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STUDY PROTOCOL

REVISED Research Evaluating Staff Training Online for Resilience (RESTORE): Protocol for a single-arm feasibility study of an online Acceptance and Commitment Therapy intervention to improve staff wellbeing in palliative care settings [version 2; peer review: 2 approved]

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Abstract

Background: Palliative care staff commonly experience workplace stress and distress. General stressors include unmanageable workloads and staff shortages. Stressors specific to palliative care include regular exposure to death, loss and grief. The COVID-19 pandemic exacerbated exhaustion and burnout across the healthcare system, including for those providing palliative care. Evidence based psychological support interventions, tailored to the needs and context of palliative care staff, are needed. Acceptance and Commitment Therapy (ACT) is an established form of cognitive behavioural therapy which uses behavioural psychology, values, acceptance, and mindfulness techniques to improve mental health and wellbeing. ACT is effective in improving workplace wellbeing in many occupational settings. Our study examines the acceptability and feasibility of an online ACT-based intervention to improve mental health and wellbeing in staff caring for people with an advanced progressive illness.
Methods: A single-arm feasibility trial. We will seek to recruit 30 participants to take part in an 8- week online ACT-based intervention, consisting of three synchronous facilitated group sessions and five asynchronous self-directed learning modules. We will use convergent mixed methods to evaluate the feasibility of the intervention. Quantitative feasibility outcomes will include participant recruitment

Open Peer Review

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and retention rates, alongside completion rates of measures assessing stress, quality of life, wellbeing, and psychological flexibility. Focus groups and interviews will explore participant perspectives on the intervention. We will run a stakeholder workshop to further refine the intervention and identify outcomes for use in a future evaluation.
Results: We will describe participant perspectives on intervention acceptability, format, content, and perceived impact, alongside rates of intervention recruitment, retention, and outcome measure completion.
Conclusion: We will show whether a brief, online ACT intervention is acceptable to, and feasible for palliative care staff. Findings will be used to further refine the intervention and provide essential information on outcome assessment prior to a full-scale evaluation.

Keywords
Acceptance and Commitment Therapy, behaviour therapy, cognitive behavioural therapy, palliative care, hospice and palliative care nursing, wellbeing, stress, burnout

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REVISED **Amendments from Version 1**

We have amended this version in accordance with reviewer suggestions. Specifically, we have added a number of references to the research literature on self-compassion in palliative care, to make it clear that this literature has informed the self-compassion module within the intervention. We have made the nomenclature more consistent, and now use palliative care 'staff' throughout, as opposed to shifting between 'staff' and 'workers'. We have corrected a typo relating to the description of ProQOL subscales, and have clarified these. We have also added the RESTORE intervention workbook to our ISRCTN record (https://www.isrctn.com/ISRCTN14313559), where further detailed on course content by week, and related exercised can be accessed.

Any further responses from the reviewers can be found at the end of the article

Introduction

Healthcare professionals working in palliative care settings commonly experience stress and distress[1–3]. General stresses include unmanageable workload and staff shortages. Specific stressors occur as a result of caring for patients with complex physical conditions, and regular exposure to death, loss, and grief. In 2020-21, the COVID-19 pandemic led to increased stress and distress within the health and social care workforce[4–8], including palliative care[9,10]. As a result of the pandemic, health-care staff encountered rapidly changing clinical roles, new modes of service delivery and increased patient volumes, coupled with risk of infection. A considerable proportion experienced mood and sleep disturbances, raising concerns about risks to mental health[8].

Despite the occurrence of workplace stress and distress, evidence based psychological support for palliative care staff is lacking. A 2019 Nursing Standard-Marie Curie survey involving 5,346 UK nurses and healthcare assistants involved in end-of-life care, found that one-third reported insufficient support at work to manage grief and emotional stress from caring for dying patients[11]. In 2020, the same survey with 894 respondents, revealed this proportion had increased to 45%, with visiting restrictions due to the pandemic placing additional emotional burden on staff who needed to balance the safety of patients with their needs to be together with their families[12]. A systematic review prior to the pandemic identified only nine papers evaluating psychosocial interventions for palliative care staff and concluded that there was an urgent need to address the lack of intervention development work and high-quality research in this area[13]. Flexible, accessible, scalable and cost-effective psychological support interventions are now more important than ever.

We propose an Acceptance and Commitment Therapy (ACT) based psychological intervention to improve wellbeing, stress, and distress in palliative care staff. ACT is an established form of cognitive behavioural therapy which uses behavioural psychology, values, acceptance and mindfulness techniques to improve mental health and wellbeing[14].

ACT principles target the kinds of responses that clinicians identify as helpful: being present, finding purpose, acceptance, perspective taking and engaging in life[15]. Recent systematic reviews and meta-analyses show that ACT is efficacious in treating stress, anxiety and depression in a range of settings[16–18], including when delivered online[19,20]. Drawing on evidence of effectiveness in other occupational and healthcare settings[16,17,21–23], we propose that an ACT-based psychological intervention has strong potential to improve mental health and wellbeing in palliative care staff.

We aim to develop, and test the feasibility of an online ACT-based intervention to enhance workplace wellbeing of staff working with terminally ill and dying patients, and their families. Our research will answer the following questions:

- Is an online ACT intervention feasible and acceptable to palliative care staff?

- What is the experience of palliative care staff undertaking ACT training?

- What are the barriers and facilitators to implementing an online ACT intervention for palliative care staff?

- Is there preliminary evidence that ACT training leads to improvements in workplace wellbeing and stress in palliative care staff?

- What are the implications for future evaluation research, including sample size and outcome measures?

