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Later Life Coping and Psychological Flexibility: Impact of Trauma Symptoms and ACT Based Interventions in Older Adults

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Submitted in partial fulfilment of the requirements for the degree of

Doctorate in Clinical Psychology

School of Health and Wellbeing

College of Medical, Veterinary and Life Sciences

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Chapter 1

Assessing Whether ACT Improves Psychological Flexibility in Older Adults: A Systematic Review and Meta-analysis

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Abstract

Objective: This review aimed to examine evidence regarding whether Acceptance and Commitment Therapy (ACT) improves psychological flexibility in older adults.

Methods: A pre-planned systematic search with no date restrictions was conducted on 23 January 2026, with an additional grey-literature search on 25 March 2026. Eligible studies were screened in two stages and synthesised using random-effects meta-analysis.

Results: Eight studies met inclusion criteria. The pooled effect indicated a significant, large improvement in psychological flexibility following ACT (Hedges' g = 0.81, 95% CI 0.05–1.58). Heterogeneity was considerable ($Q = 77.64$, $p < .001$; $I^2 = 90.98\%$). Sensitivity analyses showed that although one study disproportionately influenced heterogeneity and precision, overall conclusions remained stable.

Discussion: Findings suggest ACT is associated with beneficial effects on psychological flexibility in older adults, though effect magnitude should be interpreted cautiously given methodological and clinical variability. Future research is needed to strengthen confidence in ACT's effectiveness for improving psychological flexibility in this population.

Keywords: older adults; acceptance and commitment therapy; psychological flexibility; systematic review

Introduction

Acceptance and commitment therapy (ACT) is a third wave cognitive behavioural therapy. ACT is based on a theoretical model known as the Hexaflex, which consists of 6 core processes (acceptance, cognitive defusion, present moment awareness, self as context, values, and committed action). These core processes focus on cultivating psychological flexibility, which is the main goal of ACT (Hayes et al., 2012). Psychological flexibility is a transdiagnostic concept not unique to ACT that can be difficult to define (Kashdan & Rottenberg, 2010). Within the ACT model, psychological flexibility is understood as the ability to connect with the present moment by being aware of inner experiences (e.g thoughts, emotions) and to change or persist in behaviours that are in line with the person's values (Hayes et al., 2006). In contrast, psychological inflexibility refers to a pattern of rigid responses to psychological experiences, such as fusion with negative self-thoughts or avoidance of internal events, leading to actions that are not in line with the person's chosen values, which increases psychological distress (Bond et al., 2011). Similarly to psychological flexibility, psychological inflexibility is posited to be formed by 6 processes (experiential avoidance, lack of contact with the present moment, self as content, fusion, and lack of contact with values). Although within the ACT model, psychological flexibility and psychological inflexibility are conceptualised as separate constructs, their core processes are interrelated, with mutual facilitative relationships (Rolffs et al., 2018) and the literature commonly defines psychological flexibility as the absence of psychological inflexibility (Bond et al., 2011).

Psychological flexibility helps people to recognise and adapt to demands, shift their mindset or behaviour to interact differently with stressors, whilst simultaneously maintaining balance in the areas of their life that matter to them (Gloster et al., 2017; Kashdan & Rottenberg, 2010). There is a growing body of evidence to show that psychological flexibility is related to better mental health in a wide range of contexts (Cheng et al., 2021; Dawson & Golijani-Moghaddam, 2020; Gloster et al., 2017; Kashdan & Rottenberg, 2010; McCracken et al., 2021; Pakenham et al., 2020). In a study of the general population, psychological flexibility was found to be a moderator of physical health, mental health, and well-being, suggesting that increased psychological flexibility serves as a protective factor (Gloster et al., 2017). Crucially, individuals who have psychological flexibility have greater physical, mental, and

well-being outcomes than those who have psychological inflexibility, even if they report greater levels of stress (Gloster et al., 2017). Greater psychological inflexibility, as indicated by the Acceptance and Action Questionnaire-II (AAQ-II) scores, is associated with higher levels of depression, anxiety, stress, and overall psychological distress (Bond et al., 2011).

Psychological flexibility may therefore be particularly relevant to the mental health of the growing older adult population, where individuals can face a range of age-related difficulties. The World Health Organisation predicts that by 2050 the percentage of the population who are 60 years old or older will double in size (WHO, 2025). Mental health difficulties are common in older adults. According to a recent meta-analysis, the global prevalence of depression in older adults is 31.5% (Cai et al., 2023). Prevalence rates of anxiety in older adults have been found to vary widely from 2.4% to 15% of the population (Bryant et al., 2008). Chronic health conditions, functional impairment, and exposure to adverse life events are well established risk factors for poorer mental health outcomes, and the likelihood of experiencing these challenges increases with age (Herrman et al., 2022; C. F. Reynolds et al., 2022). Recent research examining psychological support for older adults has focused on cognitive behavioural therapy (CBT) approaches, of which a core element involves challenging the validity of anxious or worrying thoughts (Petkus & Loebach Wetherell, 2013). Acceptance based approaches may be particularly beneficial for older adults as they navigate the often-unavoidable stressors associated with ageing. Moreover, older adults often experience co-occurring mental health difficulties, cognitive impairment, and physical health conditions (Petrova & Khvostikova, 2021). ACT takes a transdiagnostic approach (Rutschmann et al., 2024) which may be particularly advantageous for this population given the high prevalence of co-morbidity.

Although the current body of literature is small, several studies have shown that ACT is effective at reducing psychological distress in older adults for a range of presentations including depression (Davison et al., 2017; Sun et al., 2025), Generalised anxiety disorder (GAD) (Wetherell et al., 2011), and chronic pain (Leung et al., 2024). A systematic review found that while ACT had a statistically significant effect on reducing depressive symptoms in older adults, the effect was small, particularly in comparison to traditional CBT, suggesting that ACT may not be as effective in treating depressive symptoms in older adults (Sun et al., 2025). However, the meta-analysis was based on seven studies, and the findings therefore

should be interpreted with caution. It is also important to bear in mind that ACT's primary goal is not to reduce psychological symptoms but to foster psychological flexibility in the face of challenges, while pursuing value-based actions, which leads to greater life satisfaction despite mental and physical challenges (Dindo et al., 2017). Symptom reduction may occur as a secondary outcome but is not the primary goal of the intervention (Knudsen et al., 2025).

A recent systematic review observed psychological flexibility to be higher in older adults, relative to average age adults (Plys et al., 2023). This potentially reflects accumulated life experience and adaptive coping across the lifespan, consistent with developmental theories of ageing such as the selective optimisation with compensation (SOC) model (Baltes, 1997). This lifespan model posits that successful ageing involves accepting changes in ability and selecting achievable goals (Petkus & Loebach Wetherell, 2013). The use of ACT for older adults aligns with the SOC model as ACT supports individuals to select valued goals, optimise limited resources through committed action and compensate for age-related losses through acceptance.

Rationale for research

To the best of the authors' knowledge, there is currently no systematic review evaluating the impact of ACT on psychological flexibility among older adults. Plys et al. (2023) aimed to examine changes in psychological flexibility in ACT interventions for older adults as part of their broader systematic review investigating psychological flexibility in older adults. However, their search conducted in October 2021 only identified three studies examining changes in psychological flexibility during ACT interventions for older adults. This was an insufficient number of studies to address this research question (Plys et al., 2023).

The aim of the present systematic review is to examine the evidence regarding whether Acceptance and Commitment Therapy improves psychological flexibility in older adults. Specifically, this review seeks to identify and synthesise studies that assess changes in psychological flexibility following ACT-based interventions in individuals aged 60 years and older. By evaluating the existing literature, this review aims to provide a clearer understanding of the role ACT may play in supporting psychological flexibility and, consequently, psychological wellbeing in later life.

Methods

This systematic review was conducted in accordance with the Preferred Reporting items for Systematic Reviews and Meta-Analyses updated guidelines (PRISMA; Page et al., 2021; Appendix 1.1). The protocol for this review was registered with the International Prospective Register of Systematic Reviews (PROSPERO) on the 14th of July 2025 (ID: CRD420251104212).

Eligibility criteria

Studies were included in this review if they met the eligibility criteria and excluded if they met any of the exclusion criteria summarised in Table 1.

Table 1: Eligibility and exclusion criteria

Eligibility criteria	Exclusion criteria
Population: The mean age of the sample must be 65 and all participants must be at least age 60.	Population: The mean age of the sample is less than 65 and includes participants younger than age 60.
Intervention: Interventions must explicitly describe themselves as based on ACT and target psychological flexibility using any of the ACT 6 core processes. Studies that combined ACT with another type of therapy or intervention, or implemented ACT in a group therapy or self-help format, will also be eligible.	Intervention: Interventions do not explicitly describe themselves as based on ACT and do not target psychological flexibility.
Outcome: Psychological flexibility measured post ACT intervention.	Outcome: Psychological flexibility is not measured post ACT intervention. Studies which do not report the effect size (or statistics to allow for this calculation). Single participant case studies. Any studies that are not available in English.

Search Strategy

Following an initial scoping search a full search strategy was developed in consultation with a specialist university librarian. Four electronic databases were searched on 23rd of January 2026 and were as follows: Pubmed, PsycINFO (EBSCOhost), CINAHL, and Web of Science Core Collection. In addition, ProQuest Dissertations and Theses were searched on the 25th of March 2026 to identify any relevant grey literature. A combination of terms related to ACT (e.g 'ACT' OR 'Acceptance and Commitment Therapy'), older adults (e.g 'Older Adult* OR 'elderly' OR 'older people' OR late* life OR aging OR 'geropsychology' OR 'gerontology' OR 'geriatrics') and psychological flexibility ('psychological flexibility') were used across the databases. The search strategy was adapted according to each database's unique thesaurus of subject headings. Full search strategies for each database can be found in Appendix 1.2.

To supplement the primary database searches, additional searches were conducted using Semantic Scholar to ensure comprehensive coverage of the literature. This step was added on the advice of a specialist university librarian after initial scoping searches returned a limited number of eligible studies due to the highly specialised nature of the topic. Unlike traditional databases, Semantic Scholar uses AI to scan the full text of papers. This increased the likelihood of identifying relevant studies in this niche topic that might not have been retrieved through conventional database searching; this was consistent with PRISMA guidance on broad and transparent search strategies. A search was conducted on Semantic Scholar on the 23rd of January 2026 using the search terms "Acceptance and commitment therapy" "older adults" "psychological flexibility", and the first 100 results were reviewed.

Selection processes

All records retrieved from the database searches were imported into Rayyan (Ouzzani, Hammady, Fedorowicz, & Elmagarmid, 2016) for screening. Potential duplicates were flagged by Rayyan (Ouzzani et al., 2016) and manually checked by the primary researcher. Duplicates were excluded.

Given that certain eligibility criteria could not be reliably determined from titles and abstracts alone, distinct criteria were applied at stage one and stage two of screening.

At the title and abstract stage, it was not possible to assess whether psychological flexibility was measured as an outcome, as it was unlikely to be included in the title or abstract. Records were therefore retained for full-text screening if they (1) explicitly described themselves as an ACT based intervention and (2) sample of older adults, with the remaining criteria applied in full at stage two. This more liberal approach at stage one was adopted to minimise the risk of prematurely excluding potentially eligible studies before full-text criteria could be applied.

In stage one, the primary researcher reviewed titles and abstracts against these two criteria (excluding searches from Semantic Scholar, which were reviewed at stage two). A second independent rater (Trainee Clinical Psychologist) screened a subset (20%) of these. Initial interrater concordance was 72%. Following this, the two reviewers met to discuss discrepancies and identified a lack of clarity regarding studies of populations with cancer where the title and/or abstract did not explicitly indicate an older adult sample. Discussion confirmed that, consistent with the stage one population criterion, such studies should be excluded unless an older adult sample could be clearly identified. Following this clarification, 100% consensus was achieved.

In stage two, full texts were screened by the primary researcher against the complete eligibility criteria (Table 1), including whether the intervention explicitly targeted psychological flexibility via ACT's six core processes and whether psychological flexibility was measured as an outcome. A subset (20%) was screened by the second reviewer, with 100% interrater concordance achieved at this stage.

In addition, backwards and forwards searching of the included studies was conducted by the primary researcher. Google Scholar was utilised for forward searching.

Data extraction

Data extraction was completed by the primary researcher, with the second reviewer checking 5 papers to ensure accuracy. The following data were extracted: title, authors, year of publication, study setting, population, intervention design, ACT components, sample size, study design, participant demographics, outcome measure used, and results of psychological flexibility.

Quality appraisal tool

Study quality was assessed using the JBI Critical Appraisal tool for quasi-experimental studies (Barker et al., 2024). Briefly, the items concerned: 1) clarity of independent variable 2) presence of a control group 3) similarity of participants/groups at baseline 4) similarity of care aside from intervention 5) measures of the outcome both pre and post intervention/exposure 6) consistent outcome measurement across participants/groups 7) outcomes measured in a reliable way 8) completeness of follow up 9) appropriate statistical analysis. No overall risk of bias score is produced using this tool. The primary researcher assessed all the full papers included in this study, with the second reviewer performing a check on 5 papers to ensure accuracy.

Statistical analysis

Effect sizes were calculated using the Meta-essentials software package (Surrmond et al., 2017). Given the variation in study design, effect sizes were first calculated separately for dependent group design and independent group design using the corresponding Meta-Essentials Excel sheets. When computing Hedges g in dependent group designs, the pre-post correlation is required by Meta-Essentials. As the studies did not routinely report this, an estimate of r = 0.5 was set. For independent-group studies, standardised mean differences (Hedges g) were derived from change scores. For studies where attrition occurred, the follow-up sample size was used to ensure accurate variance estimation. A number of measures of psychological flexibility were used across the studies. To ensure consistent interpretation, the sign of the Hedges g was reversed for studies using the AAQ, in which higher scores indicated poorer performance, to ensure consistent directionality and follow the intuitive assumption that positive values reflect improvement.

The resulting Hedge's g value and standard errors were then subsequently combined into a single master Meta-Essentials Excel sheet, and a single meta-analysis was conducted using a random-effects model. For the multi-arm study, only the treatment-as-usual control group was included in the meta-analysis to avoid double-counting participants. Effect size correction was employed to account for small samples ($n < 20$) to convert SMDs to Hedge's g. Forest plots were generated, and pooled effect sizes were calculated using inverse-variance weighting. For random-effects models, Meta-Essentials applies the

DerSimonian–Laird (DerSimonian & Laird, 1986) estimator to incorporate between-study variance. Confidence intervals for the pooled effect were computed using the weighted-variance method, which has been shown to outperform other approaches for random-effects meta-analysis (Sánchez-Meca & Marín-Martínez, 2008). To address heterogeneity, the I^2 was calculated. This index reflects the proportion, or percentage, of variance in effect size estimates attributable to real differences in effect size (Higgins et al., 2003).

