





RESEARCH ARTICLE

Finding presence during a pandemic: a qualitative analysis of participation in an Irish University online mindfulness practice during the COVID-19 emergency [version 1; peer review: 2 approved with reservations]

Eva Flynn ¹, Niamh Salmon ¹, Derek O’Keeffe¹, Craig Hassed ²

¹Department of General Practice, University of Galway, Galway, County Galway, Ireland

²Faculty of Medicine, Nursing and Health Sciences, Monash University, Clayton, Victoria, Australia

V1 First published: 11 Jul 2023, 6:33
<https://doi.org/10.12688/hrbopenres.13735.1>
 Latest published: 11 Jul 2023, 6:33
<https://doi.org/10.12688/hrbopenres.13735.1>

Abstract

Background: In response to the change, and distress, that many faced during the time of the COVID-19 pandemic, a twice weekly online practice of mindfulness meditation was delivered to staff, students and the wider community outside of the University of Galway, Ireland. Mindfulness is a contemplative practice which improves coping skills and reduces emotional distress. This practice allows attention to be directed to the present moment, with acceptance and without judgement. Strengthening this practice nurtures skills of dealing with difficult emotions, changing unhelpful habits, behaviours and strengthening resilience during uncertainty. The twice weekly practice of an online mindfulness meditation was delivered in the context of the changes and preventative measures of the first pandemic lockdown in Ireland. The main objective of this practice is to cultivate skills of returning to the present, being grounded and building resilience amidst adversity. The aim of this study is to examine the effect of the offered regular online practice of mindfulness meditation for participants during the COVID-19 emergency, exploring through qualitative analysis of their own lived experience with this intervention.



Methods: This qualitative study consisted of a short-structured interview process to explore the participants’ experience of the online practice of mindfulness during the COVID-19 pandemic.


Results: From participating in this regular practice at this time, participants reported improved self-awareness, stress management and emotional regulation. Along with this, participants reported the felt sense of empathy and compassion and a sense of connection.

Conclusion: This study has shown that during the difficult time of the COVID-19 pandemic, an online mindfulness meditation led to better wellbeing.

Open Peer Review

Approval Status ? ?

	1	2
version 1		
11 Jul 2023	view	view

1. **Craig P Polizzi** , US Department of Veterans Affairs, Washington, USA

2. **Kim Roberts** , Wilfrid Laurier University, Waterloo, Canada

Any reports and responses or comments on the article can be found at the end of the article.

Keywords

Wellbeing, mindfulness, pandemic, COVID, coping, quarantine



This article is included in the [Coronavirus \(COVID-19\)](#) collection.

Corresponding author: Eva Flynn (eva.flynn@universityofgalway.ie)

Author roles: **Flynn E:** Conceptualization, Formal Analysis, Investigation, Methodology, Project Administration, Resources, Software, Supervision, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing; **Salmon N:** Data Curation; **O’Keeffe D:** Conceptualization, Methodology, Writing – Review & Editing; **Hassed C:** Conceptualization, Methodology, Writing – Review & Editing

Competing interests: No competing interests were disclosed.

Grant information: Health Research Board (CTN-2021-006).

The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Copyright: © 2023 Flynn E *et al.* This is an open access article distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

How to cite this article: Flynn E, Salmon N, O’Keeffe D and Hassed C. **Finding presence during a pandemic: a qualitative analysis of participation in an Irish University online mindfulness practice during the COVID-19 emergency [version 1; peer review: 2 approved with reservations]** HRB Open Research 2023, 6:33 <https://doi.org/10.12688/hrbopenres.13735.1>

First published: 11 Jul 2023, 6:33 <https://doi.org/10.12688/hrbopenres.13735.1>

Introduction

Mindfulness is a contemplative practice which is now widely accepted to improve coping skills, (Chiesa & Serretti, 2006; Kabat-Zinn, 2013), emotional regulation (Chambers *et al.*, 2009) mental/physical health, cognitive performance (Goldberg *et al.*, 2021) and to reduce emotional distress (Hofmann *et al.*, 2010). It is defined as the awareness that arises from paying attention, on purpose, in the present moment and non-judgmentally (Kabat-Zinn, 2013; Kabat-Zinn, 2021). With this practice, the participant is guided to cultivate attention of the body, mind and environment just as it is in each moment. Practicing mindfulness allows attention to be directed to the present moment experience with acceptance and less emotional reactivity (Chambers *et al.*, 2009; Kabat-Zinn, 2013; Kabat-Zinn, 2021). Bringing awareness to what is present in each moment helps to gain an understanding of how we perceive ourselves and the world. Strengthening this practice of mindful attention and observation to what is in the present moment can help to shift attention from unhelpful patterns of mental activity like worry and rumination and reveal a new understanding of what we are experiencing, be it wanted or unwanted, comfortable or uncomfortable.

Without developing a self-awareness, recurring feelings of stress and fear result in a state of anxiety. This can become more stable overtime with more enduring characteristics and patterns of behaviour that form a trait of anxiety. The individual then commonly reports negative emotions such as worry, fear and anxiety in many daily experiences and life.

Practicing a more mindful way of being invites moment to moment awareness, revealing habitual ways of being, thinking and reacting, and the effect this has on us. Thus, the practice can help to open up important questions and help to produce insight. For example, how do we experience difficult emotions? What are unhelpful habits and behaviours? What way do we experience stressful situations? Allowing this observation builds capacity to see our current ways of being, thinking and reacting and the effect it has on how we meet and experience difficulties. Insights from this honest exploration can strengthen resilience during uncertainty and adversity (Chambers *et al.*, 2009; Chiesa & Serretti, 2006; Kabat-Zinn, 2013).

Mindfulness can be practiced in two main ways-formal and informal. Formal relates to practicing mindfulness meditation and not doing something else at the same time. The informal practice of mindfulness means to be present and attentive while we are going about other activities and it brings awareness into existing routines and everyday life. The ability to be mindful in daily life (informal practice) can be developed from the formal practice of mindfulness meditation and also informally through the conscious choice of bringing attention into this moment of now. When the mind is not engaged with the present moment then it tends to activate the brain's default circuits (Brewer *et al.*, 2011) which are commonly active during rumination and worry and therefore leave a person vulnerable to depression and anxiety. Formal and informal mindfulness (Hanley *et al.*, 2015) practice help to switch off

this default mental activity. With consistent practice over time of the formal and informal practice of mindfulness creates neuroplastic changes within the brain causing reorganisation of the brain's connections based on experience, giving rise to the experienced benefits of mindfulness (Holzel *et al.*, 2011).