Methods

Design

A single-arm feasibility trial of a brief ACT-based intervention for staff providing palliative care for terminally ill adults. We will use convergent mixed methods[24] to evaluate the feasibility of the proposed intervention.

Setting

The study will be hosted by Marie Curie Scotland. Marie Curie is the largest independent provider of end-of-life care and the largest charitable provider of hospice-based care in Scotland. Two Marie Curie hospices, located in Edinburgh and Glasgow, provide short-term inpatient hospice care, outpatient services (including day services), home visits and family support, to terminally ill people and families in their surrounding areas. Across Scotland, the Marie Curie Nursing Service (MCNS) provides care in the last days of life to people in their own homes.

Participants and sample size

Participants will be recruited from two Marie Curie hospices and from the Marie Curie Nursing Service (Scotland). We will seek a sample size of approximately 30 participants. As this is a feasibility study, sample size has not been formally calculated. Our target sample size is based on prior experience, resources available and the format of the intervention.

Inclusion criteria. The intervention will be offered to health and social care professionals providing direct support to patients and families, including nursing and medical staff, allied health professionals, social workers, and healthcare assistants.

Exclusion criteria. Staff who have previously undertaken Acceptance and Commitment Therapy training will be excluded.

Participant recruitment

Members of the research team will discuss the proposed study with service managers and clinical leads across Marie Curie Scotland. The study will be promoted via hospice newsletters, posters, internal email lists and via relevant Marie Curie internal online forums. The research team will run an online information session for potentially interested participants via MS Teams.

Interested staff members will be directed to seek approval from their line manager in the first instance, if they are interested in taking part. Potentially interested participants will be emailed the participant information sheet, and a link to an online consent form. Following consent, they will be invited to complete an online participant characteristics form (gender; age band; ethnicity; role and number of years' experience in palliative care) which will be used to describe the sample, and stored separately from any outcome data.

Intervention design and content

Location. The online Acceptance and Commitment Therapy (ACT) intervention will be hosted using MS Teams. Participants will be able to join from their usual workplace or home

setting. Support will be provided from the research team and the admin team at each hospice for participants who need to access a hospice PC in a quiet location for the purpose of this study.

Facilitation. The intervention will be delivered by a Peer Reviewed ACT Trainer and Fellow of the Association for Contextual Behavioural Science (DG) and facilitated by a research psychologist (AF). DG will lead the virtual classroom sessions. AF will co-ordinate module delivery, manage the online platform and liaise and respond to technical support queries.

Online platform. MS Teams will be used as the training platform, as this supports a range of media, enables chat, and is used widely within health and social care organisations. An MS Team will be set up for intervention delivery, and participants will be invited to join once they consent to the taking part. All participants will be invited to access the online platform in advance of the first session, and individual support, as well as printed resources, will be provided to support access. All intervention materials made available via MS Teams.

Content. The intervention will cover key ACT processes including being present, finding purpose, perspective taking and engaging in life values (Table 1). The content has been informed by previous interventions delivered by the team for

Table 1. Overview of intervention content.

Week	Module	Time required	Content	Delivery mode
1	*Introduction to ACT*	**90 minutes**	**Introduction**	Synchronous online virtual classroom Led by an ACT trainer (DG)
2	*Values*	30 minutes	Identifying and acting in line with your values	Self-directed, asynchronous materials Group chat Homework
3	Awareness	30 minutes	Present moment awareness; mindfulness; grounding	Self-directed, asynchronous materials Group chat Homework
4	*Review of materials*	**90 minutes**	Review, troubleshooting, clarifying materials. Discussion.	Synchronous online virtual classroom Led by an ACT trainer (DG)
5	*Openness*	30 minutes	Developing self-awareness, becoming more open, making room.	Self-directed, asynchronous materials Group chat Homework
6	*Defusion*	30 minutes	Unhooking from difficult thoughts and feelings	Self-directed, asynchronous materials Group chat Homework
7	Compassion	30 minutes	Kindness to self and others	Self-directed, asynchronous materials Group chat Homework
8	**Review and trouble shooting**	**90 minutes**	Review, troubleshooting, clarifying materials. Discussion.	Synchronous online virtual classroom Led by an ACT trainer (DG)

health professionals in other settings, as well as research on occupational stress, wellbeing, self-compassion and resilience in palliative care[3,15,25–28]. The content is described in a draft manual, which will be revised and shared on the ISRCTN registry on completion of the study.

Format. There will be 8 modules delivered via MS Teams over an 8-week period (Table 1). Delivery will be via three synchronous virtual classroom sessions and five asynchronous, self-directed, e-learning modules. The three virtual classroom modules will be interactive expert-led sessions. The five self-directed e-learning modules will consist of online reading materials, pre-recorded videos, and reflective exercises. Participants will be encouraged to share experiences with each other and ask questions or seek clarification via the online chat function within MS Teams. Participants will be provided with a workbook (hard-copy) outlining the content for each week alongside related exercises. The workbook can be accessed here: https://doi.org/10.1186/ISRCTN14313559.

Homework. Participants will be asked to complete 'homework' each week to reflect on the material and how it relates to themselves and their work. Homework will be brief and non-obligatory but encouraged. Examples of homework would include practicing brief mindfulness exercises or exercises to enhance compassionate responses. Homework will be described in the workbook.

Adherence. To facilitate adherence, participants will also be sent a weekly reminder to alert them when new content is made available. To facilitate engagement, participants will be encouraged to share their experiences of the intervention, and any questions they might have via the online chat function (within MS Teams).