Reporting bias assessment

A funnel plot was produced, and an Egger's regression test (Egger, Smith, Schneider, & Minder, 1997) and the Begg and Mazumdar rank correlation test (Begg & Mazumdar, 1994) were conducted to assess whether any results may be missing in a non-random way due to reporting bias. These analyses were conducted using the Meta-Essentials Excel spreadsheet.

Results

Study selection

A total of 485 records were identified and extracted through database and grey literature searches. After deduplication, 253 articles were screened by title and abstract of which 222 articles were excluded at this stage. For full text screening, 31 reports were retrieved and assessed for eligibility. Full text for one thesis identified via ProQuest was obtained by directly contacting the author, as the full document was not available through the database. Following full text screening, 7 studies met eligibility criteria. Supplementary searches identified a further 100 articles which were retrieved for full text screening and assessed for eligibility. Of those studies, 3 met eligibility criteria, but all had already been retrieved when searching the databases and were therefore removed as duplicates. Backwards and forwards searching of 867 citations identified nine articles which were retrieved for full text screening and assessed for eligibility. This resulted in 1 additional study being included. In total, 8 studies were included in the quality appraisal and data synthesis. A PRISMA (2020) diagram outlining this process can be found in Figure 1.

Figure 1: PRISMA diagram

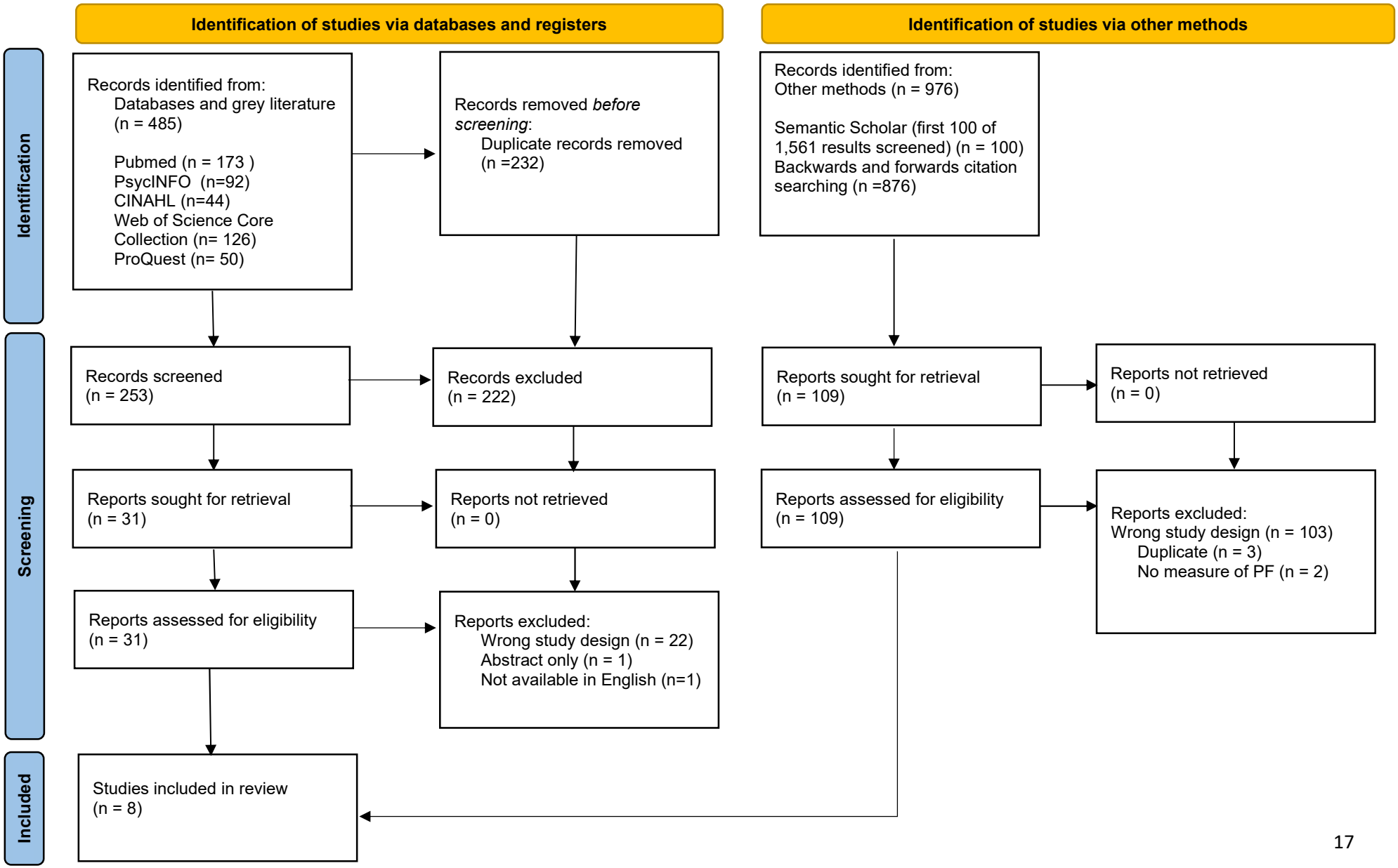


Table 2: Study Characteristics and Participants

ID	Authors	Country	Study design	Sample size (n)	Participant sex (% female)	Mean Age (SD), Age range	Ethnicity, N (%)	Sample description	Intervention details	Measure
1	Alonso et al. (2013)	Spain	Quasi-experimental	Experimental n = 5 Control n= 5	Experimental = 80% Control = 80%	Experimental = 87 (2.44) Control = 83.8 (3.82), 78-91	Not reported	Care home dwelling older adults with chronic pain of musculoskeletal origin	Structured group ACT intervention incorporating SOC strategies, comprising of 10 (120 minute) sessions over 5 weeks.	AAQ
2	Chojak (2023)	Poland	RCT	Experimental n = 50 Control n = 50	Pooled = 80%	Pooled = 75.6 (7.61), 60–93	Not reported	Community dwelling older adults attending daily care homes	Structured group ACT intervention, comprising 12 (20-40 minute) weekly sessions.	MPFI-24
3	Gould et al. (2021)	UK	Uncontrolled pre-post	n = 37	81%	74.8 (6.3), not reported	White /White British = 32 (86%), Asian/Asian British = 1 (3%), Black/Black British = 1 (3%), Mixed =	Community dwelling older adults with a diagnosis of GAD who had failed to respond to first-line treatment	Manualised 1:1 ACT intervention, comprising of 16 (60 minute) weekly sessions, with the final two sessions taking place fortnightly.	AAQ-II

						1(3%), Other =2 (5%)				
4	Lappalainen et al. (2022)	Finland	Quasi-experimental	Experimental n = 59 Control (TAU) n = 52 Control (peer support) n = 38	Experimental = 81.4% Control = 75%	Experimental = 72.3 (6.3), 59-88* Control (TAU) = 74.7(6.1), 60-88 Control (peer support) = 71.4(6.1), 61-86	Not reported	Community dwelling older adults who were family caregivers and self-identified with caregiving burden, exhaustion, and/or depressive symptoms	Self-guided online ACT programme, made up of 5 modules on ACT and one module on compassion. Participants were advised to spend two weeks on each module. Participants received a semi-scripted check-in call every other week, limited to 20 minutes, from a coach.	AAQ-II
5	Liu et al. (2025)	China	2-arm pilot cluster RCT	Experimental n = 20 Control n = 20	Experimental n = 85% Control n = 95%	Experimental = 72.8(6.2), not reported Control = 73.6 (6.2), not reported	Not reported	Community-dwelling older adults experiencing non-specific chronic low back pain for at least 3 months in the last 12 months	Structured group ACT intervention plus 30 minutes of exercise, comprising of 8 (90 minute) weekly sessions.	AAQ-II

6	Reynolds et al. (2025)	Canada	Uncontrolled pre-post	n = 34	91.4%	72.1 (8.1), 60-93	Canadian = 24 (70.6%), French-Canadian = 3 (8.8 %), Indigenous = 2 (5.9), Asian =2 (5.9), Black or South Asian = 2 (5.9)	Community dwelling older adults experiencing loneliness, social isolation, anxiety, and depression	Structured telephone group-based ACT intervention, comprising of 6 (90 minute) weekly sessions.	AAQ
7	Roche et al. (2021)	USA	RCT	Experimental n = 41 Control n = 39	Pooled = 56.3%	Pooled = 78.05 (5.08), 68-91	White = 78 (97.5%)	Community dwelling older adults.	Brief structured group ACT intervention, comprising of 2 (90 minute) weekly sessions.	CompACT

8	Scott et al. (2017)	UK	Uncontrolled pre-post	n = 60	61.7%	69.3 (4.2), 60-79	White = 53 (88.3%), Black = 5 (8.3%), Asian = 2 (3.3%)	Community dwelling older adults referred to pain management Clinic	Residential structured group ACT intervention, comprising of 4 sessions a week. Participants who were eligible for a neuromodulation procedure received a 2 week intervention, while those who were not received a 4 week intervention.	AAQ-II

Note: *one participant was 59 during assessment but turned 60 over the course of the intervention, SOC = Selective Optimisation with Compensation, AAQ = Acceptance and Action Questionnaire, MPFI = Multidimensional Psychological Flexibility Inventory, GAD = Generalised Anxiety Disorder, CompACT = Comprehensive Assessment of Acceptance and Commitment Therapy processes.

Study and participant characteristics

The eight studies included in this review were published between 2013 and 2025. Studies were conducted in the UK (n=2), the USA (n=1), Canada (n=1), China (n=1), Poland (n=1), Finland (n=1), and Spain (n=1). Of the five studies that included a control group, comparator conditions comprised of treatment as usual (n=2), positive psychology (n=1), waitlist control (n=1), and education on back care (n=1), the latter in participants with chronic back pain. Two studies (1, 5) combined ACT with another intervention, the former with selective optimisation and the latter with exercise.

Across the eight included studies, there were 510 participants in total. All the studies had relatively small sample sizes, ranging from small pilot samples of 10 participants to a moderate sample size of 100 participants. Gender was predominantly female, with females making up at least 80% of participants included in six of the studies. Four studies did not report participants' ethnicity (1, 2, 4, 5). Of the studies that did report ethnicity, the majority of participants were White. One study (6) reported ethnicity using mixed nationality, racial and cultural categories. Two studies did not report age ranges (3, 5); however, their inclusion criteria stipulated that participants must be aged 60 years or older. Apart from one study (1), all studies recruited community-dwelling participants. Study characteristics and participant details are summarised in Table 2.

Interventions

All of the studies included explicitly identified themselves as ACT-based and were designed to target psychological flexibility through one or more of the 6 core ACT processes. However, psychological flexibility was frequently assessed as a secondary or process outcome rather than the primary outcome. There was considerable variability in the extent to which intervention content was described and manualised. Five studies (1,2,4,6,7) provided brief session-by-session descriptions of the intervention, each demonstrating coverage of all six core processes within ACT's hexaflex. One study (5) did not report session-level content but offered an overarching description that explicitly referenced all six ACT processes. One study (8) was conducted in an actual practice setting, where the intervention was already being delivered and was not designed as a controlled research trial. Although the ACT intervention

being delivered was designed to target all six ACT processes, it was not manualised, and the researchers did not record session-specific content. This substantially limits the ability to verify treatment fidelity. Only one study (3) employed a manualised protocol and reported formal adherence ratings (mean 4.2/5, SD 0.8), providing the strongest evidence of treatment fidelity amongst the eight studies included in this review.

Among the included studies, five (1,2,5,7,8) delivered the ACT-based intervention in person in a group format, one (6) delivered it by telephone in a group format, one (3) delivered it in person on a one-to-one basis, and one (4) used a computerised self-guided format with fortnightly check-in telephone calls from coaches. The duration of ACT interventions ranged from 2 to 18 weeks (M = 8 weeks, SD = 5.27). The total number of intervention sessions ranged from 2 to 16 (M = 9.29, SD = 4.72). Most studies (n=6) provided one intervention session a week. Two studies (1,8) provided more than one session a week, with the former providing two sessions a week and the latter providing four sessions a week.

The professional background of the intervention facilitators varied across studies, although interventions were delivered predominantly by professionals with a psychology background. Facilitators included psychologists, clinical psychologists, counselling psychologists, CBT therapists, and social therapists, while one study used a multidisciplinary team comprising psychologists, occupational and physical therapists, nurses, and physicians.

Four studies (4,5,7,8) included follow-up assessments, with the final follow-up ranging from 3 to 10 months (M = 7, SD = 3.16). However, because follow-up time points and attrition varied considerably across studies, only immediate post-intervention data were included in the meta-analysis.

Risk of bias in studies

Only one study (5) met every criterion on the JBI Critical Appraisal tool for quasi-experimental studies. All the studies clearly described their interventions and used appropriate outcome measures. The dependent design studies failed to meet criterion 2, presence of a control group, and scored inapplicable on items 4 and 8 due to the dependent study design rather than methodological issues. Two studies failed to meet criterion 8 as they did not adequately describe reasons for attrition at follow-up. Most studies met the

criteria for item 3, similarity of participants/groups at baseline; however, one study did not, and two studies scored as unclear as they provided demographics for the sample as a whole. Study 1 met criteria for appropriate statistical analysis despite a very small sample, though this should be considered when interpreting its findings. Study 4 included a second control group that differed significantly from the intervention group on age; however, as this group was not included in this review's analysis, the appraisal reflects the comparison between the intervention group and the included control group. The tool does not provide a formal cut-off score to categorise studies as low or high risk of bias; therefore, risk was interpreted based on the pattern of criteria met. Overall, most studies satisfied the majority of JBI items that were applicable, suggesting moderate methodological quality with some risk of bias that should be considered when interpreting the findings.