The generally high rates of anxiety, stress and depression in the community has led to a high level of demand for mindfulness training in recent years. This demand increased when the pandemic swept across the globe from 2020.

In March 2020, the global health pandemic of Corona Virus 2019 (COVID-19) was declared (World Health Organisation Coronavirus Disease Advice for the Public). In response to the initial outbreak in Wuhan (Hubei, China) and the spread of outbreaks across Europe and the United States, a series of preventative public health measures were implemented to reduce rates of transmission including social distancing and lockdowns which significantly impacted on the communities causing loss of freedom, financial insecurity, health fears and social isolation for many. As a result, during this unprecedented time, changes in people's wellbeing and mental health were predicted (Campion *et al.*, 2020; Xiang *et al.*, 2020) and identified (Otu *et al.*, 2020; Reger *et al.*, 2020; Wang *et al.*, 2020).

Historically for communities effected by an epidemic, the psychological impact can persist for individuals and have a subsequent influence on the mental health of an individual (Kelly, 2020).

While the societal and economic impact of lockdowns, social distancing and quarantine created considerable upheaval and uncertainty in peoples' lives, the loss of human contact is associated with an increase in psychological distress, including anxiety and depression (Brooks *et al.*, 2020; Leigh-Hunt *et al.*, 2017; Otu *et al.*, 2020; Santini *et al.*, 2020; Wang *et al.*, 2020).

At a time when experts were still learning about this virus, many frightening depictions of the pandemic were portrayed in the media, which added to a generalised sense of fear and anxiety (Tasnim *et al.*, 2020).

Ireland's first lockdown was in March 2020, which became one of the longest cumulative lockdowns in Europe (NPHE, 2021). Two further lockdowns were implemented in August and December 2020. To date, as of March 2022 Ireland has been reported to have 1704,502 cases and 8708 deaths attributable to this virus (John Hopkins, University of Medicine, COVID-19 Virus Resource Centre).

Ireland has faced the same challenges during imposed lockdowns and during the pandemic as other nations, including the effect on psychological wellbeing (Burke *et al.*, 2020; Stafford *et al.*, 2021).

In response to the change and distress that many faced during this time of the COVID-19 pandemic, a twice weekly online practice of mindfulness meditation was delivered to staff,

students and also for the wider community outside of the University of Galway.

This twice weekly practice offered a regular mindfulness meditation, and this was delivered in the context of what was happening during this time; this being living with the changes and preventative measures during the pandemic in Ireland.

The aim of this study is to examine the effect of the offered regular online practice of mindfulness meditation for participants during the COVID-19 emergency, exploring through qualitative analysis of their own lived experience with this intervention.

Methods

Ethics

Ethical approval for this study was granted by the Clinical Research Ethics Committee of Galway University Hospitals (reference: C.A. 2397). Written informed consent was obtained for all participants.

This qualitative study consisted of a short, structured interview process, consisting of 8-10 open questions, to explore the participants' experience of the online practice of mindfulness during the COVID-19 pandemic (see *Extended data* for the interview questions (Flynn *et al.*, 2023b)).

Participants

The participants for this study were recruited from those that took part in the twice weekly online practice of mindfulness meditation that was delivered from NUIG following the announcement of the COVID-19 pandemic in March 2020. This self-selected group was made up of staff and students from the University of Galway and those from the wider community outside of the university that enlisted in this regular mindfulness practice during this time. From this group, all meditation class participants were invited to take part in this research. Each participant must have attended a minimum of four online mindfulness practice sessions. Six participants from the invited group of 30 participants agreed to participate in this research, following obtaining fully informed consent. These participants were then invited to take part in an open-ended interview process.

Intervention

The twice weekly online practice of mindfulness meditation was offered to staff, students and greater community beyond the university in response to the announcement of the COVID-19 pandemic. For this study, this intervention was offered twice a week for five months. This was delivered through open access of the university teaching platform with video conferencing software, [Blackboard](#). The sessions that were delivered consisted of a short introduction and discussion and then followed with a guided mindfulness meditation that lasted 30 minutes. This was delivered within the context of living during the COVID-19 pandemic. The main objective of this online mindfulness practice was to help participants cultivate

skills of presence, a sense of being grounded in the present, and building resilience amidst adversity by being less dominated by the coming and going of uncomfortable thoughts and emotions.

Data collection

Interviews were conducted after five months of twice weekly online mindfulness meditation. The interview process was conducted by telephone and lasted on average 24 minutes. Each interview was audio-recorded. This post-intervention interview asked the participant as to the reason for joining this online practice, previous experience of mindfulness, impact of the COVID-19 pandemic on life and wellbeing, experience of this online practice of mindfulness (formal practice), development of mindfulness outside of the online practice of mindfulness (informal practice), effect of this mindfulness practice during this time of the pandemic, and intention to continue mindfulness practice.

In the interview, a succinct opening statement introduced the participant to the subject of the question. This was followed by a related question, and then further questioning if required. The schedule for the interview was flexible and without time constraint, allowing the participant to reflect and give their own response.

All interviews were conducted in English by a masters student enrolled in the School of Business and Marketing at the University of Galway. The interviewer was given training on how to facilitate a research-based interview and was also familiarised with the themes for discussion within the interview. The interviewer was not involved in the online practice of mindfulness. See *Extended data* for post-intervention interview (Flynn *et al.*, 2023b).

Data analysis

All participants of this interview process were given a unique identifying number. Each recorded interview was stored under the unique identifying number and then anonymised of personally identifiable information. All interviews were transcribed verbatim and checked thereafter against the recordings to ensure accuracy and consistency in the translation.

From the data, the thematic analysis method as described by Braun and Clarke was used to identify themes (Braun & Clarke, 2006). Having collected the qualitative data through the interview process, themes and patterns were induced through this analysis with the use of [NVIVO](#) software for thematic analysis.

In doing this, exploration for identified individual themes was carried out across all participants' interviews. The process was carried out by two independent researchers to improve validity.

Two researchers independently analysed the data. All transcripts were first read to get an overall sense of the responses. More detailed analysis following multiple re-readings of the transcripts and coding of emerging themes took place with

the use of NVIVO software. Both researchers then decided on final themes from the analysed data.