Benefits of participation. Participants will receive introductory training in ACT targeted at using this for their own stress management benefit and will be given the opportunity to engage with a range of strategies to improve their workplace and personal well-being over time.

Distress protocol. It is unlikely that a participant will experience negative consequences as a result of participating in the proposed intervention. However, if a participant does report feeling heightened stress or distress, the course leader, a Clinical Psychologist, will discuss immediate concerns with them, and will signpost them to additional resources and support as appropriate. This may include: i) the Marie Curie Employee Assistance Programme (EAP) which includes practical information and emotional support guidance as well as access to trained counsellors, ii) to their line manager or HR manager if appropriate, iii) to a Marie Curie hospice-based Clinical Psychologist. Any unintended harms will be recorded by the Co-Principal Investigators and described as part of the research findings.

Ancillary and post-trial care. Should any participant express a need for additional or continued psychological support on completion of the intervention, they will be directed to additional support, in line with the distress protocol.

Data collection, analysis and management

Quantitative data collection. Five key outcomes will be assessed prospectively, via JISC online survey (www.onlinesurveys.ac.uk) at four time-points – before commencement of the intervention, mid-way through the intervention, on completion of the intervention and one-month post-completion. (Table 2). This will allow examination of preliminary evidence for changes in outcomes collected by questionnaire over the course of the intervention, as well as questionnaire completion rates to inform the design of a future evaluation. As we are most interested in changes in outcomes that are sustained beyond intervention delivery, our main exploratory analysis will focus on the change in outcomes pre-intervention versus 4 weeks post intervention. This data will help us identify key outcomes and sample size needed for a future evaluation

Self-reported, perceived stress will be assessed by the Perceived Stress Scale (PSS)[29,30]. This scale assesses participants' appraisals of stressful situations, including perceptions of how unpredictable, uncontrollable, and overloaded their lives have been over a defined period. We will use the 10-item scale consisting of a Perceived Helplessness subscale (6-items) and a Perceived self-efficacy subscale (4-items)[30].

Workplace quality of life will be assessed by the Professional Quality of Life scale (ProQol)[31]. The ProQOL consists of 30 items in three subscales (10 items per subscale) designed to measure *compassion satisfaction (pleasured derived from doing your work well), burnout and secondary trauma.* Each item rates the frequency of an experience on a scale from 0 (never) to 5 (very often).

Wellbeing will be assessed using the Edinburgh Warwick Mental Wellbeing Scale[32,33]. This is a 14-item scale, covering both hedonic and eudemonic aspects of mental health including positive affect, satisfying interpersonal relationships and positive functioning. Higher scores reflect increased wellbeing.

Healthcare professional experience will be assessed by the Mindful Healthcare Scale which assesses engagement, awareness and defusion – 13 items. This measure is being developed at the University of Edinburgh[3,34].

Psychological flexibility will be assessed by the CompACT[35]. It consists of 23 items over 3 sub-scales - *openness to experience, behavioural awareness, and valued action.* Participants are asked to rate the degree to which a statement is true for them using a 7-point scale. The higher the score, the higher participant's level of psychological flexibility.

Feasibility outcomes will be assessed retrospectively via routine data collection on completion of the intervention and qualitative data collection. Data will include:

- the number of participants recruited (target is 24 – 30 participants),
- the number of participants who complete the intervention, i.e. participant attended the final session or reported they had completed at least 6 of 8 modules (target is two-thirds of those who completed the intervention)

Table 2. Schedule of enrolment, interventions, and assessments.

WEEK	Pre-intervention	Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13-16
EVALUATION TIMEPOINTS	t0			t1				t2					t3	
ENROLMENT														
Study promotion	X													
Informed consent	X													
Technology support session	X													
INTERVENTION		Introduction	Values	Awareness	Review	Openness	Diffusion	Compassion	Review					
Virutal classroom modules		X			X				X					
E-Learning module			X	X		X	X	X						
QUANTITATIVE OUTCOMES														
Perceived stress	X			X				X					X	
Professional Quality of Life	X			X				X					X	
Mental wellbeing	X			X				X					X	
Mindful Healthcare	X			X				X					X	
Psychological flexibility	X			X				X					X	
Feasibility data collection										X				
QUALITATIVE DATA														
Focus groups														X
Interviews														X

- the number of participants who complete the outcome measures (target is at least two-thirds of those who commence the intervention).

- The number of participants who take part in post-intervention focus groups or interviews (target is 50–75% of those recruited, given that focus groups will be run during work time and some participants will be unable to take part due to work schedules and annual leave).

We will also explore stress levels at baseline to determine whether those with moderate to high levels of stress were recruited and examine any potential links between baseline stress and participant retention.

Qualitative data collection. We will conduct virtual focus groups with participants one month following completion of the intervention to explore their experience of ACT training; views on what elements were most and least useful; perception of any changes in how they manage challenging situations; and whether/in what way skills learnt during the training might improve the care they provide to patients and families. All participants will be invited to take part. Focus groups will be run via MS Teams, recorded, and transcribed for analysis. Qualitative data will be collected by an experienced qualitative researcher (BS), based at a different institution to participants, and not personally known to participants prior to data collection. Participants who drop-out will be invited to share their reasons via brief interview. With permission, the interview will take place via MS Teams, and will be recorded and transcribed. Where participants drop-out and choose not to take part in an interview, we will ask permission to note their main reason(s) for drop-out.

