know the participants or had anything to do with the design of the app. Whilst the staff members that took part in the study worked in different Schools within the university, the student sample consisted of eight people studying for careers in the helping profession. This does make generalisability difficult especially as people studying for a career in healthcare may have been drawn to an app that aims to boost wellbeing and promote self-care. A further limitation is that we did not collect data regarding participants' previous experience of using self-help apps or data about interventions they may have used previously to boost levels of compassion.

4.2 Impact and Implications

Despite the limitations of this study, participants reported that they valued the experience and welcomed the opportunity to be part of an innovative research project that could potentially boost wellbeing and levels of compassion. Staff and students, particularly those in the helping and creative professions, experienced a variety of challenges when trying to make time to use the app. Trying to find time and space away from client/patient work or academic pressures to manage one's own wellbeing, can feel like a juggling act. However, results suggest that when participants made time or changed their behaviour this had a positive impact on their wellbeing and self-compassion levels. Considering the recent pandemic, and the negative impact it has had on people's wellbeing, interventions utilising technology with the aim of boosting wellbeing, levels of compassion, and reducing self-criticism, are imperative.

4.3 Further Research

A randomised control trial and longitudinal study would be beneficial to help explore the long-term benefits of using the app. Providing participants with access to the app for a longer time period could enable the research team to analyse whether changes to behaviour are maintained over time. As 94% of 18 to 33 year olds are committed to making personal improvements [32], further research could explore the long-term impact The Self-Compassion App has on college and university students from a variety of backgrounds, which would make the results more generalisable. Currently the app is being used within some National Health Service (NHS) Trusts in the United Kingdom to help staff sustain and strengthen their compassionate minds. Research to explore the direct impact this has on staff wellbeing, and the indirect benefits to patients would also be worthy of exploration.

5. Conclusion

To the best of our knowledge The Self-Compassion App is the first commercially available app that focuses on CFT and CMT, a scientific approach that has been found to boost wellbeing, levels of compassion, and reduce self-criticism. Having access to an app has the potential to have direct and indirect benefits; the former for those who use it and the latter for their significant others. In the current climate this makes exploring how technology can be used to help people cultivate a compassionate mind essential.

Author Contributions

Dr E Beaumont: Project development, conceived the experiment, co-wrote The Self-Compassion App, data analysis, report writing; Dr C Irons: Project development, co-wrote The Self-Compassion App, commented on drafts of the paper; Prof S McAndrew: Project development, data collection, data analysis, commented on drafts of the paper. All authors reviewed and approved the final version of the manuscript.

Competing Interests

Dr Elaine Beaumont and Dr Chris Irons co-wrote The Self-Compassion App and receive royalty payments from Psychological Technologies the app developer.

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