Results

Of the 30 people who participated in this intervention, six agreed to be interviewed after five months of the regular online practice of mindfulness.

The mean age of the participants was 56 years, with four female and two males making up the participant group. The average number of sessions attended was 14, with 40 sessions being offered over the 5 months period. Participant characteristics are presented in [Table 1](#).

On analysis of each of these personal accounts, four themes were identified as being common across the six participants.

Main themes

The main theme identified was increased self-awareness, where the individual can observe and recognise their own physical, mental and emotional states. Participants noted that self-awareness commonly led to an acceptance and understanding of the self and one’s relationship to present moment experience.

Sub-themes

The four sub-themes identified were: (1) stress-management, (2) emotional regulation, (3) empathy and (4) social connection. The subthemes are detailed with the use of supporting quotes. See *Underlying data* for additional supporting quotes ([Flynn et al., 2023](#)).

Stress-management

With the announcement of the pandemic and the commencement of the first lockdown in Ireland, considerable change took place overnight for many ([NPHET, 2021](#)). In order to reduce the rate of transmission of the SARS-CoV-2 virus, necessary policies of working from home, social isolation and distancing, along with travel and exercise restrictions were implemented. As commonly described, this unprecedented time caused uncertainty, worry, fear of the future and stress in the lives of many people. Participants reported manifestations of this stress in their own lives during this time; presenting as

rumination, worry and interrupted sleep. From what was gained through the formal practice of mindfulness, participants were able to apply a mindful approach to the stress that they experienced:

“The practice helped me to keep a focus on, not to get carried away with all the stress inadvertently... and through the rest of the day to remind myself to connect with my breathing and stay in the moment as opposed to getting panicked... more recently, I started sleeping maybe better” (Participant 3).

Through development of self-awareness, awareness of irritability and triggers for stress in people’s lives during this time of the pandemic were identified. With increased self-awareness, participants were able to respond more mindfully:

“The circumstances of the pandemic and the meditation is not a cure-all but it helps you be more aware of them more quickly, and therefore able to deal with them.... becoming aware of irritability more quickly, and therefore being able to deal with it in the present” (Participant 2).

“For me.. mindfulness is a realisation of why I get stressed about my work practice. And I realised that it’s a slightly workaholic nature, in not getting organised and getting distracted with too many ideas and things, not being focused...Mindfulness helped me to understand what’s the problem that is causing me this kind of restrictive scenarios” (Participant 6).

Emotional regulation

Participants reported an awareness of the difficult emotions that they experienced during this time of the pandemic. With the restrictions in normal daily routines and the future uncertainty, challenging emotions were evident. Participants appreciated that this practice was delivered in the context of what was being experienced across the globe. This was common feelings of uncertainty, loss, sadness and worry.

“The content... was in the present. It was very much in the moment... and they referred to what people were going through... it wasn’t an attempt to idealise or to take you away from what was actually happening and make some sort of a fairy land out of it all” (Participant 1).

Through this perspective, participants showed acceptance of experiencing difficult emotions, and also an understanding of the transient nature of emotions:

“The practice gives you permission to accept some of the negative feelings that you might be having... to stand back from the sadness and the bad news ... you mightn’t be feeling okay and that’s okay and you know it’s going to pass... it helped” (Participant 5).

A change in perception, gave an awareness of previous norms or habitual ways of reacting and a choice to see the present moment reality and regulate their response:

Table 1. Participant characteristics.

Participant Number	Sex	Age	Background	Number of sessions attended
1	F	60	University staff	25
2	M	78	University staff	5
3	F	57	University staff	22
4	F	42	University staff	10
5	F	56	University staff	10
6	M	41	University staff	14

“I would’ve always in the past shoved negative feelings down... it gives you a chance to accept, okay I’m not feeling great today but that’s okay” (Participant 5).

Knowing how unprecedented this time was, participants showed non-attachment to the difficulties that were faced. In addition, with an understanding of the effect of over-thinking and rumination on difficult thoughts, participants reported building their capacity of coping in this time with presence of mind:

“The world is cracking up a bit, you have some control over your own mind... you have some way of dealing with what’s going on around you ...it was really important to build a resilience. I think it kind of stabilised me, brought me back to stability” (Participant 1).

“When I’m out for a walk, or when I go for a swim that I’m more in, sort of trying to be in the present of that. Instead of going through a shopping list in my head, or other things. That I’m trying to be in the moment” (Participant 3).

Empathy and compassion

The development of enhanced self-awareness also revealed the quality of empathy in participants. Participants reported being more aware of others and what others were experiencing and feeling in this time:

“It made it real in the sense that other people were going through the same as you... It was more than just yourself” (Participant 1).

“With self-acceptance... helping to understand what other people are going through” (Participant 5).

With this awareness of the difficulties faced in this lockdown, participants showed compassion with the intentional concern for others to be well in this time:

“There was a concern, you know, be safe, be well... you understood it and were kind to others and then that kindness spread” (Participant 1).

Social connection

Participants recognised the sense of connection to others within the group that joined this regular online practice. Despite the practice being only online without any face-to-face meeting a sense of commonality formed a group identity:

“Just hearing it and seeing that other people were also participating in it... and that you were kind of part of a bigger group” (Participant 3).

“Being able to connect with other people. And I think there was a great sense of well that we’re all in this together” (Participant 5).

This sense of connection offered comfort to participants and reinforced their sense of purpose to participate in this practice. This motivation led to continued group practice:

“The fact we were all in it together and that we had an anchor, it was kind of like an anchor on the

mornings you had it... The fact that you had to go and connect with people and you were committed to that connection” (Participant 1).

Discussion

This study explored the experience of staff, students and the public outside of the University of Galway that took part in a twice weekly online practice of a mindfulness meditation. This was delivered during the first lockdown (March-May 2020) implemented in Ireland due to the pandemic (NPHE, 2021). From participating in this regular practice at this time, participants reported improved self-awareness, stress management and emotional regulation. Along with this participants reported the felt sense of empathy and compassion and also a sense of connection from attending this practice.

The benefits of mindfulness are well established, having beneficial effects in improving wellbeing, promoting good mental health and improving stress-related illnesses (Chiesa & Serretti, 2006; Hofmann *et al.*, 2010). The findings in this study support the positive findings related to mindfulness.