Quantitative and qualitative data analysis. The main quantitative outcomes of interest are feasibility outcomes which will include rates of participant recruitment and retention over the course of the study. As this is a feasibility trial, it is likely to be underpowered to detect statistically significant improvements in the non-feasibility outcomes (e.g. stress, quality of life, wellbeing) and so these will be reported descriptively (mean, standard deviation, range etc.). Instead, the outcome data collected will help ascertain whether there is any preliminary evidence for intervention effectiveness. It will be also used to estimate effect sizes and determine sample sizes for a future full-scale evaluation. Any missing data will be handled using pairwise deletion methods. We are most interested in any evidence for improvements in outcomes between pre-intervention baseline (T0) and post-intervention follow-up (T3). Data will be analysed in IBM SPSS Statistics, V24. Qualitative data analysis will be guided by the framework approach using NVivo 12[36] and will provide vital insights on intervention acceptability, perceived effectiveness and recommendations for further refinement.

Stakeholder workshop to cross-validate emergent findings, refine the intervention and identify considerations for future full scale evaluation and implementation. A stakeholder workshop will be organised, bringing together participants, members of the research team, staff managers and those who would be involved in intervention delivery if it were implemented, to discuss findings. At this workshop participants will have the opportunity to highlight themes that resonate with them, as well as those that do not, and identify anything that may have been missed. We will review feasibility data and seek feedback on how the intervention could be further refined to meet the needs of palliative care staff in the organisational context in which the intervention would be implemented. We will explore costs and resource use from multiple perspectives and consider short and long terms outcomes for consideration in a future full-scale evaluation.

Data management
Personal data. Personal data (participant name, email address, age band, gender, role, years working in palliative care) will be stored in a secure file in the University of Edinburgh DataStore. This is password protected and encrypted storage. Participants will be allocated a Participant ID for the study. The Participant ID will be used when completing the online questionnaire. Outcome data will be kept separate from personal data throughout the study. The code break file will be held in a separate password protected folder within the DataStore only accessible by the Co-Principal Investigators (AF and DG).

Transfer of data. Focus group and interview data collected at the host organisation (Marie Curie) will be stored in a secure location on MS Teams, accessible only to participants and the research team (and deleted once transcription has taken place). Data will be anonymised and transcribed by a member of the research team, and then transferred via secure email to the University of Edinburgh DataStore.

Data storage. All date files will be stored in a secure location – the University of Edinburgh DataStore. Personal data will be held for no longer than 2 years after completion of the study. The Co-Principal Investigators will be responsible for deletion of data. Anonymised data will be retained indefinitely to inform future research.

Confidentiality. Participants will be allocated a Participant ID following recruitment. The Participant ID will be used when completing online questionnaires throughout the study. The Participant ID will be linked in one stand-alone file held in the DataStore, and only accessed if the participant has forgotten their ID and needs to be reminded. We do not plan any analysis that would potentially identify a participant, however, if there is any chance of this occurring, we will collapse the small group data in the final anonymised file, so there is no chance of identification (e.g. If only one male participated, outcome data by gender would be amalgamated.) Participants will be known to each other but will be reminded throughout the study that all discussions should remain confidential.

Monitoring
Role of sponsor and funder. The Co-Principal Investigators (AF and DG) are employees of the sponsor organisation (University of Edinburgh) and have honorary contracts at the host site (Marie Curie). They will have a direct role in study design; collection, management, analysis, interpretation of data; writing of the report; and the decision

to submit the report for publication. The study is funded by Marie Curie: www.mariecurie.org.uk.

Data controller, breaches and monitoring. The University of Edinburgh is the data controller for this study. Any data breaches will be reported to the University of Edinburgh Data Protection Officers who will onward report to Marie Curie, according to the appropriate timelines, if required. As this is a low-risk single-arm feasibility study, a data monitoring committee is not required.

Ethics and dissemination

Research ethics and governance approvals. We obtained ethical approval from the University of Edinburgh Clinical Psychology Research Ethics Committee on 20/5/2021 (Ref: CLPS021s). This research was also approved by the Marie Curie Research Governance Committee in Scotland.

Protocol registration and amendments. Any protocol amendments will be communicated to i) the sponsor, ii) the University of Edinburgh Clinical Psychology Research Ethics Committee, and iii) the Scottish Marie Curie Research Governance Committee, in a timely manner. The study protocol was registered on the ISRCTN registry, and any proto-col amendments will be available there (https://doi.org/10.1186/ISRCTN14313559).

Dissemination policy

Research findings will be disseminated via publication in an open access academic journal, a report for the funder, social media and conference presentation. To accelerate dissemi-nation, we will share study findings on a pre-print server (e.g. Medrxiv) at the same time as we submit to a journal. We will share preliminary findings (e.g. poster presentations) and related study material (e.g. study protocol) on AMRC Open (https://www.amrc.org.uk/), an open access platform for the dissemination of research funded by medical research charities.

Authorship of research papers will be agreed in line with ICMJE recommendations. http://www.icmje.org/icmje-recommendations.pdf.

Conclusions

The RESTORE study represents the first step in a programme of research to examine the effectiveness of ACT-based approaches to improve mental health and wellbeing in health and social care professionals caring for people with an advanced illness. It will yield findings on the acceptability and feasibility of an online ACT intervention for palliative care staff, including the aspects of the intervention most valued, and the outcomes most useful to measure in future studies. Our findings will inform the development of a future large scale evaluation examining intervention effectiveness on staff mental health and wellbeing, cost effectiveness and broader impacts within the wider health and social care system.

Study status

Data collection is currently underway, and will be completed in December 2021. Data analysis will take place in January 2022, and the stakeholder workshop will take place soon after. The study is scheduled to conclude in March 2022.

Data availability

The Co-Principal Investigators and Co-Investigators will have access to the final dataset. On completion of this study fully anonymised underlying data will be made available on the ISRCTN registry.