Table 3: Risk of bias table. Y = yes, N= no, N/A = not applicable

ID	study	1. Is it clear in the study what is the "cause" and what is the "effect"	2. Was there a control group?	3. Were participants included in any comparisons similar?	4. Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?	5. Were there multiple measurements of the outcome, both pre and post the intervention/exposure?	6. Were the outcomes of participants included in any comparisons measured in the same way?	7. Were outcomes measured in a reliable way?	8. Was follow-up complete and if not, were differences between groups in terms of their follow-up adequately described and analyzed?	9. Was appropriate statistical analysis used?
1	Alonso et al., (2013)	Y	Y	N	Y	Y	Y	Y	Y	Y
2	Chojak (2023)	Y	Y	Unclear	Y	Y	Y	Y	Y	Y
3	Gould et al., (2021)	Y	N	Y	N/A	Y	Y	Y	N/A	Y
4	Lappalainen et al., (2022)	Y	Y	Y	Y	Y	Y	Y	N	Y
5	Liu et al., (2025)	Y	Y	Y	Y	Y	Y	Y	Y	Y
6	Reynolds et al., (2025)	Y	N	Y	N/A	Y	Y	Y	N/A	Y
7	Roche et al., (2021)	Y	Y	Y	Y	Y	Y	Y	N	Y
8	Scott et al., (2017)	Y	N	Y	N/A	Y	Y	Y	N/A	Y

Reporting biases

Publication bias was assessed using visual and statistical methods. A funnel plot (Figure 2) was generated using the Meta-essentials tool**.** Visual inspection of the funnel plot suggested a degree of asymmetry. One study (8) appeared visually as a potential outlier, showing a notably larger effect size than the other included studies. This study delivered the highest number of ACT sessions per week and was the only intervention implemented in a real-world clinical setting rather than a structured research environment. These differences may contribute to its comparatively large effect. The funnel plot also showed minor asymmetry at the lower end, where a single study with the second-largest effect size was positioned. While such asymmetry can suggest the possibility of reporting bias, visual interpretation is inherently limited when fewer than ten studies are included and should be interpreted cautiously.

Begg and Mazumdar's rank correlation test, which seeks to identify whether there is a correlation between study effect sizes and their standard errors**,** was non-significant (p = 0.193), indicating no detectable association between study size and effect magnitude. The Egger's regression test, which seeks to identify a relationship between effect size and precision of estimate, was also non-significant (p = 0.260), suggesting an absence of small-study effects.

However, these findings should be interpreted cautiously. With only eight studies, statistical tests for publication bias have low power and may fail to detect asymmetry even when it is present. As such, while the available evidence does not indicate publication bias, the possibility cannot be definitively ruled out.

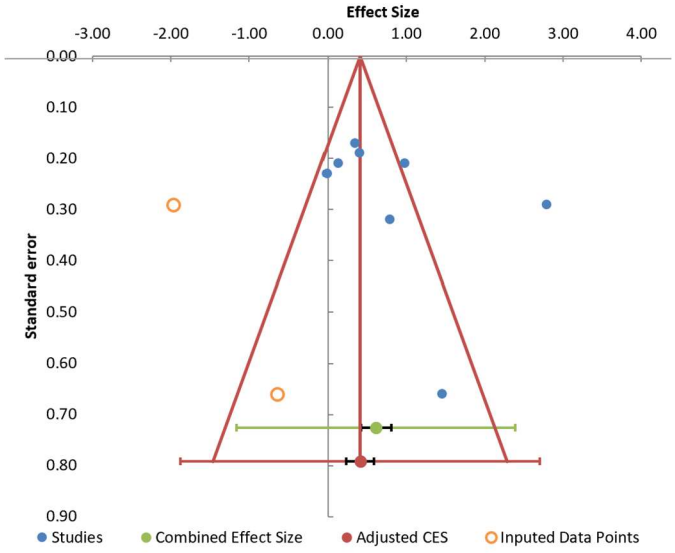


Figure 2: funnel plot

Synthesis of results

Eight studies examined psychological flexibility, most commonly as a secondary or process outcome. Although findings were generally in a positive direction, the magnitude of effects varied considerably across studies. A random-effects meta-analysis was therefore conducted to quantify the overall effect and examine between-study variability.

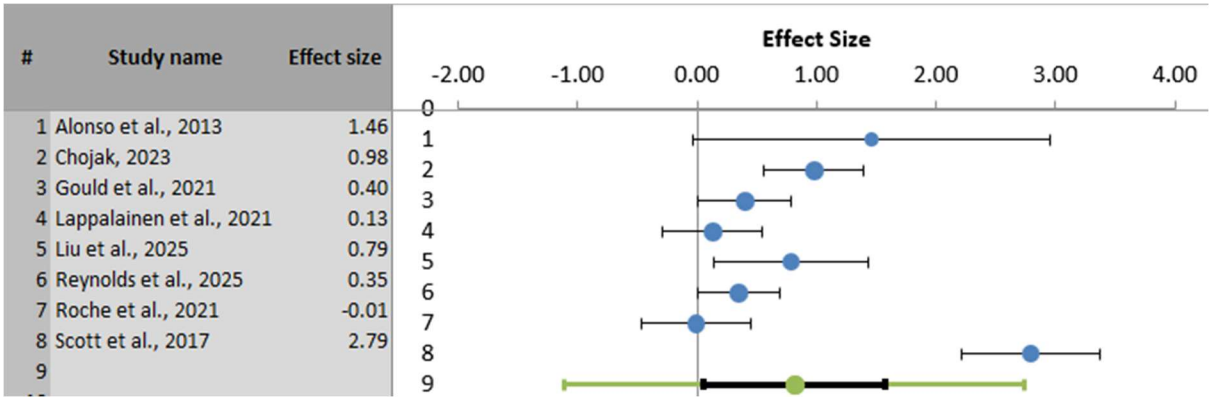


Figure 3: forest plot

All eight studies were included in the meta-analysis. Across the eight included studies, a total of 510 participants were enrolled. For the quantitative synthesis, data from 464 participants were included, with one control group from a multi-arm study excluded from the pooled analysis to avoid double-counting. The pooled analysis indicated an overall positive effect of ACT on psychological flexibility (Hedges' g = 0.81, 95% CI 0.05 to 1.58),

suggesting a statistically significant large effect. There was considerable heterogeneity across studies ($Q = 77.64$, $p < .001$, $I^2 = 90.98\%$).

Across individual studies, effect sizes were predominantly in the positive direction, suggesting that ACT was generally associated with improvements in psychological flexibility. Most studies demonstrated small-to-moderate effects, with the majority of Hedge's g values ranging from 0.13 to 1.46. One study (7) reported an effect size close to zero, suggesting no change. In contrast, another study (8) demonstrated a substantially larger effect (Hedge's g = 2.79), notably exceeding the magnitude observed in the remaining studies.

The pooled effect size therefore suggests that ACT is associated with improvements in psychological flexibility in older adult populations. However, there was substantial variability across studies. Statistical heterogeneity was high, with an I^2 value of 90.98%, indicating that the majority of variance in effect sizes was attributable to true between-study differences rather than sampling error. Visual inspection of the forest plot supported this, showing a wide spread of effect estimates and the presence of a clear outlying study with a markedly larger effect.

Despite this heterogeneity, the direction of effect was broadly consistent across studies, with the majority favouring ACT. Overall, these findings suggest that ACT is associated with beneficial effects on psychological flexibility in older adults. However, the magnitude of effect varies considerably across study contexts, and the presence of a substantially larger effect in one study suggests that the pooled estimate may be influenced by outliers and should therefore be interpreted with some caution. Due to this, sensitivity analyses were undertaken.

Sensitivity analyses

Two separate sensitivity analyses were conducted. First, the meta-analysis was re-run with one study (8) removed as it appeared to be an outlier. Using the full dataset, the pooled effect size was Hedges' g = 0.81 (95% CI 0.05 to 1.58). When the outlying study was removed, the pooled effect size decreased to Hedges' g = 0.48 (95% CI 0.45 to 0.50), and the confidence interval narrowed substantially. Although the exclusion of this study reduced the magnitude of the pooled effect and indicated greater precision, the direction of the effect

remained unchanged, indicating that the overall pattern of findings was not dependent on this single study.

Second, as an estimate of r = 0.5 had been used as an assumed pre-post correlation to calculate change-score effect sizes for the dependent group designs, the meta-analysis was repeated for the entire dataset using an estimate of r = 0.7. This produced a pooled effect size of Hedges' g = 0.73 (95% CI 0.11 to 1.36), which was comparable in direction and magnitude to the primary analysis. This suggests that the findings are robust to reasonable variation in the assumed correlation between pre- and post-intervention scores.

Taken together, these sensitivity analyses indicate that although one study had a disproportionate influence on heterogeneity and precision, the overall conclusions of the meta-analysis remain stable across analytic approaches. This suggests that the overall findings are robust and that the available evidence suggests ACT is associated with beneficial effects on psychological flexibility in older adults.

Discussion

This review examined the evidence regarding whether ACT improves psychological flexibility in older adults. Eight studies were included in this review, comprising a total of 510 participants aged 60 years and older. Of these, data from 464 participants were included in the meta-analysis. The pooled analysis indicated an overall positive effect of ACT on psychological flexibility, suggesting a statistically significant large effect. However, there was substantial variability across studies. Sensitivity analyses further indicated that one study exerted disproportionate influence on heterogeneity and precision, although the overall interpretation of the findings remained stable across analytic approaches. Taken together, these findings suggest that ACT is associated with beneficial effects on psychological flexibility in older adults, but the precise magnitude of effect should be interpreted cautiously in light of methodological and clinical variation across studies.

To the authors' knowledge, this is the first review assessing whether ACT improves psychological flexibility in older adults. A systematic review of mediation studies suggested that processes of change during ACT are mediated by psychological flexibility (Stockton et al., 2019), however very few studies have assessed whether ACT improves psychological flexibility in older adults, and as is the case in this review, many of the papers have assessed psychological flexibility as a process or secondary outcome. By examining psychological flexibility itself rather than symptom reduction, this review adds a new layer to the evidence base for ACT for older adults and aligns with broader evidence suggesting that psychological flexibility is a viable mechanism of change in ACT (Hayes et al., 2006; Stockton et al., 2019).

Additionally, the findings lend empirical support to the theoretical rationale outlined earlier for using ACT with older adults. While older adults tend to have a greater level of psychological flexibility in comparison to average age adults, the current results suggest that this capacity can be further strengthened through ACT-based interventions rather than representing a fixed, age-related ceiling effect. This is consistent with the SOC model, which frames successful ageing as an active process of accepting changes, optimising resources and setting achievable goals, rather than a passive outcome of ageing itself. The finding that ACT improved psychological flexibility in older adults may indicate that ACT-based interventions could enact the SOC processes theorised to underlie successful ageing.

It has been argued that ACT may be particularly appropriate for older adults when compared to traditional therapies such as CBT, which involves challenging the validity of distressing thoughts (Petkus & Loebach Wetherell, 2013), when considering many stressors associated with ageing are unavoidable and unchangeable (Roberts and Sedley 2016). Several of the included studies involved participants with chronic pain, the prevalence of which increases with age and is estimated to affect 40% of adults aged 75 and over (NHS Digital, 2026). An RCT comparing ACT and CBT for chronic pain found that older adults were more likely to respond to ACT, whereas average age adults were more likely to respond to CBT (Wetherell et al., 2016). ACT may be particularly appropriate for older adults with chronic pain, as in comparison to average age adults they may have experienced a greater number of failed attempts to reduce their pain and therefore an intervention that focuses on living well with pain may have greater appeal (Wetherell et al., 2016).

In this review, the two studies reporting the largest effect sizes were those delivering ACT more intensively, offering multiple sessions per week rather than the standard weekly format. Notably, the study with the largest effect size also provided the largest number of sessions in total, suggesting that frequency and overall dose may be contributing factors. A dose-response pattern has been observed in other populations. Guo et al. (2025) found that ACT produced its largest stress-reduction effects when intervention sessions were 120 minutes or longer and conducted at least twice a week, raising the possibility that frequency and intensity may be moderators of ACT's efficacy across populations. NICE (2022) guidance does not require any adjustments or modifications to psychological interventions for anxiety or depression in older adults, only recommending adjustments to the delivery or length of the intervention in the case of cognitive impairment. Based on older adults showing lower lasting changes in psychological flexibility at follow-up, Rutschmann et al. (2024) suggested that older adults may benefit from longer or more intensive ACT interventions to receive the optimum benefits. Similarly, a meta-analysis looking at ACT for cancer patients found that duration was a moderator for psychological flexibility; longer ACT interventions predicted a higher level of psychological flexibility (Zhang et al., 2023). Although this review did not assess follow-up outcomes, our findings do align with their broader suggestion that older adults may benefit from more intensive and longer ACT interventions.

Although the current review does not have data on trauma, the findings on benefits to psychological flexibility may have relevance to this presentation. For veterans who had gone through a traumatic event, those who scored higher in psychological inflexibility and lower in self-compassion tended to have worse PTSD and depression symptoms than those with higher psychological flexibility scores (Cheng et al., 2021). A meta-analysis examining ACT's effectiveness on trauma symptoms indicated that ACT is likely an effective intervention for trauma symptoms; however, its effectiveness varied for subgroups, with those who reported interpersonal trauma and medical trauma having a greater decrease in symptoms than veterans and individuals with unspecified trauma (Rowe-Johnson et al., 2024). Psychological flexibility targeted by ACT may be particularly relevant for older adults who experience cumulative traumas or reactivated symptoms in later life.

Limitations of evidence base

Only one of the eight studies included met every JBI criterion. Although the JBI quasi-experimental tool was appropriate for the included studies, several criteria were marked as not applicable for the dependent group design studies. The unmet or not applicable items reflected the absence of a control group rather than methodological weakness, as some of the questions were not applicable to single-group pre-post designs. Consequently, the Lower number of criteria met by these studies reflects the format of dependent group designs rather than any inherent methodological weaknesses. Its consistent application across all eight ensured comparability.

The AQQ/AAQ-II is the most used measure of psychological flexibility (Cherry et al., 2021), and this was reflected in the current review, with six studies employing the AAQ/AAQ-II. However, the AAQ was originally created as a measure of psychological inflexibility (Bond et al., 2011), and five of the studies reverse-scored the AAQ to indicate higher levels of psychological flexibility. In response to the criticism of the AAQ, several multidimensional questionnaires have been developed to assess psychological flexibility, including the Multidimensional Psychological Flexibility Inventory (MPFI-24) (Rolffs, Rogge, & Wilson, 2018) and the Comprehensive Assessment of Acceptance and Commitment Therapy processes (CompACT) (Francis et al., 2016) which were used by studies included in this review. Both the MPFI-24 and the CompACT appear to be acceptable measures of psychological flexibility; however, further research is required to determine whether they

represent psychometrically robust alternatives to the AAQ (Barrado-Moreno et al., 2025; Francis et al., 2016). Despite the growing criticism, the AAQ remains the most widely used and researched tool (Rutschmann et al., 2024).