With technological advances and the displacement secondary to quarantine restrictions during the pandemic and now hybrid models of working, many mindfulness programs are delivered now in an online format; either synchronously or asynchronously (Loucks *et al.*, 2021). The positive effects from this online intervention delivered from the university are in keeping with the findings of a meta-analysis of randomised controlled trials studying the effectiveness of online mindfulness meditation to help promote mental health, reducing stress, anxiety, and depression (Spikerman *et al.*, 2016). Similarly, a study carried out in Italy during the initial outbreaks of COVID-19 in Europe looked at the effects of online mindfulness meditation practice offered to female teachers during this time. This study showed that this practice was associated with the promotion of good mental health for participants during this difficult of the pandemic (Matiz *et al.*, 2020).

In this study participants became aware of the stress that was present in their lives during this extraordinary time of the announcement of the pandemic with the subsequent life changes that came about following the advised lockdown. Anxiety and fear stemming from the sudden changes in life in this unprecedented time and uncertainty for the future contributed to this stress, leading to rumination, worry and irritability. These findings support other studies, that predicted and identified what the effects were from the pandemic for the mental health of individuals (Brooks *et al.*, 2020; Ettman *et al.*, 2020; Killgore *et al.*, 2020). Through this formal practice of mindfulness meditation, participants reported how developing self-awareness helped them to recognise the relationship to stress and their response to stress. The development of self-awareness that comes from mindfulness helps the individual to recognise how we perceive. This is well described in Kabat Zinn’s *Full Catastrophe Living* (2009). Mindfully observing what is occurring within when we encounter any experience (stimulus) and the thoughts, feelings, impulses and action that may then come about (response). Developing a

conscious awareness of the present fosters acceptance of what is in the now and the choices we have in each moment.

In this study, participants reported that self-awareness of the difficulties faced and acceptance of the feelings of uncertainty relating to health, safety and existential fears helped mitigate feelings of panic and loss of control. Similarly, without mindful awareness, the process of observing and responding is often replaced by reacting, which reflects much of the stress experienced in modern day life, which predates the pandemic. This concurs with the growing body of evidence supporting how mindfulness changes the relationship to stressors in life, having a subsequent positive effect on health behaviours (Sala *et al.*, 2021) and stress-related health (Epel *et al.*, 2009; Greeson & Chin, 2019; Kuyken *et al.*, 2016; McEwen, 2004; Ong *et al.*, 2014; Rosenkranz *et al.*, 2013). With the stress experienced in daily life, many of the responses to stress become conditioned, resulting in what is known as the automatic pilot (Goleman & Davidson, 2017). In an environment where stress is perceived regularly, the automatic pilot is immediate and occurs without due consideration or autonomy. Commonly this results in what is known as living in a default mode of stress. With the automatic pilot, there is less awareness within the individual of the interaction between the stimulus and the response. Participants in this study described how with the practice of mindfulness their patterns of response changed over time and despite an awareness of stress, they were able to choose healthier ways of responding. In the absence of self-awareness, the individual's response to difficulty and adversity can give rise to recurring feelings of stress and fear, perpetuating further a state of anxiety. To mitigate stress and the negative effects of this, mindfulness offers an effective solution (Chiesa & Serretti, 2006; Kabat-Zinn, 2013).

In the study, development of self-awareness appeared then to be associated with emotional regulation during this difficult time. The practice of mindfulness helps to build emotional regulation within an individual, leading to better coping skills and an improved sense of wellbeing (Chambers *et al.*, 2009; González-García *et al.*, 2016; Hofmann & Asmundson, 2008).

As participants showed a conscious awareness of the difficulties life posed for them in this global pandemic and the stress that was experienced, this awareness brought acceptance of what was present at that time. This presence of mind and acceptance, allowed participants to consider how they responded within themselves, to their family, friends and work and to the situation they now faced. In effect, the development of this awareness, showed the participants the choices that are present in each moment, choosing how to respond to what is, instead of automatically reacting. Participants in this study showed improved coping mechanisms and a sense of letting-go of what is out of their control.

The practice of mindfulness can be strengthened and improved upon over time through practice and commitment (Kabat-Zinn, 2013). For the individual this practice must be acceptable to them with a belief in the benefit that comes from this practice. For some, engagement and commitment to

nurturing mindfulness into daily life comes after a life event which involved considerable stress, with the individual understanding the harmful effects of stress based on their own lived experience.

Mindfulness meditation helped participants of this study to build an understanding of the present moment experience. Emotional regulation comes from recognition of the current emotional state, knowing previous ways of reacting and then choosing to respond from a place of presence.

Participants in this study reported an awareness of others during this time of the pandemic and the feelings that others likely experienced during this challenging time. In this way the practice of mindfulness developed an awareness initially for the individual's own experience and response and then helped to orientate this awareness interpersonally, becoming then more aware of the other person and their experience. Participants revealed in the interviews an intentional concern for others during this time and for their wellbeing. Innate qualities of understanding, kindness and compassion are expressed with the presence of mind and emotional regulation that comes from the practice of mindfulness. Empathy, empathetic concern and compassion have been shown to improve mental health by reducing perceived psychological stress (Arch *et al.*, 2014; Luo *et al.*, 2019). Along with developing self-awareness, cultivating compassion and empathy has been of interest to navigate the difficult times that the pandemic has brought (Khoury, 2020).

A group identity formed among the participants of this online practice of mindfulness meditation. Participants reported a sense of connection, being part of a larger community of people during this time of social distancing. This inspired further engagement in the twice weekly delivered practice. This finding suggests a real sense of common humanity among participants that wished to deepen and extend their mindfulness practice during this extraordinary time of the COVID-19 pandemic. Reduced access to healthcare during the COVID-19 emergency has been reported, with people looking for ways to improve their mental and physical health (Loucks *et al.*, 2021). While mindfulness is not a replacement for access to healthcare, engaging in the practice as a community and individually can be helpful to reduce the effect of life stressors.

This research has some limitations however. The participants in this study self-selected by volunteering to participate. Given this, it is unknown what the effect of this mindfulness meditation was for those that did not self-select to be part of this study. Noteworthy also is the fact that the sample size overall is small and this may not be representative of the group. As this is a qualitative form of research, use of a quantitative measures such as a validated self-report scales and stress biomarkers could offer another perspective on the impact of mindfulness meditation further. Participants of this study also were from professional backgrounds. It has been suggested that some studies of mindfulness based interventions oversample a distinct group, that being of a white, middle-aged and educated background from countries of higher incomes

(Loucks *et al.*, 2021). Inclusion of diverse backgrounds and marginalised groups as participants could offer further insight on the effect of mindfulness based interventions. These are groups that are disadvantaged socioeconomically and are likely to be affected by the pandemic the most.