Reporting guidelines

The SPIRIT reporting guideline was used in writing this protocol and is available here: https://doi.org/10.1186/ISRCTN14313559.

References

1. Powell MJ, Froggatt K, Giga S: **Resilience in inpatient palliative care nursing: a qualitative systematic review.** *BMJ Support Palliat Care.* 2020; **10**(1): 79–90.
    PubMed Abstract | **Publisher Full Text**

2. Beng TS, Chin LE, Guan NC, *et al.*: **The experiences of stress of palliative care providers in Malaysia: a thematic analysis.** *Am J Hosp Palliat Care.* 2015; **32**(1): 15–28.
    PubMed Abstract | **Publisher Full Text**

3. Fisher S: **You've got to give a part of yourself to do the job well': an exploration of occupational stress, wellbeing and psychological flexibility in palliative care professionals.** Doctoral Manuscript. University of Edinburgh, Edinburgh, 2020.
    Publisher Full Text

4. Mills J, Ramachenderan J, Chapman M, *et al.*: **Prioritising workforce wellbeing and resilience: What COVID-19 is reminding us about self-care and staff**

    support. *Palliat Med.* 2020; **34**(9): 1137–1139.
    PubMed Abstract | **Publisher Full Text**

5. Ruiz-Fernández MD, Ramos-Pichardo JD, Ibáñez-Masero O, *et al.*: **Compassion fatigue, burnout, compassion satisfaction and perceived stress in healthcare professionals during the COVID-19 health crisis in Spain.** *J Clin Nurs.* 2020; **29**(21–22): 4321–4330.
    PubMed Abstract | **Publisher Full Text**

6. Sarma R, Vig S, Rathore P, *et al.*: **Concerns of healthcare professionals managing non-COVID patients during the COVID-19 pandemic: A descriptive cross-sectional study.** *Indian J Palliat Care.* 2020; **26**(Suppl 1): S21–S26.
    PubMed Abstract | **Free Full Text**

7. Shahrour G, Dardas LA: **Acute stress disorder, coping self-efficacy and subsequent psychological distress among nurses amid COVID-19.** *J Nurs*

Manag. 2020; **28**(7): 1686–1695.
PubMed Abstract | **Publisher Full Text** | **Free Full Text**

8. Pappa S, Ntella V, Giannakas T, *et al.*: **Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis.** *Brain Behav Immun.* 2020; **88**: 901–907.
    PubMed Abstract | **Publisher Full Text** | **Free Full Text**

9. Reynolds A, Hamidian Jahromi A: **The impact of COVID-19 on palliative care workers across the world and measures to support their coping capacity.** *Palliat Support Care.* 2021; 1–2.
    PubMed Abstract | **Publisher Full Text** | **Free Full Text**

10. Pastrana T, De Lima L, Pettus K, *et al.*: **The impact of COVID-19 on palliative care workers across the world: A qualitative analysis of responses to open-ended questions.** *Palliat Support Care.* 2021; **19**(2): 187–192.
    PubMed Abstract | **Publisher Full Text** | **Free Full Text**

11. Dean E: **Short-staffing and a lack of support: the barriers to good end of life care: What nurses in their thousands told our third annual Nursing Standard-Marie Curie poll on end of life care provision.** *Nurs Stand.* 2019; **34**(6): 35–38.
    Publisher Full Text

12. Dean E: **Care at the end of life: the lessons of the first wave: Marie Curie-Nursing Standard survey highlights the emotional toll of the pandemic and the need for more staff support.** *Nurs Stand.* 2020; **35**(11): 51–54.
    Publisher Full Text

13. Hill RC, Dempster M, Donnelly M, *et al.*: **Improving the wellbeing of staff who work in palliative care settings: A systematic review of psychosocial interventions.** *Palliat Med.* 2016; **30**(9): 825–833.
    PubMed Abstract | **Publisher Full Text**

14. Hayes SC: **Acceptance and Commitment Therapy, Relational Frame Theory, and the Third Wave of Behavioral and Cognitive Therapies – *Republished Article*.** *Behav Ther.* 2016; **47**(6): 869–885.
    PubMed Abstract | **Publisher Full Text**

15. Wardley MN, Flaxman PE, Willig C, *et al.*: **'Feel the Feeling': Psychological practitioners' experience of acceptance and commitment therapy well-being training in the workplace.** *J Health Psychol.* 2016; **21**(8): 1536–47.
    PubMed Abstract | **Publisher Full Text**

16. Han A, Yuen HK, Jenkins J: **Acceptance and commitment therapy for family caregivers: A systematic review and meta-analysis.** *J Health Psychol.* 2021; **26**(1): 82–102.
    PubMed Abstract | **Publisher Full Text**

17. Gloster AT, Walder N, Levin ME, *et al.*: **The empirical status of acceptance and commitment therapy: A review of meta-analyses.** *J Contextual Behav Sci.* 2020; **18**: 181–192.
    Publisher Full Text

18. Reeve A, Tickle A, Moghaddam N: **Are acceptance and commitment therapy-based interventions effective for reducing burnout in direct-care staff? A systematic review and meta-analysis.** *Ment Health Rev J.* 2018; **23**(3): 131–155.
    Publisher Full Text

19. Thompson EM, Destree L, Albertella L, *et al.*: **Internet-Based Acceptance and Commitment Therapy: A Transdiagnostic Systematic Review and Meta-Analysis for Mental Health Outcomes.** *Behav Ther.* 2021; **52**(2): 492–507.
    PubMed Abstract | **Publisher Full Text**