A further limitation of the available evidence relates to the demographic homogeneity of the included sample. Across the studies, participants were predominantly female, with 6 studies reporting that at least 80% of participants were female. Similarly, while the included studies were conducted across a diverse spread of countries, reporting of ethnicity data was poor, with only half of the studies reporting ethnicity, including one study that reported ethnicity using mixed nationality and racial categories (Canadian, indigenous, Asian, Black), which limits comparability to other studies. As a result, despite the included studies being conducted across three continents, the extent to which the overall sample reflects ethnic diversity remains unclear. Taken together, these reflect a lack of gender and racial diversity in the study samples. Future studies should prioritise detailed demographic reporting and explore the efficiency of ACT on psychological flexibility in a diverse sample of older adults.

Strengths, limitations and future directions

A strength of this review is its methodological rigour. We adhered to PRISMA guidelines and worked with a librarian with expertise in systematic reviews. The search strategy was refined through extensive preliminary searching and was applied to databases from multiple academic disciplines. Backwards and forwards citation searching was conducted, and grey literature was included, incorporating one thesis into the review.

However, several limitations should be noted. This review focused on pre- and immediate post-data on psychological flexibility following an ACT intervention. As most studies did not include a follow-up, we cannot comment on change over time.

The variability in reporting of the content of the ACT interventions limits the evidence base. Although most studies provided session-by-session descriptions covering all six ACT processes, adherence to these plans could not be verified. Only one study used a fully manualised protocol and reported formal fidelity ratings, meaning that adherence could be assessed.

Finally, this review includes both studies with and without a control group. Given the limited research on ACT and psychological flexibility, and the broader paucity of studies involving older adults, an expansive approach was necessary.

These limitations, and those of the studies included in this review, point to clear future directions. Additional studies are warranted given that only eight studies met the inclusion criteria. Future research would benefit from consistent use of multidimensional psychological flexibility measures, manualised ACT protocols with fidelity assessment, and incorporating longer-term follow-up to establish whether gains in psychological flexibility are maintained over time. More demographically diverse samples, with transparent reporting, are also needed to strengthen the evidence base.

Conclusion

This review sought to identify and synthesise studies assessing changes in psychological flexibility following ACT interventions in older adults. Our findings suggest that ACT is associated with beneficial effects on psychological flexibility in this population. This review adds a new layer to the evidence base for ACT in older adults, and aligns with broader evidence suggesting that psychological flexibility is a viable mechanism of change within ACT. However, the evidence base remains constrained by small and often homogeneous samples, a lack of manualised protocols, limiting the ability to assess intervention fidelity, and a scarcity of controlled designs. Future research employing larger, controlled trials, multidimensional assessment tools, and more diverse samples is needed to strengthen confidence in ACT's effectiveness for improving psychological flexibility in this population.

References

Alonso, M., López, A., Losada, A., & González, J. L. (2013). Acceptance and Commitment Therapy and Selective Optimization with Compensation for Older People with Chronic pain: A Pilot Study. *Behavioral Psychology*, *21*, 59–79.

Baltes, P. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. American Psychologist, 52, 366–380.

Barrado-Moreno, V., Esteve, R., López-Martínez, A. E., & Ramírez-Maestre, C. (2025). Measuring psychological flexibility and inflexibility: further psychometric evidence of the Multidimensional Psychological Flexibility Inventory short form (MPFI-24) in Spanish population. *Current Psychology*, *44*(2), 1001–1015. https://doi.org/10.1007/s12144-025-07421-x

Begg, C. B., & Mazumdar, M. (1994). Operating characteristics of a rank correlation test for publication bias. *Biometrics, 50*(4), 1088-1101. dx.doi.org/10.2307/2533446

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., Waltz, T., Zettle, R. D., Curtiss, L., Fox, E. J., Kulesza, M., Orsillo, S. M., Roemer, L., & Wilson, K. G. (2011). *Preliminary Psychometric Properties of the Acceptance and Action Questionnaire-II: A Revised Measure of Psychological Inflexibility and Experiential Avoidance*. www.sciencedirect.comwww.elsevier.com/locate/bt

Bryant, C., Jackson, H., & Ames, D. (2008). The prevalence of anxiety in older adults: Methodological issues and a review of the literature. In *Journal of Affective Disorders* (Vol. 109, Number 3, pp. 233–250). https://doi.org/10.1016/j.jad.2007.11.008

Cai, H., Jin, Y., Liu, R., Zhang, Q., Su, Z., Ungvari, G. S., Tang, Y. L., Ng, C. H., Li, X. H., & Xiang, Y. T. (2023). Global prevalence of depression in older adults: A systematic review and meta-analysis of epidemiological surveys. In *Asian Journal of Psychiatry* (Vol. 80). Elsevier B.V. https://doi.org/10.1016/j.ajp.2022.103417

Cheng, Z. H., Lozier, C. C., Lewis, M. M., O'Neil, M. E., Luoma, J. B., & Morasco, B. J. (2021). Investigating the role of psychological inflexibility, mindfulness, and self-compassion in

PTSD. *Journal of Contextual Behavioral Science*, *22*, 102–107. https://doi.org/10.1016/j.jcbs.2021.10.004

Cherry, K. M., Hoeven, E. Vander, Patterson, T. S., & Lumley, M. N. (2021). Defining and measuring "psychological flexibility": A narrative scoping review of diverse flexibility and rigidity constructs and perspectives. In *Clinical Psychology Review* (Vol. 84). Elsevier Inc. https://doi.org/10.1016/j.cpr.2021.101973

Chojak, A. (2023). Effectiveness of ACT-based intervention in compliance with the model for sustainable mental health: A cluster randomized control trial in a group of older adults. *Journal of Contextual Behavioral Science*, *28*, 48–59. https://doi.org/10.1016/j.jcbs.2023.03.007

Davison, T. E., Eppingstall, B., Runci, S., & O'Connor, D. W. (2017). A pilot trial of acceptance and commitment therapy for symptoms of depression and anxiety in older adults residing in long-term care facilities. *Aging and Mental Health*, *21*(7), 766–773. https://doi.org/10.1080/13607863.2016.1156051

Dawson, D. L., & Golijani-Moghaddam, N. (2020). COVID-19: Psychological flexibility, coping, mental health, and wellbeing in the UK during the pandemic. *Journal of Contextual Behavioral Science*, *17*, 126–134. https://doi.org/10.1016/j.jcbs.2020.07.010

DerSimonian, R., & Laird, N. (1986). Meta-analysis in clinical trials. *Controlled Clinical Trials*, 7(3), 177-188. dx.doi.org/10.1016/0197-2456(86)90046-2

Dindo, L., Van Liew, J. R., & Arch, J. J. (2017). Acceptance and Commitment Therapy: A Transdiagnostic Behavioral Intervention for Mental Health and Medical Conditions. In *Neurotherapeutics* (Vol. 14, Number 3, pp. 546–553). Springer New York LLC. https://doi.org/10.1007/s13311-017-0521-3

Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *British Medical Journal, 315*(7109), 629-634. dx.doi.org/10.1136/bmj.315.7109.629

Francis, A. W., Dawson, D. L., & Golijani-Moghaddam, N. (2016). The development and validation of the Comprehensive assessment of Acceptance and Commitment Therapy processes (CompACT). *Journal of Contextual Behavioral Science*, *5*(3), 134-145.

Gloster, A. T., Meyer, A. H., & Lieb, R. (2017). Psychological flexibility as a malleable public health target: Evidence from a representative sample. *Journal of Contextual Behavioral Science*, *6*(2), 166–171. https://doi.org/10.1016/j.jcbs.2017.02.003

Gould, R. L., Wetherell, J. L., Kimona, K., Serfaty, M. A., Jones, R., Graham, C. D., Lawrence, V., Livingston, G., Wilkinson, P., Walters, K., Le Novere, M., Leroi, I., Barber, R., Lee, E., Cook, J., Wuthrich, V. M., & Howard, R. J. (2021). Acceptance and commitment therapy for late-life treatment-resistant generalised anxiety disorder: A feasibility study. *Age and Ageing*, *50*(5), 1751–1761. https://doi.org/10.1093/ageing/afab059

Guo, Y., He, H., & Lan, J. (2025). The effectiveness of Acceptance and Commitment Therapy on parental stress in parents of special children: a meta-analysis. In *Child and Adolescent Psychiatry and Mental Health* (Vol. 19, Number 1). BioMed Central Ltd. https://doi.org/10.1186/s13034-025-00944-y

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, *44*(1), 1–25. https://doi.org/10.1016/j.brat.2005.06.006

Hayes, S. C., Pistorello, J., & Levin, M. E. (2012). Acceptance and Commitment Therapy as a Unified Model of Behavior Change. *The Counseling Psychologist*, *40*(7), 976–1002. https://doi.org/10.1177/0011000012460836

Herrman, H., Patel, V., Kieling, C., Berk, M., Buchweitz, C., Cuijpers, P., Furukawa, T. A., Kessler, R. C., Kohrt, B. A., Maj, M., McGorry, P., Reynolds, C. F., Weissman, M. M., Chibanda, D., Dowrick, C., Howard, L. M., Hoven, C. W., Knapp, M., Mayberg, H. S., … Wolpert, M. (2022). Time for united action on depression: a Lancet–World Psychiatric Association Commission. In *The Lancet* (Vol. 399, Number 10328, pp. 957–1022). Elsevier B.V. https://doi.org/10.1016/S0140-6736(21)02141-3

Higgins, J. P. T., Thompson, S. G., Deeks, J. J., & Altman, D. G. (2003). Measuring inconsistency in meta-analyses. *BMJ*, 327(7414), 557–560. https://doi.org/10.1136/bmj.327.7414.557

Karlin, B. E., Walser, R. D., Yesavage, J., Zhang, A., Trockel, M., & Taylor, C. B. (2013). Effectiveness of acceptance and commitment therapy for depression: Comparison among older and younger veterans. *Aging and Mental Health*, *17*(5), 555–563. https://doi.org/10.1080/13607863.2013.789002

Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. In *Clinical Psychology Review* (Vol. 30, Number 4, pp. 865–878). Elsevier Inc. https://doi.org/10.1016/j.cpr.2010.03.001

Knudsen, F. M., Donahue, M. L., Klimczak, K. S., Aller, T. B., & Levin, M. E. (2025). Psychological flexibility as a mechanism of change in online ACT among adults living with chronic health conditions. *Journal of Behavioral Medicine*, *48*(5), 891–899. https://doi.org/10.1007/s10865-025-00585-8

Lappalainen, P., Pakkala, I., Lappalainen, R., & Nikander, R. (2022). Supported Web-Based Acceptance and Commitment Therapy for Older Family Caregivers (CareACT) Compared to Usual Care. *Clinical Gerontologist*, *45*(4), 939–955. https://doi.org/10.1080/07317115.2021.1912239

Leung, D. K. Y., Fong, A. P. C., Kwok, W. W., Shum, A. K. Y., Liu, T., Chan, R. H. M., Kanagawa, H. S., Wong, G. H. Y., & Lum, T. Y. S. (2024). A Cultural Adaptation of Acceptance and Commitment Therapy With Exercise for Older Chinese With Chronic Pain and Depressive Symptoms: A Mixed-Methods Study. *Psychotherapy*, *61*(4), 269–281. https://doi.org/10.1037/pst0000539

Liu, J. Q. J., Mak, Y. W., Tang, A. L. Y., Kwan, C., Al Zoubi, F., Wong, T. K. T., Tsang, G. S. H., Kwong, H. C. W., Lai, S. W. T., Sze, S. P. S., Hui, K. T. K., Cheung, C. K. C., Samartzis, D., Chow, K. K. S., & Wong, A. Y. L. (2025). Effects of acceptance and commitment therapy plus exercise for older adults with chronic low back pain: A preliminary cluster randomized controlled trial with qualitative interviews. *Journal of Pain*, *30*. https://doi.org/10.1016/j.jpain.2025.105350

McCracken, L. M., Badinlou, F., Buhrman, M., & Brocki, K. C. (2021). The role of psychological flexibility in the context of COVID-19: Associations with depression, anxiety, and insomnia.

Journal of Contextual Behavioral Science, *19*, 28–35. https://doi.org/10.1016/j.jcbs.2020.11.003

NHS Digital. (2026, January 27). *Chronic pain: Health Survey for England, 2024*. https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england/2024/chronic-pain

NICE. (2022). *Depression in adults: Treatment and management (NG222).* National Institute for Health and Care Excellence. https://www.nice.org.uk/guidance/ng222

Ouzzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan: A web and mobile app for systematic reviews. *Systematic Reviews, 5(1), 210.* https://doi.org/10.1186/s13643-016-0384-4

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ, 372, n71. https://doi.org/10.1136/bmj.n71

Pakenham, K. I., Landi, G., Boccolini, G., Furlani, A., Grandi, S., & Tossani, E. (2020). The moderating roles of psychological flexibility and inflexibility on the mental health impacts of COVID-19 pandemic and lockdown in Italy. *Journal of Contextual Behavioral Science*, *17*, 109–118. https://doi.org/10.1016/j.jcbs.2020.07.003

Petkus, A. J., & Loebach Wetherell, J. (2013). *Acceptance and Commitment Therapy With Older Adults: Rationale and Considerations*. www.elsevier.com/locate/cabp

Petrova, N. N., & Khvostikova, D. A. (2021). Prevalence, Structure, and Risk Factors for Mental Disorders in Older People. *Advances in Gerontology*, *11*(4), 409–415. https://doi.org/10.1134/S2079057021040093

Plys, E., Jacobs, M. L., Allen, R. S., & Arch, J. J. (2023). Psychological flexibility in older adulthood: a scoping review. In *Aging and Mental Health* (Vol. 27, Number 3, pp. 453–465). Routledge. https://doi.org/10.1080/13607863.2022.2036948

Reynolds, C. F., Jeste, D. V., Sachdev, P. S., & Blazer, D. G. (2022). Mental health care for older adults: recent advances and new directions in clinical practice and research. *World Psychiatry*, *21*(3), 336–363. https://doi.org/10.1002/wps.20996

Reynolds, K. A. A., Kudar, K., Joshi, J., Christianson, I., Davidson, D., Gopinath, G., Koven, L., Mackenzie, C., Miller, S., & Newall, N. (2025). Telephone-based group mental health support for older adults in central Canada: pilot acceptability and effectiveness findings of The CONNECT Program. *Frontiers in Public Health*, *13*. https://doi.org/10.3389/fpubh.2025.1541583

Roberts, S. L., & Sedley, B. (2016). Acceptance and commitment therapy with older adults. *Clinical Case Studies*, *15*(1), 53–67. https://doi.org/10.1177/1534650115589754

Roche, A. I. (2021). *Well-being in ACTion: Examining the impact of acceptance and commitment training in community-dwelling older adults* [Doctoral dissertation, University of Iowa]. ProQuest Dissertations & Theses Global.