Finally, it would also be interesting to include a control group in this study. The control group would not attend this online practice of mindfulness meditation but may be facilitated with another non-mindfulness based intervention that may account for the perceived benefits found in this study.

However, despite these limitations, this is a study from a university setting in Ireland that highlighted through qualitative interviews the benefits of a regular online mindfulness meditation during the COVID-19 emergency.

Conclusion

This study has shown that during the difficult time of the COVID-19 pandemic, an online mindfulness meditation led to better wellbeing. The qualities that came from this intervention gave rise to improved wellbeing were improved stress management, emotion regulation, empathy and compassion and also building social connection amongst people who took part in this regular practice.

These findings provide a rationale for developing further opportunities for mindfulness training for staff in the workplace, with development of further online resources. Further studies are required to extend these initial findings and study the development of online mindfulness resources.

Data availability

Underlying data

Figshare: Finding presence during a pandemic – a qualitative analysis of participation in an Irish University online mindfulness practice during the COVID-19 emergency. The themes and subthemes with supportive quotations from this research

<https://doi.org/10.6084/m9.figshare.22731878.v1> (Flynn *et al.*, 2023)

This project contains the following underlying data:

- Themes and Subthemes with supportive quotations.docx

Extended data

Figshare: Finding presence during a pandemic – a qualitative analysis of participation in an Irish University online mindfulness practice during the COVID-19 emergency. The candidate interview questions used in this study

<https://doi.org/10.6084/m9.figshare.22732085.v1> (Flynn *et al.*, 2023b)

This project contains the following extended data:

- Interview Questions.docx

Data are available under the terms of the [Creative Commons Zero “No rights reserved” data waiver](#) (CC0 1.0 Public domain dedication).

Acknowledgements

We thank the independent researcher for their assistance with conducting the interviews.

References

- Arch JJ, Brown KW, Dean DJ, *et al.*: **Self-compassion training modulates alpha-amylase, heart rate variability, and subjective responses to social evaluative threat in women.** *Psychoneuroendocrinology.* 2014; **42**: 49–58.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Braun V, Clarke V: **Using thematic analysis in psychology.** *Qual Res Psychol.* 2006; **3**(2): 77–101.
[Publisher Full Text](#)
- Brewer JA, Worhunsky PD, Gray JR: **Meditation experience is associated with differences in default mode network activity and connectivity.** *Proc Natl Acad Sci U S A.* 2011; **108**(50): 20254–9.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Brooks SK, Webster RK, Smith LE, *et al.*: **The psychological impact of quarantine and how to reduce it: rapid review of the evidence.** *Lancet.* 2020; **395**(10227): 912–920.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Burke T, Berry A, Taylor LK, *et al.*: **Increased psychological distress during COVID-19 and quarantine in Ireland: a national survey.** *J Clin Med.* 2020; **9**(11): 3481.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Campion J, Javed A, Sartorius N, *et al.*: **Addressing the public mental health challenge of COVID-19.** *Lancet Psychiatry.* 2020; **7**(8): 657–659.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Chambers R, Gullone E, Allen NB: **Mindful emotion regulation: An integrative review.** *Clin Psychol Rev.* 2009; **29**(6): 560–72.
[PubMed Abstract](#) | [Publisher Full Text](#)
- Chiesa A, Serretti A: **Mindfulness-based stress reduction for stress management in healthy people: a review and meta-analysis.** *J Altern Complement Med.* 2006; **15**(5): 593–600.
[PubMed Abstract](#) | [Publisher Full Text](#)
- Epel E, Daubenmier J, Moskowitz JT, *et al.*: **Can meditation slow rate of cellular aging? Cognitive stress, mindfulness, and telomeres.** (ed. W.C. Bushnell, E.L. Olivo and N.D. Theise), 2009; **1172**(1): 34–53.
[Publisher Full Text](#)
- Ettman CK, Abdalla SM, Cohen GH, *et al.*: **Prevalence of depression symptoms in US adults before and during the COVID-19 pandemic.** *JAMA Netw Open.* 2020; **3**(9): e2019686.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Flynn E, Salmon N, HASSED C, *et al.*: **Finding presence during a pandemic – a qualitative analysis of participation in an Irish University online mindfulness practice during the COVID-19 emergency. The themes and subthemes with supportive quotations from this research.** *figshare.* Dataset, 2023.
<http://www.doi.org/10.6084/m9.figshare.22731878.v1>
- Flynn E, Salmon N, O Keeffe D, *et al.*: **Finding presence during a pandemic – a qualitative analysis of participation in an Irish University online mindfulness practice during the COVID-19 emergency. The candidate interview questions used in this study.** *figshare.* Dataset, 2023b.
<http://www.doi.org/10.6084/m9.figshare.22732085.v1>
- Goldberg SB, Riordan KM, Sun S, *et al.*: **The empirical status of mindfulness-based interventions: a systematic review of 44 meta-analyses of randomized controlled trials.** *Perspect Psychol Sci.* 2021; **17**(1): 108–130.
[PubMed Abstract](#) | [Publisher Full Text](#) | [Free Full Text](#)
- Goleman D, Davidson R: **Altered traits: science reveals how meditation**

changes your mind, brain and body. Avery, New York, 2017.

Reference Source

González-García M, Borràs X, López JG, et al.: **Mindfulness-based cognitive therapy application for people living with chronic disease: the case of HIV.** In: *Mindfulness-Based Cognitive Therapy: Innovative applications.* (ed. S. Eisendrath), Springer, 2016.

Publisher Full Text

Greeson JM, Chin GR: **Mindfulness and physical disease: a concise review.** *Curr Opin Psychol.* 2019; **28**: 204–10.

PubMed Abstract | Publisher Full Text | Free Full Text

Hanley AW, Warner AR, Dehili VM, et al.: **Washing dishes to wash the dishes: brief instruction in an informal mindfulness practice.** *Mindfulness.* 2015; **6**: 1095–1103.

Publisher Full Text

Hofmann SG, Asmundson GJG: **Acceptance and mindfulness-based therapy: new wave or old hat?** *Clin Psychol Rev.* 2008; **28**(1): 1–16.

PubMed Abstract | Publisher Full Text

Hofmann SG, Sawyer AT, Witt AA, et al.: **The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review.** *J Consult Clin Psychol.* 2010; **78**(2): 169–183.