20. Brown M, Glendenning A, Hoon AE, *et al.*: **Effectiveness of Web-Delivered Acceptance and Commitment Therapy in Relation to Mental Health and Well-Being: A Systematic Review and Meta-Analysis.** *J Med Internet Res.* 2016; **18**(8): e221.
    PubMed Abstract | **Publisher Full Text** | **Free Full Text**

21. Brinkborg H, Michanek J, Hesser H, *et al.*: **Acceptance and commitment therapy for the treatment of stress among social workers: A randomized controlled trial.** *Behav Res Ther.* 2011; **49**(6–7): 389–398.
    PubMed Abstract | **Publisher Full Text**

22. Waters CS, Frude N, Flaxman PE, *et al.*: **Acceptance and commitment therapy (ACT) for clinically distressed health care workers: Waitlist-controlled evaluation of an ACT workshop in a routine practice setting.** *Br J Clin Psychol.* 2018; **57**(1): 82–98.
    PubMed Abstract | **Publisher Full Text**

23. Clarke S, Taylor G, Lancaster J, *et al.*: **Acceptance and commitment therapy-based self-management versus psychoeducation training for staff caring for clients with a personality disorder: a randomized controlled trial.** *J Pers Disord.* 2015; **29**(2): 163–176.
    PubMed Abstract | **Publisher Full Text**

24. Creswell JW, Plano Clark VL: **Designing and conducting mixed methods research.** John W. Creswell, Vicki L. Plano Clark. Third edition. ed. Los Angeles: SAGE, 2018.
    Reference Source

25. Fisher S, Gillanders D, Ferreira N, *et al.*: **The experiences of palliative care professionals and their responses to work-related stress: A qualitative study.** *Br J Health Psychol.* 2022; **27**(2): 605–622.
    PubMed Abstract | **Publisher Full Text**

26. Kent W, Hochard KD, Hulbert-Williams NJ, *et al.*: **Perceived stress and professional quality of life in nursing staff: How important is psychological flexibility?** *J Contextual Behav Sci.* 2019; **14**: 11–19.
    Publisher Full Text

27. Garcia ACM, Silva BD, da Silva LCO, *et al.*: **Self-compassion In Hospice and Palliative Care: A Systematic Integrative Review.** *J Hosp Palliat Nurs.* 2021; **23**(2): 145–154.
    PubMed Abstract | **Publisher Full Text**

28. Mills J, Wand T, Fraser JA: **Palliative care professionals' care and compassion for self and others: a narrative review.** *Int J Palliat Nurs.* 2017; **23**(5): 219–229.
    PubMed Abstract | **Publisher Full Text**

29. Cohen S, Kamarck T, Mermelstein R: **A Global Measure of Perceived Stress.** *J Health Soc Behav.* 1983; **24**(4): 385–396.
    PubMed Abstract | **Publisher Full Text**

30. Taylor JM: **Psychometric Analysis of the Ten-Item Perceived Stress Scale.** *Psychol Assess.* 2015; **27**(1): 90–101.
    PubMed Abstract | **Publisher Full Text**

31. Stamm BH: **The Concise ProQOL Manual.** 2nd Ed. Pocatello: Idaho: ProQol. org. 2010.
    Reference Source

32. Tennant R, Hiller L, Fishwick R, *et al.*: **The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation.** *Health Qual Life Outcomes.* 2007; **5**: 63.
    PubMed Abstract | **Publisher Full Text** | **Free Full Text**

33. Stewart-Brown S, Tennant A, Tennant R, *et al.*: **Internal construct validity of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS): a Rasch analysis using data from the Scottish Health Education Population Survey.** *Health Qual Life Outcomes.* 2009; **7**: 15.
    PubMed Abstract | **Publisher Full Text** | **Free Full Text**

34. Kidney G: **Acceptance and commitment therapy training and psychological flexibility for helping professionals.** University of Edinburgh, Edinburgh, 2018.
    Reference Source

35. Francis AW, Dawson DL, Golijani-Moghaddam N: **The development and validation of the Comprehensive assessment of Acceptance and Commitment Therapy processes (CompACT).** *J Contextual Behav Sci.* 2016; **5**(3): 134–145.
    Publisher Full Text

36. Gale NK, Heath G, Cameron E, *et al.*: **Using the framework method for the analysis of qualitative data in multi-disciplinary health research.** *BMC Med Res Methodol.* 2013; **13**: 117.
    PubMed Abstract | **Publisher Full Text** | **Free Full Text**

Open Peer Review

Current Peer Review Status: ✓ ✓

Version 2

Reviewer Report 11 July 2022

https://doi.org/10.21956/amrcopenres.14151.r26973

✓ **David Dawson** iD

School of Psychology, University of Lincoln, Lincoln, UK

The authors have addressed the comments provided in the original review.

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Clinical Psychology; Applied Clinical Research; Behaviour Analysis; Behaviour Change

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.

Reviewer Report 23 June 2022

https://doi.org/10.21956/amrcopenres.14151.r26972

✓ **Jason Mills** iD

School of Nursing, Midwifery and Paramedicine, University of the Sunshine Coast, Caboolture, Qld, Australia

Careful consideration of feedback is evident and the authors have revised this paper to a very high standard.

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Palliative care, Mindfulness, Compassion, Self-compassion, Self-care, Workforce

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.

Version 1

Reviewer Report 19 May 2022

https://doi.org/10.21956/amrcopenres.14110.r26967

✔ **David Dawson** (iD)

School of Psychology, University of Lincoln, Lincoln, UK

Thank you for the opportunity to review this study protocol which outlines a single-arm feasibility study of an online Acceptance and Commitment Therapy (ACT) intervention to improve staff wellbeing in palliative care settings.