Rolffs, J. L., Rogge, R. D., & Wilson, K. G. (2018). Disentangling Components of Flexibility via the Hexaflex Model: Development and Validation of the Multidimensional Psychological Flexibility Inventory (MPFI). *Assessment*, *25*(4), 458–482. https://doi.org/10.1177/1073191116645905

Rowe-Johnson, M. K., Browning, B., & Scott, B. (2024). Effects of Acceptance and Commitment Therapy on Trauma-Related Symptoms: A Systematic Review and Meta-Analysis. *Psychological Trauma: Theory, Research, Practice, and Policy*. https://doi.org/10.1037/tra0001785.supp

Rutschmann, R., Romanczuk-Seiferth, N., Gloster, A., & Richter, C. (2024). Increasing psychological flexibility is associated with positive therapy outcomes following a transdiagnostic ACT treatment. *Frontiers in Psychiatry*, *15*. https://doi.org/10.3389/fpsyt.2024.1403718

Sánchez-Meca, J., & Marín-Martínez, F. (2008). Confidence intervals for the overall effect size in random-effects meta-analysis. *Psychological Methods, 13*(1), 31-48. dx.doi.org/10.1037/1082-989x.13.1.31

Scott, W., Daly, A., Yu, L., & McCracken, L. M. (2017). Treatment of chronic pain for adults 65 and over: Analyses of outcomes and changes in psychological flexibility following interdisciplinary acceptance and commitment therapy (ACT). *Pain Medicine (United States)*, *18*(2), 252–264. https://doi.org/10.1093/pm/pnw073

Stockton, D., Kellett, S., Berrios, R., Sirois, F., Wilkinson, N., & Miles, G. (2019). Identifying the underlying mechanisms of change during acceptance and commitment therapy (ACT): A systematic review of contemporary mediation studies. *Behavioural and Cognitive Psychotherapy*, *47*(3), 332–362. https://doi.org/10.1017/S1352465818000553

Sun, Y., Tian, Z., Ma, Y., Zhu, Q., Zheng, R., Guan, Y., & Zhang, X. (2025). Effectiveness of Acceptance and Commitment Therapy on Reducing Depression and Anxiety in Older Adults: A Systematic Review and Meta-Analysis. In *Journal of Psychiatric and Mental Health Nursing* (Vol. 32, Number 3, pp. 643–655). John Wiley and Sons Inc. https://doi.org/10.1111/jpm.13138

Suurmond R, van Rhee, H, Hak T. (2017). Introduction, comparison and validation of *Meta-Essentials*: A free and simple tool for meta-analysis. Research Synthesis Methods. Vol. 8, Iss 4, 537-553. https://doi.org/10.1002/jrsm.1260

Wetherell, J. L., Afari, N., Ayers, C. R., Stoddard, J. A., Ruberg, J., Sorrell, J. T., Liu, L., Petkus, A. J., Thorp, S. R., Kraft, A., Patterson, T. L., Belding, W., Birchler, G., Goodman, D., Singley, D., Otis, L. V, Ramsdell, J., & Wetherell, J. (2011). Acceptance and Commitment Therapy for Generalized Anxiety Disorder in Older Adults: A Preliminary Report. In *Behavior Therapy* (Vol. 42). www.sciencedirect.comwww.elsevier.com/locate/

Wetherell, J. L., Petkus, A. J., Alonso-Fernandez, M., Bower, E. S., Steiner, A. R. W., & Afari, N. (2016). Age moderates response to acceptance and commitment therapy vs. cognitive behavioral therapy for chronic pain. *International Journal of Geriatric Psychiatry*, *31*(3), 302–308. https://doi.org/10.1002/gps.4330

World Health Organization. (2025, October 1). *Ageing and health*. https://www.who.int/news-room/fact-sheets/detail/ageing-and-health

Zhang, Y., Ding, Y., Chen, X., Li, Y., Li, J., & Hu, X. (2023). Effectiveness of acceptance and commitment therapy on psychological flexibility, fatigue, sleep disturbance, and quality of life of patients with cancer: A meta-analysis of randomized controlled trials. In *Worldviews on Evidence-Based Nursing* (Vol. 20, Number 6, pp. 582–592). John Wiley and Sons Inc. https://doi.org/10.1111/wvn.12652

Chapter 2

Living With Trauma Symptoms in Later Life: Enduring Experiences, Disruption, and Evolving Responses

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Plain Language Summary

Title: Living With Trauma Symptoms in Later Life: Enduring Experiences, Disruption, and Evolving Responses.

Background**:** Research suggests that PTSD may be less common in older adults than in average age adults. However, these figures are usually based on diagnostic tools that have been designed for average age adults and may not reflect the true picture. Older adults may describe or report their symptoms differently. They may have developed ways of coping that help them manage difficult experiences or may experience PTSD in ways that do not fully match current diagnostic guidelines, which were mostly developed based on research with younger people. As a result, PTSD in older adults may be underestimated rather than genuinely less common. Despite this, very little research has explored what living with trauma symptoms is like for older adults, in their own words. To our knowledge, no previous study has explored this using qualitative methods, which allow people to describe their experiences in their own voice, rather than through questionnaires or rating scales alone.

Aims: This study aimed to explore how trauma presents in older adults.

Research Questions: (1) How do older adults describe and experience their trauma symptoms? (2) What are older adults' experiences of managing their symptoms? (3) Have they noticed a change in their symptoms over time? (4) Have they noticed a change in their coping strategies as they have aged?

Methods: Participants were older adults who had lived through one or more frightening or distressing experiences that continued to affect their mental health, whether or not they had a formal diagnosis of PTSD. Eight older adults took part in interviews about their experiences and descriptions of trauma symptoms, and whether they reported a change in how they experienced and managed trauma symptoms over time. Interviews were recorded, transcribed and analysed using Reflexive Thematic Analysis.

Main Findings:

- Trauma symptoms were described as persistent and enduring. They affected far more than participants' mental health; they shaped how participants saw themselves, their relationships, and their daily lives.

- Some participants felt judged or feared being a burden, which led them to hide their difficulties. Many also avoided situations that reminded them of their trauma, often by staying at home.
- Getting older sometimes made symptoms harder to manage, as participants lost roles and routines that had previously helped them cope.
- Later life often brought more time for reflection, and for many, this was their first time accessing mental health support. This helped some participants engage in new ways of coping and recognition of their resilience, while for others, increased reflection brought renewed grief about what had happened to them.

Conclusions: Symptoms sometimes became harder to manage as participants got older, particularly as they lost the routines or responsibilities that had previously helped them avoid difficult memories, and as other challenges of ageing added further strain. At the same time, many participants found new ways to cope, supported by close relationships and by psychological therapy. Although more research is needed, particularly with a more diverse range of older adults, these findings show that trauma symptoms do not simply fade with age. Instead, they can continue to change and affect people's lives well into later life.

Abstract

This study aimed to explore older adults' experiences of trauma symptoms, how they managed their symptoms, and whether they perceived changes in symptoms and coping over time. Eight participants, all of whom were engaged in psychology, took part in semi-structured interviews. Data were transcribed and analysed using reflexive thematic analysis, generating five main themes. Participants' accounts reflected both deterioration and adaptation. Deterioration was linked to age-related transitions that reduced access to avoidance strategies, alongside later-life vulnerabilities that compounded distress. Adaptation, meanwhile, was supported by relationships and psychological input. Increased reflection in later life was a double-edged process, moving some participants towards integrity, while deepening grief for others. Although further work is needed with more diverse populations, these findings challenge assumptions that trauma symptoms fade with time and instead highlight their ongoing, dynamic nature in later life.

Keywords: Older adults; Trauma; Complex PTSD; Qualitative

Introduction

Assessment of post-traumatic stress disorder (PTSD), a condition categorised by three symptom clusters: re-experiencing, avoidance, and hypervigilance (ICD-11, 2019), has been largely based on the symptom presentation of younger adults (Pless Kaiser et al., 2019). What does this mean for older adults? While there is no universal definition, older adulthood is generally understood to begin between 60 and 65 (NICE, 2015; WHO, 2025). There is a paucity of research examining the symptomology and severity of PTSD in older adults (Maccarrone et al., 2021; Pless Kaiser et al., 2019). Studies that have investigated PTSD in older adults have focused on individuals with very specific experiences, namely war veterans who are typically American men, and holocaust survivors, meaning these findings lack generalisability to the general population (Durai et al., 2011; Yehuda et al., 2009). Similarly, the related but separate disorder Complex PTSD (CPTSD), in which PTSD symptoms are accompanied by disturbances in self-organisation (dysregulation, negative self-concept, and difficulties in relationships), is also under-researched in older adults (McGinty et al., 2021).

Prevalence

The limited research exploring PTSD in older adults gives the impression that the prevalence of PTSD is lower in older adults in comparison to younger adults (Frueh et al., 2014; Yehuda et al., 2009). However, these estimates of prevalence typically rely on PTSD diagnostic tools that have been validated for use with average-age adults, with limited research on their assessment of PTSD in older adults within non-veteran, non-Western populations, with studies suggesting the use of lower thresholds for older adults (Havermans et al. 2025). Military veterans over 65 had one-third the prevalence of PTSD in comparison to middle-aged military veterans, despite self-reporting higher rates of combat (Frueh et al., 2014). Potential reasons for the lower reported rate of PTSD in older adults may be due to several factors such as generational differences in endorsing or reporting symptoms, resilience factors related to age, or differences in presentation, which means the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) and the International Classification of Diseases (ICD-11; World Health Organization, 2019) criteria may not fit as well (Elshaikh et al., 2023; Frueh et al., 2014; Glück et al., 2016).

Generational differences

Greater stigma and lower levels of mental health literacy may mean that older adults are less likely to report or acknowledge psychiatric symptoms (Frueh et al., 2014; Pless Kaiser et al., 2019). On stigma, a recent systematic review found that fear of stigma was the most prominent barrier for help-seeking in older adults (Elshaikh et al., 2023). Older adults may be more likely to use general terms such as 'stress' to describe trauma-related difficulties (Pless Kaiser et al., 2019). In terms of mental health literacy, Wetherell et al, (2009) found older adults were less accurate than adults under the age of 65 at identifying symptoms of anxiety and depression, with older adults more likely to label symptoms as neither anxiety nor depression.

Due to these obstacles in recognising experiences that are related to trauma, older adults may present with somatic symptoms as their primary concern. Pain, poor sleep, and gastrointestinal issues may be misinterpreted by older adults as physical health issues rather than manifestations of psychological distress (Pless Kaiser et al., 2019). Preliminary research indicates that many chronic health conditions are associated with a history of trauma in older adults, with persistent pain being observed to have the strongest link to trauma and PTSD symptoms (Maccarone et al., 2021).

Duration, age when experienced, and dose relationship

The length of time that elapsed from trauma may impact the prevalence and severity of symptoms. A longer duration of symptomology may play a role in the lower rates of prevalence of PTSD in older adults (Böttche et al., 2015; Rutherford et al., 2021). If the trauma occurred 40-70 years ago, the person has had years of experience in coping with or extinguishing the prevalence or severity of the symptoms, combined with the fading effect bias of the event becoming less salient over time (Frueh et al., 2014; Pless Kaiser et al., 2019). Older adults may become used to the lifestyle practices they once considered avoidant and may not remember the behaviours or activities that they engaged in prior to curtailing them due to their symptoms (Rutherford et al., 2021).

There is some understanding that the age at which trauma was experienced, and frequency of exposure, play a role in symptom severity. Older adults who experienced trauma as a

child reported greater current PTSD symptom severity than older adults who were in adulthood when they experienced their greatest trauma (Culp et al., 2019; Ogle & Rubin, 2013). Evidence suggests that there is a dose-response relationship with greater exposure to traumatic events over the life course predicting more severe symptoms of PTSD in older adults (Böttche et al., 2015; Maccarrone et al., 2021; Ogle et al., 2016).

Symptomatology

What if the lower prevalence is not solely due to generational differences and increased coping, and there are differences in symptomatology? The limited research that has explored PTSD symptomatology in older adults suggests that it may differ in comparison to younger adults (Pless Kaiser et al., 2019). A study comparing the clinician-administered PTSD scale (CAPS; Blake et al., 1995; Weathers et al., 2013) scores between older adults and adults found that although total CAPS scores were not significantly different between the two groups, the PTSD symptom profiles did appear to be noticeably different (Rutherford et al., 2021). Older adults exhibited a higher frequency of hyperarousal symptoms (Rutherford et al., 2021) and fewer avoidance symptoms when compared to adults with PTSD (Pless Kaiser et al., 2019; Rutherford et al., 2021). Previous avoidance strategies such as work and substance use may not be as available to older adults in later life. Nevertheless, the limited literature on avoidance in older adults is inconsistent. Older adults who developed delayed onset PTSD showed an increase in avoidance over a ten year follow-up period (Yehuda et al., 2009). This suggests that, for some older adults, avoidance may increase rather than diminish as trauma symptoms develop or resurface later in life.

These differences in presentation may lead to older adults being inadvertently misdiagnosed or overlooked (Averill & Beck, 2000). Lunney et al. (2014) found a tendency for clinician-rated PTSD symptoms to be lower in older adults when compared to self-rated measures. This disparity was not seen for clinician-rated PTSD symptoms in average-age adults. However, it is not possible to determine whether this age-related difference is due to under-detection by professionals or over-reporting by older adults (Lunney et al., 2014). Sleep disturbance can be considered a PTSD symptom. However, as the phenomenon is commonly seen in older adults, clinicians may be liable to attribute this to the effects of chronic disease or age. Meanwhile, flashbacks may be misdiagnosed as hallucinations, and

problems with concentration may be seen as a sign of mild cognitive impairment rather than a symptom of PTSD (Böttche et al., 2015). Lack of recognition or misattribution may lead to inadequate treatment plans or provision of poorly focused or inappropriate treatment (Frueh et al., 2014). If an older adult receives a diagnosis of PTSD, provision of adequate mental health care appears low (Glaesmer et al., 2011; Rutherford et al., 2021), which is concerning given the well-known negative impact untreated PTSD has on individuals (Rutherford et al., 2021).

Mental health professionals' failure to enquire about childhood abuse may also contribute to the potential under-diagnosis of PTSD in older adults. The percentage of service users asked about childhood abuse ranged from 0- 21%. Common barriers to asking included fear that the client would become distressed and it could make their problems worse (the 'can of worms argument'), and not knowing, or not having the resources to respond to a disclosure (Read et al., 2018).

The body of literature exploring PTSD and trauma presentations in older adults is small and chiefly quantitative in nature (Böttche et al., 2015; Culp et al., 2019; Fox & Hons, 2020; Glück et al., 2016) but with insufficient studies on the assessment of PTSD in older adults to permit rigorous meta-analysis (Pless Kaiser et al., 2019). The lack of studies on older adults with PTSD was further exemplified by the review on the topic, including several studies in which older adults were classified as those aged over 50 (Pless Kaiser et al., 2019). Research regarding the severity and course of PTSD over the lifespan remains inconclusive.