PubMed Abstract | Publisher Full Text | Free Full Text

Hölzel BK, Lazar SW, Gard T, et al.: **How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective.** *Perspect Psychol Sci.* 2011; **6**(6): 537–559.

PubMed Abstract | Publisher Full Text

Kabat-Zinn J: **Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness.** Random House Publishing Group: New York, USA, 2013.

Reference Source

Kabat-Zinn J: **The Invitation within the cultivation of mindfulness.** *Mindfulness.* 2021; **12**: 1034–037.

Publisher Full Text

Kelly BD: **Plagues, pandemics and epidemics in Irish history prior to COVID-19 (coronavirus): what can we learn?** *Irish J Psychol Med.* 2020; **37**(4): 269–274.

Publisher Full Text

Khoury B: **The Root Causes of COVID-19 screech for compassion.** *Mindfulness (N Y).* 2020; **11**(8): 1910–1913.

PubMed Abstract | Publisher Full Text | Free Full Text

Killgore WDS, Cloonan SA, Taylor EC, et al.: **Loneliness: a signature mental health concern in the era of COVID-19.** *Psychiatry Res.* 2020; **290**: 113117.

PubMed Abstract | Publisher Full Text | Free Full Text

Kuyken W, Warren FC, Taylor RS, et al.: **Efficacy of mindfulness-based cognitive therapy in prevention of depressive relapse: an individual patient data meta-analysis from randomized trials.** *JAMA Psychiatry.* 2016; **73**(6): 565–74.

PubMed Abstract | Publisher Full Text | Free Full Text

Leigh-Hunt N, Bagguley D, Bash K, et al.: **An overview of systematic reviews on the public health consequences of social isolation and loneliness.** *Public Health.* 2017; **152**: 157–171.

PubMed Abstract | Publisher Full Text

Loucks EB, Rosenkranz MA, Creswell JD: **Harnessing Life's Slings and Arrows: The Science and Opportunities for Mindfulness Meditation During a Global Pandemic and Beyond.** *Psychosom Med.* 2021; **83**(6): 497–502.

PubMed Abstract | Publisher Full Text | Free Full Text

Luo Y, Meng R, Li J, et al.: **Self-compassion may reduce anxiety and depression in nursing students: a pathway through perceived stress.** *Public*

Health. 2019; **174**: 1–10.

PubMed Abstract | Publisher Full Text

Matiz A, Fabbro F, Paschetto A, et al.: **Positive impact of mindfulness meditation on mental health of female teachers during the COVID-19 outbreak in Italy.** *Int J Environ Res Public Health.* 2020; **17**(18): 6450.

PubMed Abstract | Publisher Full Text | Free Full Text

McEwen BS: **Protection and damage from acute and chronic stress: allostasis and allostatic overload and relevance to the pathophysiology of psychiatric disorders.** *Ann N Y Acad Sci.* 2004; **1032**: 1–7.

PubMed Abstract | Publisher Full Text

NPHE Policy Unit, Department of Health: **Timeline and Detail of Public Health Restrictive Measures Advised by NPHE in Response to the COVID-19 Pandemic.** 2021.

Ong JC, Manber R, Segal Z, et al.: **A randomized controlled trial of mindfulness meditation for chronic insomnia.** *Sleep.* 2014; **37**(9): 1553–63.

PubMed Abstract | Publisher Full Text | Free Full Text

Otu A, Charles CH, Yaya S: **Mental health and psychosocial well-being during the COVID-19 pandemic: the invisible elephant in the room.** *Int J Ment Health Syst.* 2020; **14**: 38.

PubMed Abstract | Publisher Full Text | Free Full Text

Reger MA, Stanley IH, Joiner TE: **Suicide Mortality and Coronavirus Disease 2019-A Perfect Storm?** *JAMA Psychiatry.* 2020; **77**(11): 1093–1094.

PubMed Abstract | Publisher Full Text

Rosenkranz MA, Davidson RJ, Maccoon DG, et al.: **A comparison of mindfulness-based stress reduction and an active control in modulation of neurogenic inflammation.** *Brain Behav Immun.* 2013; **27**(1): 174–84.

PubMed Abstract | Publisher Full Text | Free Full Text

Sala M, Geary B, Baldwin AS: **A mindfulness-based physical activity intervention: a randomized pilot study.** *Psychosom Med.* 2021; **83**(6): 615–23.

PubMed Abstract | Publisher Full Text

Santini ZI, Jose PE, York Cornwell E, et al.: **Social disconnectedness, perceived isolation, and symptoms of depression and anxiety among older Americans (NSHAP): a longitudinal mediation analysis.** *Lancet Public Health.* 2020; **5**(1): 62–70.

PubMed Abstract | Publisher Full Text

Spijkerman MPJ, Pots WTM, Bohlmeijer ET: **Effectiveness of online mindfulness-based interventions in improving mental health: A review and meta-analysis of randomised controlled trials.** *Clin Psychol Rev.* 2016; **45**: 102–114.

PubMed Abstract | Publisher Full Text

Stafford O, Berry A, Taylor LK, et al.: **Comorbidity and COVID-19: investigating the relationship between medical and psychological well-being.** *Ir J Psychol Med.* 2021; **38**(4): 272–277.

PubMed Abstract | Publisher Full Text | Free Full Text

Tasnim S, Hossain MM, Mazumder H: **Impact of rumors and misinformation on COVID-19 in social media.** *J Prev Med Public Health.* 2020; **53**(3): 171–174.

PubMed Abstract | Publisher Full Text | Free Full Text

Wang C, Pan R, Wan X, et al.: **Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China.** *Int J Environ Res Public Health.* 2020; **17**(5): 1729.

PubMed Abstract | Publisher Full Text | Free Full Text

Xiang YT, Yang Y, Li W, et al.: **Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed.** *Lancet Psychiatry.* 2020; **7**(3): 228–229.

PubMed Abstract | Publisher Full Text | Free Full Text

Open Peer Review

Current Peer Review Status: ? ?

Version 1

Reviewer Report 30 November 2023

<https://doi.org/10.21956/hrbopenres.15024.r36745>

© 2023 Roberts K. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

? **Kim Roberts** 

Department of Psychology, Wilfrid Laurier University, Waterloo, Ontario, Canada

A qualitative study is described in which adults participated in an online meditation class for up to 5 months. The participants were interviewed about their experiences in this online activity and several themes emerged from their responses: self regulation, empathy and compassion, and others. The authors argue that the mindfulness meditation reduced participants' stress and improved their well-being.