The authors provide a clear rationale and justification for the proposed work: the elevated levels of stress and distress among palliative care workers, the augmenting effect of the COVID-19 pandemic on those stressors, and the lack of evidence-based interventions available to palliative care workers to mitigate the psychological impact of their work.

The work has clear merit and has the potential to significantly impact on clinical practice; successful outcomes from the work have implications for practitioners (potentially including improved psychological health, and reduced stress, burn-out, and compassion fatigue), services (perhaps improved staff retention, lower levels of absence), and service-users (improved and more engaged care). The work also has the potential to contribute to the extant theoretical literature within behavioural health science.

The protocol is generally well-written, clearly structured, and appropriately detailed; I have provided some comments below that largely focus on the methodological aspects of the work, and hope the authors find them constructive – either for informing the current work, or a subsequent full trial.
  ○ Inclusion criteria: although the primary focus of the work at this stage is feasibility, it would perhaps be beneficial to state a preliminary primary outcome (e.g., Perceived Stress, Wellbeing), and to only recruit participants to the study who already meet a minimum threshold on that measure (e.g., 'moderate stress'). That would help protect against floor/ceiling effects, ensure that any meaningful change within those variables was observable/captured by the measures, and potentially improve the ability to detect signal

efficacy.

○ Design: The rationale for the non-randomised, single-arm design, and the decision to not include a 'wait-list' or similar control (to facilitate randomisation, control for within participant differences, and establish between group effects) was not clear and would be useful to include.

○ Fidelity: Some detail regarding how fidelity to the ACT model (within the online sessions) is to be assessed would be useful (e.g., independent review of online seminars using the ACT-FM). This is particularly salient given that session seven within the protocol suggests a focus on 'Compassion' (which may adhere more closely to Compassion-Focused Therapy rather than traditional ACT).

○ Measures: To lessen participant burden, the authors may wish to consider the short versions of the WEMWBS and CompACT.

○ Adherence: Will homework compliance etc., be formally monitored (to determine adherence to, and 'dose' of, the intervention)?

○ Data collection: The authors may not be aware that the JISC platform (at the time of writing) does not appear to allow analysis of partial or incomplete responses (https://www.onlinesurveys.ac.uk/help-support/can-i-see-partial-or-incomplete-responses/). This appears to be a severe limitation of the platform, particularly when undertaking feasibility research. The authors state here their aim to determine the number of participants who complete the measures; however, partial, incomplete, and unfinished survey responses cannot be accessed – only the page where a participant ceased participation can be determined.

○ It would be useful to provide a rationale for the use of focus groups (over individual interviews) given the impact dominant voices can have on group consensus etc.

○ Stakeholder Workshop: We have found the RE-AIM framework useful for structuring discussions around how health interventions might be refined (https://re-aim.org/learn/what-is-re-aim/) and the authors may find some utility there too.

Is the rationale for, and objectives of, the study clearly described?

Yes

Is the study design appropriate for the research question?

Partly

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

Yes

Are the datasets clearly presented in a useable and accessible format?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Clinical Psychology; Applied Clinical Research; Behaviour Analysis; Behaviour Change

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.

Author Response 31 May 2022

Anne Finucane, Marie Curie Cancer Care, UK

Thank you very much for the helpful comments and suggestions. These will be very informative as we plan follow-up work. We have provide some additional justifications and clarifications in response to your comments below.

1. We did not specify a primary outcome or pre-screen participants as this was a small-scale feasibility study. We were keen to explore a range of outcomes to see which might be most suitable for inclusion in future large-scale evaluations. We were also unsure about the extent to which would be able to recruit participants in light of COVID, so were hesitant to pre-screen participants, but we will explore the question of whether or not to pre-screen in future studies as we analyse the data collected and share the findings with stakeholders.

2. As this was a small-scale study, undertaken during the COVID pandemic, we were keen to keep it simple. We did not have the capacity to link in with clinical trials unit, and to randomise participants. However, we agree with Reviewer 2 that this will be essential in future studies.

3. Thank for this useful suggestion which we will need to consider for future studies. For the present study, the intervention was delivered by a Peer Reviewed ACT Trainer and Fellow of the Association for Contextual Behavioural Science, but for future studies we will need to consider fidelity assessments.

4. We aimed to collect data via focus groups as this method allows the generation of a range of responses regarding the intervention in an efficient and pragmatic manner. Furthermore, participants were used to exchanging views in a facilitated group format, and while we appreciate that in some instances this can hinder the freedom with people exchange views, given the nature of the topics covered in the focus groups, it was felt that the benefits of the group interaction and sharing of ideas outweighed this. We also offered interviews to participants who did not complete the intervention. Given the timing of intervention delivery (during the height of the COVID pandemic) offering a variety of participation approaches, while minimising overall staff time commitment, was important.

5. Thank you for the helpful suggestion in relation to using shorter assessment tools which we will consider in future studies.

6. Adherence was monitored via self-report questionnaires and explored further during qualitative data collection.

7. We set up 4 separate questionnaires to gather data at each timepoint; and merge on completion of data collection (using participant ID not linked to the participants name) - any limitations of the JISC platform have not been a problem.

8. Thank you for the helpful suggestion in relation to the RE-Aim framework.

Reviewer Report 15 December 2021

https://doi.org/10.21956/amrcopenres.14110.r26868

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Jason Mills 🔾

School of Nursing, Midwifery and Paramedicine, University of the Sunshine Coast, Caboolture, Qld, Australia

This article reports the RESTORE study protocol - Research Evaluating Staff Training Online for Resilience (RESTORE) – seeking to examine the feasibility and acceptability of an Acceptance and Commitment Therapy (ACT) intervention designed to improve mental health and wellbeing for those working within palliative care contexts.