The voice of the older person is missing in the current research. To the author's knowledge, no qualitative research on older adult experiences of trauma symptoms has been undertaken. There is a need for qualitative studies to capture rich and nuanced data on how older adults with trauma presentations, experience and manage their symptoms.

Aims and Research Questions

The focus of this research project is to explore how trauma presents in older adults. Given the previous research, attention will be given to exploring the symptoms of avoidance and hyperarousal, including ways these may be experienced differently.

Research questions

1. How do older adults describe and experience their trauma symptoms?
2. What are older adults' experiences of managing their symptoms?
3. Have they noticed a change in their symptoms over time?
4. Have they noticed a change in their coping strategies as they have aged?

Methods

Study design

A qualitative design was employed to explore older adults' experiences of Trauma Symptoms. Due to the exploratory nature of the current research, a qualitative approach using Reflective Thematic Analysis (RTA) was deemed appropriate to preserve rich, detailed narratives vital to understanding the complex aspects of older adults' experiences of trauma. In-depth one-to-one interviews were conducted to explore participants' experience and management of trauma symptoms and whether they have noticed changes in their symptoms and coping strategies over time.

Participants

Recruitment took place between August and December 2025. A purposeful sampling of participants was initially identified by Clinical Psychologists working in NHS Greater Glasgow and Clyde's Older People's Mental Health Services. Participants were selected based on the following criteria: (1) aged 65 and over (consistent with the age threshold used within NHS Older Adult Mental Health Services), (2) has had exposure to an extremely threatening or horrific event or series of events which a clinician deems as continuing to affect their mental health (a formal diagnosis of PTSD is not necessary), (3) can provide written informed consent, (4) have a sufficient level of English to participate in the interview, (5) currently receiving support from a mental health team in NHS GG&C, (6) consent to researcher accessing their clinical notes prior to interview, and (7) if they are currently engaged in ongoing trauma therapy, their clinician supports their participation. Exclusion criteria were as follows: (1) severe cognitive impairment, and (2) current significant suicidal ideation.

Sample size

The target sample size of 6-8 participants was guided by the concept of information power. The concept of information power suggests that the more information the sample holds, relevant to the actual study, the fewer participants needed (Malterud et al., 2016). As this study involves a purposive sample who are sharing experiences rarely described in the literature, this enhances the sample's information power. This sample size was consistent with the suggested recruitment number of 6-10 for reflective thematic analysis (Braun & Clarke, 2013). The project's time scale, as well as recruitment factors, were also considered.

Recruitment procedure

Clinical Psychologists working in NHS Greater Glasgow and Clyde Older People's Mental Health services identified eligible potential participants and provided them with the participant information sheet. Potential participants who wished to take part agreed to have their contact details shared with the Principal Investigator (PI). The PI contacted them to provide any further information required and, if they were still willing to take part, arranged a suitable date and time for the interview. Participants also provided verbal consent to have their clinical notes accessed by the PI prior to the interview to gather information on the nature and number of traumas, and age at which trauma occurred. This was done to focus on the symptoms rather than the trauma itself when conducting the interview.

Data collection

A semi-structured interview schedule was developed by the PI based on relevant literature and following consultation with the Chief Investigator, Field Supervisors, and a researcher with expertise in qualitative research. A draft of the interview schedule was reviewed by experts by experience at the Mental Health Network Greater Glasgow and Clyde. Feedback on wording and question order was incorporated into the final version of the interview schedule (Appendix 2.6).

As well as taking part in interviews, participants completed a standardised PTSD self-assessment tool. The International Trauma Questionnaire (ITQ) is an 18-item self-report measure to assess for ICD-11 PTSD and complex PTSD (CPTSD) and can be used to make a provisional diagnosis of PTSD or CPTSD (Cloitre et al., 2018). Items are rated on a 0–4 scale, with scores ≥2 indicating endorsement of a symptoms. PTSD is assessed through three symptom clusters (re-experiencing, avoidance, and sense of threat), with a provisional diagnosis requiring endorsement of one of two symptoms from the symptom clusters plus functional impairment associated with one cluster. Items include 'Avoiding internal reminders of the experience (for example, thoughts, feelings, or physical sensations)?' and 'Being "super-alert", watchful, or on guard?'.

A provisional CPTSD diagnosis requires the endorsement of one of two symptoms from each of the three PTSD symptoms clusters and one of two symptoms from each of the three

Disturbances in Self-Organization (DSO) clusters (affective dysregulation, negative self-concept, and relational difficulties). Functional impairment must be associated with one PTSD cluster as well as one DSO cluster. DSO items include 'I feel like a failure' and 'I find it hard to stay emotionally close to people'. The ITQ demonstrates acceptable internal validity, with Cronbach's alphas ≥ .77–.79 in a community sample with the exception of the avoidance items which were slightly lower but remained with the good range (α = 0.67)(Cloitre et al., 2018). Participants completed the ITQ in the presence of the PI prior to beginning the interview. Demographic information was collected to obtain age, gender, and ethnicity. This information was used to characterise the sample.

The interview schedule was designed to explore the participant's individual experiences of trauma symptoms, their coping strategies and whether the way they manage their symptoms had changed over time. Open-ended and spontaneous follow-up questions were used to encourage participants to elaborate on their experiences. Participants were also asked about common symptoms that people with trauma histories often experience to help orient them to experiences they might find themselves having. Prior to the interview, participants provided verbal consent for the PI to access their clinical notes to gather information on the nature and number of traumas, and age at which trauma occurred.

Face-to-face individual interviews were conducted by the PI in NHS GG&C clinic rooms, lasting between 48 minutes and 92 minutes. Participants attended the interviews alone. Written consent was obtained to audio record interviews. Recordings were stored on a secure password-protected NHS account on Microsoft Teams and deleted after transcription. The PI transcribed the interviews verbatim, anonymising the transcripts prior to analysis.

Data Analysis

The qualitative data was analysed using reflective thematic analysis (RTA). RTA was deemed suitable given the exploratory nature of the research and the limited theoretical evidence base. To ensure methodological validity, the analysis followed the 6 steps outlined in the seminal paper by Braun and Clarke (2006). Transcripts were read and re-read with the PI noting initial reflections on each transcript. Key features of the data relevant to the research question were coded by the PI using NVivo (Lumivero, 2023). An inductive approach was

taken, with coding driven by participants' accounts rather than by pre-existing theoretical frameworks, resulting in a large number of unique codes. Codes with shared properties were then grouped together or merged into one another. Codes were then grouped together to form provisional themes and reviewed against the data set. An initial thematic map was created to visualise the provisional themes. Theme development was an active, interpretative process which evolved through the analysis and write-up period. Supervision was used in generating themes, naming them, and refining their specifics.

Research reflexivity

The PI was a female clinical psychology doctorate student working in older adult services during the study. Participants were aware that the PI was conducting the research as part of her doctoral work. Two participants were known to the PI prior to the interview, though not recruited directly, which may have affected rapport and interpretation. To mitigate bias, the PI maintained a consistent interview structure and engaged in reflexive journaling, documenting emotional responses to interview content during data collection and analysis. The PI adopted a critical realist position, recognising participants' accounts as genuine expressions of lived experience while acknowledging that their accounts of these experiences are shaped by individual, social, and cultural context.

A trauma-informed approach guided the design of the study. Potential participants were informed, both in the participant information sheet and during an initial phone call, that they would not be asked about the trauma itself during the interview. Instead, participants were asked to consent to the PI accessing their clinical notes so that information on the nature and number of traumas the person experienced could be gathered without requiring them to disclose it directly, and to ensure the PI had appropriate context to respond safely and appropriately during the interview. This approach reflected an awareness of the sensitivity of the interviews and the privilege of hearing participants' stories. Awareness of power dynamics and positionality guided the PI's efforts to ensure transparency and trustworthiness in the research process.

Ethics

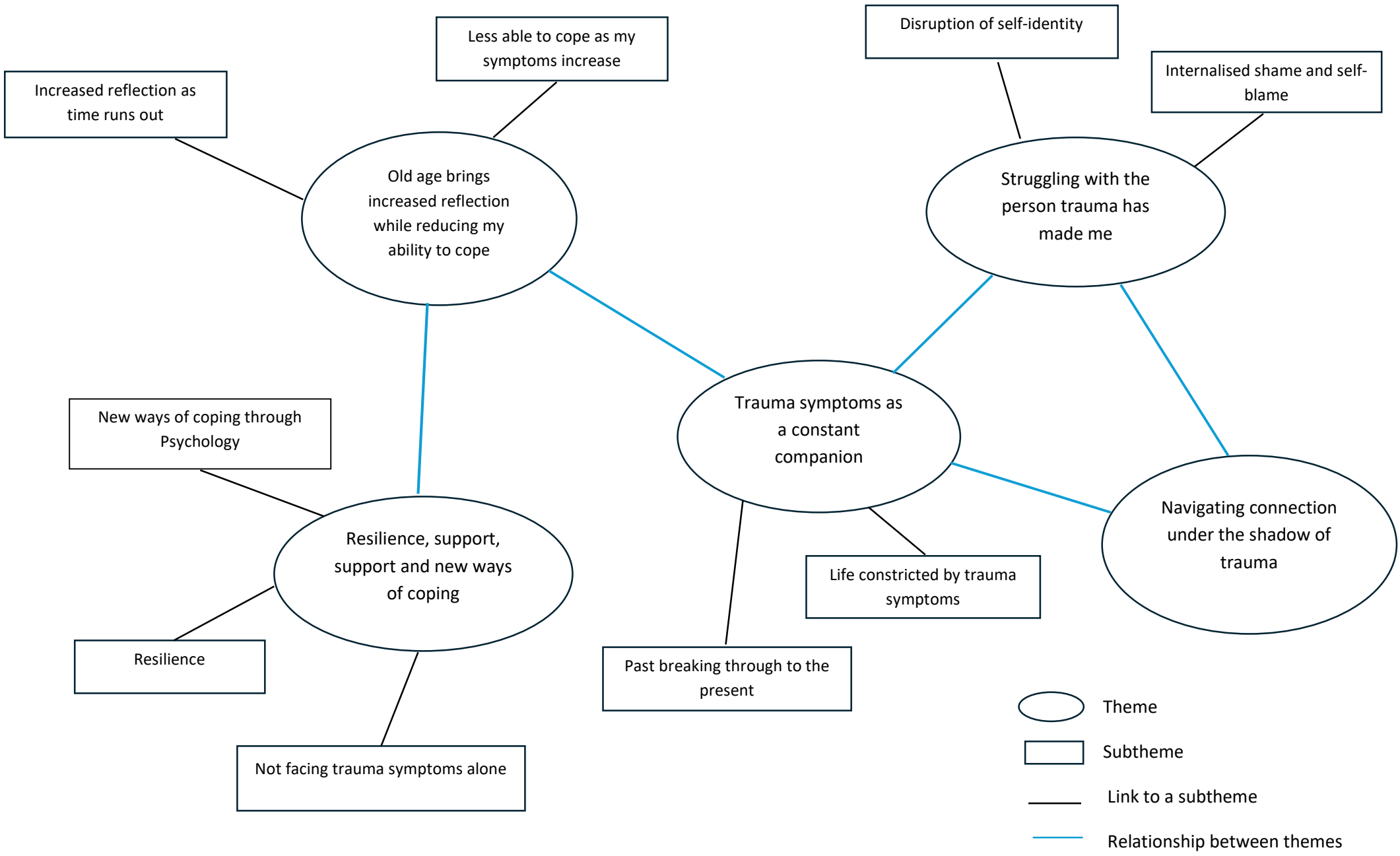
This study was reviewed by the Leicester South Research Ethics Committee, and a favourable opinion was given by the committee (IRAS 350935) on the 24th of April 2025, and the NHS Greater Glasgow and Clyde Research and Innovation Department (UGN25MH092) provided approval on the 13th of May 2025.

Results

Eight participants (four women and four men) were interviewed. Their mean age was 68.75 years (age range: 65-74). Five participants had a CPTSD diagnosis, and one participant had a PTSD diagnosis, given by a Clinical Psychologist. Based on the ITQ, all of the participants met the threshold for a provisional diagnosis of PTSD or CPTSD, with six participants meeting the threshold for a CPTSD diagnosis. The duration of time since the trauma occurred varied for participants, with 50% reporting 1-5 years since the most troubling experience had occurred. Four participants reported it had been 20 years or more, and one participant indicated it had been between 10 and 20 years.

Through a process of reflective thematic analysis, five themes with nine subthemes were generated by the author. The themes are as follows: '*Trauma symptoms as a constant companion', 'Struggling with the person trauma has made me', 'Navigating connection under the shadow of trauma', 'Resilience, support and new ways of coping',* and *'Old age brings increased reflection while taking my ability to cope'.* A thematic map illustrating the themes and their subthemes is presented in Figure 4.

Figure 4: Thematic map



Trauma symptoms as a constant companion

This theme reflects participants' accounts of trauma symptoms being ever-present in their lives, impacting them on a daily basis.

Life constricted by trauma symptoms

Participants spoke about experiencing trauma related symptoms, particularly anxiety and persistent rumination on a *'daily' (P1, P2, P5)* basis. They described how exhausting and overwhelming these experiences were to cope with, with P1 using the word *'phenomenal'* to describe the effort it takes to do basic tasks. All the participants spoke about anxiety and the profound impact it had on their lives, shaping not only how they felt, but also what they felt able to do. They shared that anxiety often felt uncontrollable and persistent, a *'constant panicky feeling'(P1),* even when they were aware that they were objectively safe.

'But my thoughts had my head, the build up to, the unknown. You know what's going to happen? I cannae control any of this, I cannae you know? And what if something happens? What dae I do? […]. I'm creating problems arenae there, only there in my head' (P4)

These experiences lead to increased avoidance and isolation to try and reduce their symptoms. A few participants spoke about wanting to stay at home, that they *'hate going out' (P4)* and will do their best to '*avoid social situations' (P2)*. For some staying at home was framed as a way to avoid triggers, such as people who may bring up the past, or places associated with the trauma. For others, staying at home was a way to manage current distress, offering a sense of safety and control.

'I feel a lot of anxiety if I've got to put myself out of my comfort zone. And out of my comfort zone is out of my house' (P2)

When they did go out, participants used phrases such as *'high alert' (P2)* or '*constant alert' (P1)* to describe how they moved through the world. They described a lack of control, that there '*is always the unknown' (P4)* and the *'fear of it happening again' (P4)*. This sense of hypervigilance made everyday situations feel unsafe and exhausting, further reinforcing patterns of avoidance and social withdrawal.