There are several aspects of the research that are intriguing. First, the inclusion of the quotes from the participants gives a rich and insightful window into their experiences. Second, the participants were affectively positive about their experiences. Third, the authors rightly acknowledge that an online intervention is not inclusive – only those with working computers and good internet access could participate in the study. Given that the study was carried out during one of the COVID lockdowns and, therefore, the meditation training could not be offered in person. It is unfortunate but understandable. Finally, the authors also imply (briefly) that the conclusions drawn by the authors would be more reliable if a control group was present to provide a comparison about wellbeing without mindfulness meditation. They are correct and this is worthy of discussion.

The methodology that the authors used can be summarized as treatment + evaluation, in this case, meditation + open-ended interview. As the participants were interviewed *after* they had been meditating for up to 5 months, the authors assume that the benefits described by the participants in the interview must be a consequence of the meditation practice. In the Abstract, for example, the conclusion reads “an online mindful meditation led to better wellbeing”. There are significant factors that need to be considered.

1). A control group should be matched with the treatment group as much as possible save for the factor of interest (i.e., meditation). If differences are observed between the treatment and control group, it strengthens the conclusion that the factor of interest was correlated with the outcome.

2). Collecting pre- and post-test measures is an additional measure that can be used although it cannot be used for causal claims. However, it would be possible to see whether there was any

actual change that occurred over the course of 5 months.

3). The lack of a control group or comparison measures does not allow other explanations to be ruled out. For example, it may not have been mindfulness or even meditation that led to the participants' responses. It could be that simply being in a 'program' or 'club' was the actual driving force – any club, not necessarily the meditation program. Perhaps the authors could look at other metrics to give some more clarity of cause-and-effect mechanisms. Analyzing data like how many meditations the participants attended, or how long they stayed in the program, both of which would be positively correlated with outcomes (as participation increases, there is an increase in wellbeing), would be illuminating.

In the Introduction, there is a description of mindfulness and how it encourages “being in the present moment”. I suggest adding in some more detail describing the key components of mindfulness, such as, its Buddhist origins, acceptance of oneself, its secular focus in the Western world, and so on. It seems important to better outline the link between mindfulness and the meditation in the study. How was it a “mindful meditation”? Mindfulness is more than meditation, and meditations are not necessarily mindful. I suggest adding some details about the meditation such as the statements and instructions that were used.

The authors propose the theory that engaging in the meditations should make people more mindful. What is the evidence that the meditation allowed people to 'live mindful lives'? Again, more detail might reveal something interesting.

Some ideas in the Introduction require citations to back them up:

- 1. Without developing a self-awareness, recurring feelings of stress and fear result in a state of anxiety. This can become more stable overtime with more enduring characteristics and patterns of behaviour that form a trait of anxiety. The individual then commonly reports negative emotions such as worry, fear and anxiety in many daily experiences and life.*
- 2. The generally high rates of anxiety, stress and depression in the community has led to a high level of demand for mindfulness training in recent years. This demand increased when the pandemic swept across the globe from 2020.*

In the Method section, the sample is described as being 30 participants who participated in the meditation program and, out of those 30, 6 agreed to be interviewed. The authors correctly refer to the participants as “self-selected”. This means that there may be characteristics about these participants that prevent generalizing from the results. Certainly, the participants needed access to the internet and time to do the meditations. Perhaps the authors collected more information such as years of education, SES group, race and ethnicity, and so on. If so, this would be very helpful to add to Table 1. This limitation of self-selection should receive more attention in the Discussion.

According to CONSORT guidelines, it is essential to provide details about those who declined and those who agreed to the interviews. Were there any demographic or gender differences, for example?

Could the authors provide some more information on the “guided mindfulness meditation”? The mindfulness literature is bereft of these types of details which may explain different results in

different studies. This information would help compare the results of this study with others leading to a richer literature base.

It would be helpful if the authors could provide any information on how faithful to the meditation the participants were. Did they stay for all 30 minutes? A 30-minute meditation is difficult for people who have never meditated before. Usually, people start out with shorter meditation sessions and gradually increase the time in meditation. According to the interview schedule in the Supplemental Material, participants at the interview were asked whether they had practised before. This information would add some clarity to the methodology. It would add a lot to the manuscript if there were sample questions actually in the Method section. It is hard to understand what the following means:

In the interview, a succinct opening statement introduced the participant to the subject of the question. This was followed by a related question, and then further questioning if required.

The authors rightly include information on the interviewer stating that they did not engage in mindfulness practice. How does this affect interpretation of the study results? Are there any metrics that could show the reader how mindful concepts were probed in the interview. Some might argue that the interviewer was not qualified to conduct the interviews. Are the authors arguing that the interviewer's naivete was a strength of the procedure?

The authors describe in the [Data Analysis](#) section, that:

In doing this, exploration for identified individual themes was carried out across all participants' interviews. The process was carried out by two independent researchers to improve validity.

I am not sure what this means. Could the authors be referring to *reliability*? Some more information on agreements and disagreements between the coders would be helpful to evaluate the coding. Otherwise, the thematic analysis seems appropriate and well carried out.

The first paragraph of the [Results](#) section can be omitted and information about the participants and Table 1 should be moved to the Method section.

The authors describe the themes they pulled from the data and give quotes. This is a strength of the study. Given that the authors state that the themes were common to all 6 participants, it would be informative to have a table that shows the prevalence of other themes that came up and how prevalent they were in the group. For example, there may be gender or age differences, where only one subgroup offers up a theme. These data would add to the richness of the data currently in the article.

The first sentence of the [Discussion](#) is inconsistent with the information in Table 1 which states that all 6 participants were university staff.

This study explored the experience of staff, students and the public outside of the University of Galway that took part in a twice weekly online practice of a mindfulness meditation.

Perhaps I missed it but I did not see any evidence that the participants engaged in the meditation twice a week. In fact, at least one of them could not; one participant attended 5 sessions.

University typo

I am not sure what is similar about these two statements:

*In this study, participants reported that self-awareness of the difficulties faced and acceptance of the feelings of uncertainty relating to health, safety and existential fears helped mitigate feelings of panic and loss of control. **Similarly**, without mindful awareness, the process of observing and responding is often replaced by reacting, which reflects much of the stress experienced in modern day life, which predates the pandemic.*

When discussing the group identity, the authors state that:

Participants reported a sense of connection, being part of a larger community of people during this time of social distancing. This inspired further engagement in the twice weekly delivered practiced. This inspired further engagement in the twice weekly delivered practiced.