I commend the researchers on their efforts in this important area.

Based on my experience as an ACT practitioner, as well as my knowledge and understanding of the palliative care field, I believe this paper proposes an important study of considerable merit given the past and ongoing impacts of the COVID-19 pandemic on the study population.

Overall, the rationale and objectives of the study are mostly described in a clear way. However, from my review, there are some important considerations for minor revision and the future conduct/reporting of the study. These are outlined further below.

This single-arm trial incorporating a mixed-methods convergent design is appropriate for the broad research questions being addressed in this study, with the mixing of quantitative and qualitative data representing a strength. Consideration of improving consistency in research question nomenclature is recommended (the terms 'palliative care workers' and 'palliative care staff' are used interchangeably).

Details of research methods are sufficient for a protocol at this stage, although there is scope to strengthen the reporting of the intervention content/format when finalising the 'draft manual' prior to sharing on the ISRCTN registry.

How was the content developed and how is the content/format justified? These details appear to be missing from the protocol. On p.4 the reader is informed that 'the content has been informed by previous interventions delivered by the team for health professionals in other settings, as well as research on occupational stress, wellbeing, and resilience in palliative care' – however, there are no intervention reference sources or research reports cited in this sentence to substantiate or support this claim.
To this end, there is a need to draw more direct linkage between self-compassion and the ACT intervention.

While it is pleasing to see the inclusion of intervention content focused on compassion for self and

others (Module 7), from my review this content has not been adequately justified and/or situated within the context of those working in palliative care. The relevance and remit of self-compassion in hospice and palliative care has been systematically reviewed by Garcia et al (2021)[1].

Given the focus of module 7 and the homework exercises intended to 'enhance compassionate responses' in participants, it is recommended that the authors include some reference to the relevant literature to justify/better situate this important content as part of the intervention. This is pertinent since that module is self-directed rather than facilitated, and past research in this area has indicated compassion for self does not come naturally and can be challenging for some people working in palliative care. The Module 8 'Review and trouble-shooting' session might best begin with acknowledging this known challenge and inviting discussion of any challenges/barriers experienced.

Important correction required:
- There is an error requiring correction on p.5 (Data collection, analysis and management) – under the heading of 'Workplace quality of life' it is stated that 'The ProQOL consists of 30 items in three subscales (10 items per subscale) designed to measure compassion, satisfaction, burnout, and compassion fatigue'. However, this instrument does not measure compassion and it was not designed to do so. Apart from BO and CF, the ProQOL measures 'compassion satisfaction' (CS) which is quite distinct from compassion itself. Perhaps this was a typo – with an erroneous comma in between 'compassion' and 'satisfaction'? Please correct this sentence for veracity.

Recommended minor revisions:
1. As above, please consider drawing reference to the relevant literature on self-compassion in palliative care to justify and better situate its explicit inclusion as key content (Module 7) within the ACT intervention. See for example: Garcia et al. (2021). https://journals.lww.com/jhpn/Abstract/2021/04000/Self_compassion_In_Hospice_and_Palliative_Care__A [1].

2. Consider improving consistency in the nomenclature used in the stated research questions (the terms 'palliative care workers' and 'palliative care staff' are used interchangeably).

Very best wishes for progressing this work.

References
1. Mesquita Garcia A, Domingues Silva B, Oliveira da Silva L, Mills J: Self-compassion In Hospice and Palliative Care. *Journal of Hospice & Palliative Nursing*. 2021; **23** (2): 145-154 Publisher Full Text

Is the rationale for, and objectives of, the study clearly described?
Partly

Is the study design appropriate for the research question?
Yes

Are sufficient details of the methods provided to allow replication by others?
Partly

Are the datasets clearly presented in a useable and accessible format?

Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Palliative care, Mindfulness, Compassion, Self-compassion, Self-care, Workforce

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.

Author Response 31 May 2022

Anne Finucane, Marie Curie Cancer Care, UK

Thank you very much for the helpful comments and suggestions. We have amended our paper in line with reviewer suggestions and will take account of these points further when writing up the results.

1. We have replaced the term 'workers' with the term 'staff' so there is greater consistency throughout the paper.
2. We have added the RESTORE intervention workbook to our ISRCTN record, where further detailed on course content by week, and related exercised can be accessed: https://www.isrctn.com/ISRCTN14313559
3. Intervention content development was led by DG, with input from the wider team. Recent doctoral research on wellbeing in palliative care staff informed much of the intervention, [1, 2] alongside previous research on the use of ACT to support wellbeing amongst nursing staff and psychological practitioners.[3, 4] We have added additional references on research that informed intervention content to the paragraph entitled 'Content' in the Methods section.
4. We have added more detail and references around the rationale for including a course component on self-care for hospice, and added relevant references. Thank you for drawing our attention to this oversight.
5. As reviewer 1 points out, Module 7 is focused on self-compassion. We have added two references to support this inclusion. We agree with the reviewer that self-compassion does not come naturally to palliative care workers, and that it is important to acknowledge this in Module 8 (online LIVE workshop) when reviewing materials from the previous weeks.
6. We have corrected the typo relating to the description of ProQOL subscales, and have clarified these.

Competing Interests: AF is supported through a fellowship funded by the host organisation (Marie Curie). JS and BL are employed by the funder. DG, BS and NHW declare no financial relationships with any organisations that might have an interest in the submitted work in the previous 3 years.