'I miss nothing, I I see everything that's going on. I'm always on the lookout um..in every scenario I'm in I'm always thinking ahead or a potential problem or danger even'(P5)

Past breaking through to the present

All the participants described experiencing intrusive symptoms in which the past abruptly inserted itself into the present. These unwelcome intrusions came in the form of intrusive thoughts, memories and nightmares. They spoke about intrusive symptoms often occurring at times when they were trying to relax or get to sleep.

'sitting nice and comfortable, enjoying myself and then all of a ding! something something makes me think, you know' (P3)

Many of the participants described experiencing vivid nightmares frequently. One participant described their nightmares as *'unfathomable' (P3)* while another reported that the content was *'beyond belief' (P8)*.

'at least twice a week, waking up, sweating or waking up from the dream feeling awful and sweating' (P7)

Struggling with the person trauma has made me

This theme reflects participants' struggles with maintaining a positive self-identity and how trauma can shape self-understanding.

Disruption of self-identity

Participants described how trauma symptoms had profoundly reshaped their sense of self, often disrupting identities that had been grounded in social connection and community involvement. Many spoke about once seeing themselves as outgoing, confident and engaged, however symptoms such as anxiety, hypervigilance and lack of motivation resulted in withdrawal which slowly eroded this sense of self.

'it changed my whole lifestyle so it did, you know. I was, I don't mean I was jack the lad, but I mean, i was a salesman. I knew everybody. I was good at what I done so. I went from that to a recluse' (P2)

These shifts were not just experienced as an outward change of behaviour but as fundamental change in who they thought of themselves as.

'I've always been somebody that gets involved in things you know. The the helper you know, Mr Joe Public, good guy, you know, and I question that now. I don't want to get involved any longer' (P4)

There was a sense of hopelessness around trauma symptoms. Participants spoke about how their mood had been impacted in the aftermath of the trauma.

'there's been a change in my mood and I try to….. be jolly. But you know I find that I'm more sarcastic' (P4)

Some participants had experienced childhood trauma and described how more recent trauma had brought back emotions they experienced as children and had caused them to doubt their long-held understandings of themselves.

'I've kinda started to think again that, you're not this person. You know you're that wee boy in a corner, and if anybody wants to abuse you, they'll abuse you. And what you're going to do about it. That's nothing you can do about it because you're a weakling. You're hopeless. You're worthless. Nothing you can do' (P4)

<u>Internalised shame and self-blame</u>

Many of the participants described experiencing embarrassment and shame about the visibility and unpredictability of their trauma symptoms, viewing their experience through a lens of personal failure to '*pull themselves together' (P1)* rather than common symptoms experienced following trauma. During the interview, participants often laughed in a self-condescending way when describing how seemingly innocuous things, such as music and a knock on the door, could trigger them.

'look at me (crying). I'm sitting here and there is sweat running down my back and my clothes are sticking to me and I'm just on the verge of of I'm having to work for being just…talking and it's it's embarrassing, to be in this state. I mean it just is' (P1)

A smaller subset of participants conveyed a sense of internalisation of responsibility for the trauma they had experienced. This was particularly evident in participants who experienced abuse within relationships, including romantic partnerships or parental relationships.

'It's it's hard to it's hard and I don't know I don't know. What my father done to me, I deserved. Maybe not to that extreme, but when my dad done that to me, I deserved it.' (P3)

This internalised blame appeared to feed into a cyclical pattern of shame about both the abuse and the symptoms that followed, in which distress around symptoms was interpreted as further evidence of personal failure.

'it affects it quite a bit because then I think I can't cope and therefore- so I've got to kind of give myself a good shake and and say, you know, you need to get rid of this. I'm not good at being weak. I think I've always had to be strong am so the moment I think I'm weak at all, I mean, I don't want anybody feeling sorry for me either' (P6)

Navigating connection under the shadow of trauma

This theme captures participants' struggles to navigate relationships following the experience of trauma. Many participants described feeling judged for their mental health difficulties, recounting experiences of feeling misunderstood or criticised by people in their lives. They described receiving unsolicited advice from people who *'don't get it' (P8)* and being told to simply *'pull themselves together' (P1),* reinforcing a sense of shame or embarrassment around their symptoms, leading towards participants *'hiding' (P1, P3)* their difficulties or withdrawing.

Some participants who had experienced trauma within relationships reflected on the enduring impact this had on their ability to connect with others. They spoke about constantly questioning other people's intentions, even those closest to them, because they '*were too trusting before' (P6).*

'I've always got to think about it. And. And that's like everybody, you know, my sisters and all that as well'(P6)

Some participants noted how attitudes toward mental health have shifted over time, contrasting previous views of mental health as a taboo topic, rarely spoken about in the UK, to the shift towards increased openness about mental health.

'People are now looking at it more, but back…It was always seen as oh the Americans have got shrinks. Do you know what I mean? It wasn't a thing that, it's not a British thing'(P8)

However, despite reflecting on this shift in the culture, the participants continued to manage their symptoms with limited support.

Due to trauma symptoms, participants worried that they were not meeting relational expectations or fulfilling their roles as parents or grandparents.

'I hate thinking, Oh, no, the kids are coming around. I'd much rather be thinking, oh, kids are coming around, that's going to be good.'(P7)

Some participants spoke about not wanting to be a *'burden' (P3, P8)* on their children, expressing that although their children were aware that they were struggling with their mental health they did not share it explicitly with them, creating a distance between them and their children.

I don't want to burden them, you know. I'm a great one for 'how you today Dad?' 'I'm fine' (P2)

A small subset of participants spoke about feeling let down by their children. They described how their children had not offered the support or care they expected in their time of need.

She said, 'oh, yeah mum, you're amazing how you've come on since you were ill' and I wanted to say, 'what do you know?' (P8)

Difficult family dynamics were particularly prevalent in participants whose children had also experienced trauma through witnessing domestic violence or parental alcoholism.

Resilience, support, and new ways of coping

This theme captures participants' resilience in the face of trauma symptoms, drawing on their support systems and engaging in psychology to manage their symptoms.

Resilience despite trauma

Many of the participants recognised their inner strength to *'keep going' (P5)* acknowledging that the road to recovery had been *'a hard journey'* (P2) and that others would have *'folded by now' (P5).*

'my resilience would come back, you know, and think well, no, no, I'm not. I'm not going to be cowed anymore, for a better way of putting it and started to fight back' (P5)

They described overcoming the traumatic experiences *'the bad things hadnae broke me' (P4)* and coming out with an increased sense of resilience.

'I know that I can do anything' (P6)

Not facing trauma symptoms alone

Participants consistently described their psychology sessions as rare places they felt safe and comfortable to share their vulnerabilities in. They spoke about feeling *'supported' (P1)* and comfortable in their sessions to share their difficulties with the knowledge that their clinician was *'not judging you' (P4).*

'this is a wee harbour. I can talk about things in here I I don't know you. And you know I'm here baring my soul, you know? I might as well be taking down my trousers and showing you my bum. Do you know?. But I've needed that' (P4)

Alongside professional support, six of the participants described having one person in their life that was a source of constant support and encouragement for them. This was most commonly a life partner but for some it was one of their children. They described knowing that no matter how bad things would get in terms of their mental health, this person would be there to support them, despite often not fully understanding their trauma symptoms.

'*It doesn't matter what happens now he's he's always there. And in a way that's that that's helped give me the courage to say right OK I can't go on like this' (P1)*

For many participants, their support figure served as an emotional anchor from which they felt safe reaching out and seeking professional support, knowing that this person had their back should they feel overwhelmed.

New ways of coping through psychology

All of the participants in this study were or had recently been supported by a Clinical Psychologist. As well as describing psychology as emotionally supportive, several participants spoke about how psychology had aided their understanding of themselves and changed how they view things.

'thanks to [psychologist] I see things different' (P3).

Participants described how engaging with psychological support introduced them to new coping skills. For many, this was the first time they had been offered structured strategies to manage overwhelming emotions, intrusive memories or long-standing patterns of avoidance.

'I'm getting a bit better, doing the mindfulness and the deep breathing and things like that and that sort of helps me a bit' (P6)

Many of the participants reflected on how these techniques helped them to interrupt cycles of anxiety or self-blame, by challenging the thoughts or responding to them differently.

'Now I tend to challenge them as opposed to just avoid it so much.' (P1)

Some of the participants described move towards acceptance, acknowledging that they would *'never get rid of anxiety' (P3)* but that psychology had supported them to respond differently to their symptoms, while other participants were still striving to reduce their anxiety more directly, reflecting perhaps the different stages participants were in their therapeutic journeys. P4 described that it was the combination of the support of their partner and engagement in psychology that promoted a shift in how he viewed his difficulties.

'I started seeing [therapist] then, and I think between the two of them then that I had got to that stage where, Acceptance. Cannae change it' (P4)

Old age brings increased reflection while reducing my ability to cope

This theme captures participants' description of increased reflection with ageing, which forced them to confront the negative impact trauma symptoms had on their lives. This,

coupled with an increased awareness of their physical vulnerability and mortality, appeared to harm their perception of their ability to cope with trauma symptoms.

Increased reflection as time runs out

Participants highlighted a sense of increased reflection as they aged. Reasons for this varied, with some participants citing that they previously did not have time to think about what had happened to them due to work or caring responsibilities, or that they had suppressed negative thoughts and emotions in the past.

'I didn't realise how much out of control I'd got until now when I've actually retired and thinking about it' (P6)

Others spoke about an increased sense of their own mortality as they aged, which had prompted self-reflection on their lives so far. For many this increased reflection brought a sense of grief and regret for the negative impact trauma symptoms had on their lives.

'I'm not at the end, but I'm getting there [..] I'm not managing them as well because […] I'm reflecting more and more of what happened to me, I'm feeling very sorry for myself' (P5)

Some of the participants described a sense of realisation that time was running out for them and they may never *'get over' (P4, P5)* what had happened to them. They described feeling trapped in their trauma symptoms, that their lives were *'stagnating' (P2)* or had been *'ruined' (P4)* by the ongoing impact of the trauma.

'It's becoming too late to start feeling good because I I haven't I haven't sorted it out in my mind yet. I haven't found solace yet, you know? Yeah. And it's getting quite late.' (P5)

Less able to cope as my symptoms increase

Most participants felt that their symptoms had intensified with age or that their ability to cope with symptoms had diminished. However, there is a degree of tension within this subtheme, with some participants reflecting retrospectively, prior to engagement with psychology and describing subsequent improvements in coping, while others described current worsening symptoms despite ongoing engagement with psychology.

‘I've said that to [psychologist] many times, you know, it's it's ah. All my problems seem to be getting worse as I get older’ (P5)

Several participants spoke about a new and unsettling sense of vulnerability as they aged and how this impacted on their sense of safety. They described feeling less able to physically protect themselves as they aged, which in turn intensified their anxiety and sense of being unsafe in everyday situations.

‘Just as I get older, I'm becoming more anxious and maybe the part of that's because I'm I'm maybe not in a position to help myself as I get older’ (P5)

Participants reflected on how this shift in physical confidence affected their ability to cope, making previously manageable symptoms feel overwhelming.

Discussion

This study sought to explore older adults' trauma symptoms: how they were experienced, how they were managed, and whether they perceived changes in symptoms and coping over time. Across the five themes identified, participants' accounts suggested that trauma symptoms were not something that resolved or lessened with age, but rather something that they continued to reckon with as they aged**.**

How do older adults describe and experience their trauma symptoms?

Throughout the interviews, participants described a range of direct experiences arising from trauma (including anxiety, intrusive thoughts, nightmares and hypervigilance) which are in keeping with the ICD-11 conceptualisation of PTSD (WHO, 2020). Nightmares were particularly distressing and seemed to be the one intrusive symptom that avoidance strategies did not appear to mitigate. It may be that the limited sense of control participants maintained over their symptoms during the day was less sustained at night. Maercker (2021) posited that posttraumatic nightmares in older adults 'waxed and waned' rather than following a uniform pattern of decline, as suggested by existing conceptualisation of PTSD in older people (WHO, 2020). Nightmares may represent a particularly persistent symptom for older adults, continuing to intrude despite the passage of time and the coping strategies employed during the day.

Participant descriptions extended beyond diagnostic symptoms, to how trauma symptoms permeated their lives, impacting their relationships, and their fundamental sense of self. The prominence of identity disruption and relational strain in their narratives is perhaps unsurprising, as many of the participants had an existing formal CPTSD diagnosis. Given that CPTSD is more strongly associated with early developmental trauma, cumulative or repeated victimisation, and higher levels of comorbidity and functional impairment than PTSD (McGinty et al., 2021), it is plausible that CPTSD symptoms may persist into later life or even become more salient as individuals age, particularly when long-standing relational or identity-based difficulties are brought into sharper focus by age-related transitions. However, given the limited and still-emerging evidence base, conclusions about CPTSD in later life must remain cautious.

What are older adults' experiences of managing their symptoms?

The presence or absence of a connection with others often shaped management of trauma symptoms. Most participants described one central supportive relationship they drew on. This narrowing towards one key relationship, rather than a broader network may reflect Socioemotional Selectivity Theory (Carstensen, 1992), in which ageing prompts more selectivity in relationships, having fewer but more meaningful relationships. At the same time, participants' relationships with others were not uniformly experienced as supportive. Long-standing behaviours of keeping their mental health difficulties hidden were reinforced by shame about their symptoms, and fears of negative judgement from others. Our findings build on the previous evidence base, which suggests that stigma is one of the main barriers to older adults seeking support for their mental health (Elshaikh et al., 2023).

This sense of judgement was not always external. Some participants also expressed self-blame in relation to the abuse they had experienced. Given that most participants met the criteria for CPTSD, this self-blame may be better understood as an expression of the negative self-concept cluster of CPTSD (WHO, 2020), rather than as a symptom that falls outside diagnostic recognition altogether. Despite expressing self-blame, many participants also recognised their own resilience in continuing to manage their trauma symptoms.

Alongside relational coping strategies, all participants spoke about engaging in avoidance to manage their anxiety and hypervigilance, particularly remaining at home and limiting exposure to situations perceived as anxiety-provoking or threatening. Taken together, these contributed to persistent patterns of under-reporting and delayed help-seeking, often resulting in long periods of managing trauma symptoms privately rather than accessing support.

Have older adults noticed a change in their symptoms over time?

Rather than describing symptoms as resolving or diminishing with age or distance from the traumatic event, participants felt that their symptoms became more difficult to manage in later life. This challenges the assumption that trauma symptoms decline with age (WHO, 2020). While this pattern may characterise some population-level samples, it may not reflect the experiences of older adults who present to mental health services. Prevalence estimates may obscure the lived reality of many older adults living with trauma symptoms.