What is the evidence for this claim?

Summary. I have suggested several additions that might help clarify or bolster the authors' conclusions. The most valid interpretation of the meditation program is not that the program increased mindfulness but that participation in the group led to participants' perception that their wellbeing improved over time. There is no alternate evidence to claim that it was the *mindfulness meditation* that caused this improvement (e.g., many of the reported factors such as a reduction in isolation could have occurred organically as we got used to the lockdowns). Nevertheless, the participants in this study reported benefits and a reduction in stress and this alone is a laudable outcome.

Is the work clearly and accurately presented and does it cite the current literature?

Partly

Is the study design appropriate and is the work technically sound?

Partly

Are sufficient details of methods and analysis provided to allow replication by others?

No

If applicable, is the statistical analysis and its interpretation appropriate?

Not applicable

Are all the source data underlying the results available to ensure full reproducibility?

Yes

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: mindfulness, developmental neuroscience, forensic psychology

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 26 July 2023

<https://doi.org/10.21956/hrbopenres.15024.r35323>

© 2023 Polizzi C. This is an open access peer review report distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



Craig P Polizzi 

Department of Psychology, US Department of Veterans Affairs, Washington, District of Columbia, USA

Overall:

This manuscript reports on a qualitative analysis on participants' experiences with a mindfulness intervention during the COVID-19 pandemic in Ireland. The strengths of this manuscript include the qualitative data analysis as well as the targeted approach to the online intervention. The manuscript's main areas of improvements are (1) enhancing readability, (2) clarifying the details of the study methodology, (3) providing a rationale for the structure of the Results, and (4) revising the Discussion to focus on broader impacts. Overall, given the necessary revisions to the manuscript, I recommend the article be Approved with Reservations.

Abstract:

The authors devote much space to the Background and the Abstract would be improved by shortening the Background and adding more specifics to the Methods and Results. Also, providing a more in-depth Conclusion would be helpful too.

Introduction:

The first half of the Introduction is well written. It can be improved by combining the second and third paragraph into one paragraph that reports on the benefits of mindfulness.

Citations are needed to support the claims made in the second paragraph.

Starting at the sixth paragraph, the remainder of the Introduction reads like a list of studies and findings. It would be beneficial if the authors revised the second half of the Introduction by making a clear transition from mindfulness to the COVID-19 pandemic and then reporting on why

a mindfulness-based intervention is well suited for addressing COVID-19-related stress in Ireland.

The Introduction would be improved with one combined paragraph at the end that reports on the present study, its aims, and main research to be answered with qualitative data.

Methods:

Although the authors provide information on the interview in the *Extended data*, it would improve readability if they moved the interview to a separate section after Participants entitled Measure. In this section, the authors could consider provide more information about the semi-structured intervention used in the present study, such as how items on the interview were generated and if the validity of the interview was tested.

More information on the participants and the recruitment process would be helpful to characterize the population/sample. For example, how many individuals were recruited overall? Why were only six participants only invited to participate in the interview process? Did the participants have any previous meditation/mindfulness experience?

The abbreviation NUIG is not defined when it's first used. Please define this abbreviation.

More details about the mindfulness intervention is needed. It is unclear how the intervention was administered insofar as was it administered live by a facilitator or was it pre-recorded. Who was the person leading the intervention and what were their credentials? Was the intervention based on previous mindfulness practices or was it created specifically for this study? If the intervention was created specifically for this study, then what theory or principles were used to guide its creation?

Additional details in Data Collection can improve the paper. There were some sentences that were vague and it was unclear what the authors were referring to. For example, what were the related question and further questioning that occurred after the opening statement? Also, who trained the interviewer to facilitate a research-based interview and was established guidelines were used in this training?

For readability purposes, it would be beneficial to combine the second and third paragraphs in the Data Analysis section.

How did the two researchers resolve any discrepancies in the themes that they identified?

Results:

The Results section would be improved by revising it to be in active voice.

It would be beneficial to move demographic data about the participants from the Results to the Methods.

The authors appear to highlight the main theme of self-awareness in each of the sub-themes. It may be helpful to move these results for self-awareness to the Main Themes section. Alternatively, the authors could provide a rationale for highlighting self-awareness in each of the sub-themes'

sections.

Discussion:

It would be beneficial to combine the second and third paragraphs in the Discussion and specifically focus this paragraph on detailing how the present study supports the therapeutic effects on a mindfulness intervention delivered online.

The authors could provide more details about how specifically the present study supports prior research. For example, what effects were identified by Brooks et al., 2020, Ettman et al., 2020, and Killgore et al., 2020, and how does the present study support these effects? Also, integrating Kabat Zinn (2009) in the Discussion and specifically describing how findings are consistent with his theories would improve the paper.

It would be helpful to combine paragraphs 6 and 7 in the Discussion. Also, please provide citations for the claims made in paragraph 7.

It was unclear how paragraph 8 related to the rest of the Discussion. It would improve the paper if this paragraph was removed or an enhanced transition to this paragraph was presented.

There are several two-sentence paragraph in the Discussion and it may enhance readability if the authors combine these paragraphs with other paragraph or add more details to deepen the ideas presented in these paragraphs.

The authors do a comprehensive job of interpreting the findings from this study, which is commendable. However, it may be helpful to streamline some of these interpretations and devote space to discussing the broader impacts of the results. For example, what does the findings say about mindfulness treatment in general? Can self-awareness be a mediator or moderator? Can mindfulness intervention be enhanced for mass traumas like the pandemic by targeting self-awareness?

The Discussion would be improved if the authors identified some specific future directions for subsequent research based on the findings from this study.

Some of the word choices in the Discussion were unclear or vague. For example, "The qualities that came from this intervention gave rise to improved wellbeing...". It was unclear what "qualities" is referring to.

Is the work clearly and accurately presented and does it cite the current literature?

Partly

Is the study design appropriate and is the work technically sound?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Partly

If applicable, is the statistical analysis and its interpretation appropriate?

Not applicable

Are all the source data underlying the results available to ensure full reproducibility?

Yes

Are the conclusions drawn adequately supported by the results?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Mindfulness, Emotion Regulation, Resilience, Trauma, PTSD

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.