They may reflect delayed help-seeking rather than an actual reduction in symptom burden among older adults.

Several participants spoke about a new and unsettling sense of physical vulnerability as they aged and how this intensified their anxiety and sense of being unsafe in everyday situations. Previous research found that older adults with PTSD experience a higher frequency of hyperarousal symptoms compared with average-age adults with PTSD (Rutherford et al., 2021). Although this finding is based on comparisons between age groups rather than changes over time, it lends some support to the current findings. Many participants had been highly successful at avoiding internal reminders of their trauma in early life but described this becoming more difficult as they aged. This aligns with Pless Kaiser et al.'s (2019) observation that avoidance is less prominent in older veterans presenting for treatment, potentially due to the roles and structures that supported successful avoidance being less available to them. This suggests a distinction between external and internal avoidance in later life, with participants continuing to rely on avoiding external triggers, such as staying at home, even while the avoidance of internal triggers becomes harder to maintain.

For half of the participants, a more recent trauma had been the catalyst for their contact with mental health services; however, they had experienced earlier traumas that shaped their emotional, relational and self-identities for many decades. Our findings add to previous research which found that additional trauma has a role in the reactivation of traumatic memories, relating to an earlier trauma, particularly impacting the 're-experiencing' symptom cluster (Fossion et al., 2015).

Have older adults noticed a change in their coping strategies as they have aged?

Participants described engaging in increased reflection as they aged, often linked to reduced responsibilities and a growing awareness of their own mortality, allowing long-standing traumatic experiences previously managed through avoidance to come to the fore. This can be viewed through the theoretical lens of Butler's (1963) concept of life review, which suggests that individuals undergo a natural process of self-reflection and re-evaluation of past events towards the end of their lives. If the life review is more negative, the person

may feel unprepared for death due to too many regrets and may fail to resolve the final stage of Erikson's (1950) developmental model, integrity versus despair.

However, the extent to which this shift reflects ageing rather than therapeutic engagement remains unclear, particularly as all participants were engaged in psychology, often for the first time in later life. At the same time, a shift in reflection itself may have prompted help-seeking rather than just resulting from it. Later life may have created the conditions under which participants became more willing to reflect on their past and seek support, with engagement in psychology further deepening their reflective process.

Roughly half of participants described this shift as adaptive; increased reflection and engagement in therapy fostered new coping strategies and recognition of their own resilience, echoing posttraumatic growth, which refers to a positive psychological change following adversity (Tedeschi & Calhoun, 2004). For others, it appeared to deepen their sense of grief rather than resolve it. Although ICD-11 does not provide age-specific descriptions of CPTSD, some authors have suggested that presentation in older adults may include profound sorrow about the long-term impact of trauma (Rusmir et al., 2024).

Clinical implications

These findings highlight the need for services to recognise how earlier trauma may remain hidden until later-life events reactivate or compound it. Several participants presented to services following a recent trauma, only for an earlier, unaddressed trauma to emerge as central to their presentation. This underscores the importance of routine, sensitive enquiry about lifetime trauma exposure. The Scottish Government launched the National Trauma Transformation Programme which aims to create a trauma-informed Scottish workforce by providing evidence-based trauma training resources (Scottish Government, 2024). Guidance on trauma-informed practice specifically for older adults is beginning to emerge, for example, NHS Education for Scotland (2023) has recently produced resources for the dementia care workforce. While this is a step in a positive direction, this guidance is limited to older adults with cognitive changes and does not address the needs of older adults more broadly. There remains a need for trauma-informed guidance that reflects the needs of the wider older adult population, beyond dementia-specific care contexts.

Participants' accounts reflected deterioration and adaptation, rather than linear recovery. This is something clinicians should be aware of prior to engaging older adults in trauma work. Notably, NICE (2022) guidelines for PTSD treatment do not offer age-specific recommendations, leaving a gap between guidance and this population's distinct needs.

Finally, stigma remains a significant barrier to older adults accessing support. Increased mental health literacy in older adults has been shown to moderate the negative impact of self-stigma on access to mental health support (Mackenzie et al., 2025). This points to the impact of psychoeducation, the need for continued promotion of older people's mental health services, and the embedding of trauma-informed approaches not only in mental health services, but also across GPs and community-based support services.

Strengths and limitations

In-depth interviews provided detailed narratives on how older adults experience trauma symptoms, how they manage their symptoms, and perceived changes in symptoms and coping over time. Contributions were from both men and women and varied widely in terms of trauma experienced, age at which the trauma occurred, and the time elapsed from the trauma. This contrasts with the current body of research, which focuses principally on male veteran experiences and is typically quantitative in nature (E. H. Davison et al., 2006; Durai et al., 2011; Frueh et al., 2014; Pless Kaiser et al., 2019). This data provides a perspective containing more diversity of experience than is typically seen in the literature.

Participants were not required to have a formal PTSD diagnosis to take part. Given evidence that PTSD may present differently and be less readily recognised or diagnosed in older adults (Pless Kaiser et al., 2019), this gave the study the opportunity to capture a broader and potentially more representative range of older adults' experiences of trauma than a diagnosis-dependent sample would have permitted. Notably, many participants met the criteria for CPTSD rather than PTSD. This means the present findings cannot speak directly to the experience of older adults with strictly PTSD presentations; however, it highlights that CPTSD may be more common in older adults than is currently recognised, which carries clinical implications.

All participants were engaged in psychology at the time of recruitment. The experiences of older adults with trauma histories who are not engaged in psychology, or do not wish to access psychological support, may differ substantially from those captured here.

Furthermore. the study sample lacks diversity, as all participants identified as white. This limits the transferability of the findings to older adults from minority backgrounds, for whom cultural beliefs about trauma, mental health, and help-seeking may vary considerably, and who are also known to engage differently with mental health services (Jimenez et al., 2012). Researchers argue that disparities in PTSD outcomes among racial and ethnic minority groups are shaped primarily by differential exposure to structural stressors, such as discrimination, rather than by race or ethnicity itself (Asnaani & Hall-Clark, 2017; Cruz-Gonzalez et al., 2023). The absence of racially and ethnically diverse voices in the current study constrains the extent to which the findings can speak to the broader landscape of trauma in later life. Future research would benefit from community-based recruitment strategies, such as working with trusted community organisations and charities, to reach a more ethnically diverse sample and to capture the experiences of older adults not currently accessing formal support.

This study employed the ITQ, which has not been validated specifically for use with older adults; however, it appears to be the only validated self-report measure of ICD-11 PTSD and CPTSD currently available (Havermans et al., 2025).

Future research

Future research should aim to include the experiences of older adults with trauma presentations that this study has failed to reach. For example, those from minority groups who may have different views on and experiences of trauma symptoms, and those who have not accessed or have chosen not to access psychological support. All participants included in this study were engaged in psychology, and the accounts captured here may reflect a particular subgroup of older adults with trauma histories, namely those who are engaged in trauma work aimed at targeting their symptoms and coping strategies, rather than the wider population of older adults living with trauma symptoms. This could involve recruiting participants from primary care services or through community organisations.

Despite the non-diagnostic criteria of this study, most participants met the probable criteria for CPTSD on the ITQ, alongside several already holding a pre-existing clinical diagnosis of CPTSD. Research on CPTSD in older adults remains limited (McGinty et al., 2021; Rusmir et al., 2024). Future research should examine how CPTSD presents in older adults, including whether the current diagnostic criteria adequately capture the ways in which disturbances in self-organisation symptoms may manifest across the lifespan, for example in the context of retirement or physical health decline.

Conclusions

This study offers novel insight into how older adults experience trauma symptoms, how they manage their symptoms, and perceived changes in symptoms and coping over time. By centring older adults' accounts, it addresses some of the underlying 'why' questions often left unanswered by quantitative research. Participants' accounts reflected both deterioration and adaptation. Deterioration was linked to age-related transitions that reduced access to avoidance strategies, alongside later-life vulnerabilities that compounded distress. Adaptation, meanwhile, was supported by relationships and psychological input. Increased reflection in later life was a double-edged process, moving some participants towards integrity while deepening grief for others. Although further work is needed with more diverse populations, these findings challenge assumptions that trauma symptoms fade with time and instead highlight their ongoing, dynamic nature in later life.

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Asnaani, A., & Hall-Clark, B. (2017). Recent developments in understanding ethnocultural and race differences in trauma exposure and PTSD. In *Current Opinion in Psychology* (Vol. 14, pp. 96–101). Elsevier B.V. https://doi.org/10.1016/j.copsyc.2016.12.005

Averill, P. M., & Beck, J. G. (2000). Posttraumatic Stress Disorder in Older Adults: A Conceptual Review. In *Journal of Anxiety Disorders* (Vol. 14, Number 2).

Blake, D. D., Weathers, F. W., Nagy, L. M., Kaloupek, D. G., Gusman, F. D., Charney, D. S., & Keane, T. M. (1995). The development of a Clinician-Administered PTSD Scale. *Journal of Traumatic Stress, 8*(1), 75–90. https://doi.org/10.1002/jts.2490080106

Böttche, M., Pietrzak, R. H., Kuwert, P., & Knaevelsrud, C. (2015). Typologies of posttraumatic stress disorder in treatment-seeking older adults. *International Psychogeriatrics*, *27*(3), 501–509. https://doi.org/10.1017/S1041610214002026

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Butler, R. N. (1963). *The life review: An interpretation of reminiscence in the aged.* Psychiatry, 26(1), 65–76.

Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). *Taking time seriously: A theory of socioemotional selectivity.* American Psychologist, 54(3), 165–181.

Cloitre, M., Shevlin, M., Brewin, C. R., Bisson, J. I., Roberts, N. P., Maercker, A., Karatzias, T., & Hyland, P. (2018). The International Trauma Questionnaire: development of a self-report measure of ICD-11 PTSD and complex PTSD. *Acta Psychiatrica Scandinavica*, *138*(6), 536–546. https://doi.org/10.1111/acps.12956

Cruz-Gonzalez, M., Alegría, M., Palmieri, P. A., Spain, D. A., Barlow, M. R., Shieh, L., Williams, M., Srirangam, P., & Carlson, E. B. (2023). Racial/ethnic differences in acute and longer-term posttraumatic symptoms following traumatic injury or illness. *Psychological Medicine*, *53*(11), 5099–5108. https://doi.org/10.1017/S0033291722002112

Culp, B. L., Roden-Foreman, J. W., Thomas, E. V., McShan, E. E., Bennett, M. M., Martin, K. R., Powers, M. B., Foreman, M. L., Petrey, L. B., & Warren, A. M. (2019). Better with age? A comparison of geriatric and non-geriatric trauma patients' psychological outcomes 6 months post-injury. *Cognitive Behaviour Therapy*, *48*(5), 406–418. https://doi.org/10.1080/16506073.2018.1533578

Davison, E. H., Pless, A. P., Gugliucci, M. R., King, L. A., King, D. W., Salgado, D. M., Spiro, A., & Bachrach, P. (2006). Late-life emergence of early-life trauma: The phenomenon of late-onset stress symptomatology among aging combat veterans. *Research on Aging*, *28*(1), 84–114. https://doi.org/10.1177/0164027505281560

Durai, U. N. B., Chopra, M. P., Coakley, E., Llorente, M. D., Kirchner, J. E., Cook, J. M., & Levkoff, S. E. (2011). Exposure to trauma and posttraumatic stress disorder symptoms in older veterans attending primary care: Comorbid conditions and self-rated health status. *Journal of the American Geriatrics Society*, *59*(6), 1087–1092. https://doi.org/10.1111/j.1532-5415.2011.03407.x

Elshaikh, U., Sheik, R., Saeed, R. K. M., Chivese, T., & Alsayed Hassan, D. (2023). Barriers and facilitators of older adults for professional mental health help-seeking: a systematic review. *BMC Geriatrics*, *23*(1). https://doi.org/10.1186/s12877-023-04229-x

Erikson, E. H. (1950). *Childhood and society*. W. W. Norton & Company.

Fossion, P., Leys, C., Kempenaers, C., Braun, S., Verbanck, P., & Linkowski, P. (2015). Beware of multiple traumas in PTSD assessment: The role of reactivation mechanism in intrusive and hyper-arousal symptoms. *Aging and Mental Health*, *19*(3), 258–263. https://doi.org/10.1080/13607863.2014.924901

Fox, R., & Hons, B. A. (. (2020). *An Evaluation of the Structure, Comorbidity, and Correlates of Posttraumatic Stress Responses in Older Adults Across Multiple National Samples*.

Frueh, B. C., Grubaugh, A. L., Acierno, R., Elhai, J. D., Cain, G., Magruder, K. M., & Frueh, C. (2014). *Age Differences in Posttraumatic Stress Disorder, Psychiatric Disorders, and Healthcare Service Use Among Veterans in Veterans Affairs Primary Care Clinics*.

Glaesmer, H., Braehler, E., Riedel-Heller, S. G., Freyberger, H. J., & Kuwert, P. (2011). The association of traumatic experiences and posttraumatic stress disorder with health care utilization in the elderly - a German population based study. *General Hospital Psychiatry*, *33*(2), 177–184. https://doi.org/10.1016/j.genhosppsych.2010.12.006

Glück, T. M., Knefel, M., Tran, U. S., & Lueger-Schuster, B. (2016). PTSD in ICD-10 and proposed ICD-11 in elderly with childhood trauma: Prevalence, factor structure, and symptom profiles. *European Journal of Psychotraumatology*, *7*, 1–9. https://doi.org/10.3402/ejpt.v7.29700

Havermans, D. C. D., Coeur, E. M. N., Jiaqing, O., Rippey, C. S., Cook, J. M., Olff, M., Hoeboer, C., Sobczak, S., & Lawrence, K. A. (2025). The diagnostic accuracy of PTSD assessment instruments used in older adults: a systematic review. In *European Journal of Psychotraumatology* (Vol. 16, Number 1). Taylor and Francis Ltd. https://doi.org/10.1080/20008066.2025.2498191

Jimenez, D. E., Bartels, S. J., Cardenas, V., Dhaliwal, S. S., & Alegría, M. (2012). Cultural beliefs and mental health treatment preferences of ethnically diverse older adult consumers in primary care. *American Journal of Geriatric Psychiatry*, *20*(6), 533–542. https://doi.org/10.1097/JGP.0b013e318227f876

Lumivero. (2023). *NVivo* (Version 14) [Computer software]. https://lumivero.com/products/nvivo/

Lunney, C. A., Schnurr, P. P., & Cook, J. M. (2014). Comparison of Clinician- and Self-Assessments of Posttraumatic Stress Symptoms in Older Versus Younger Veterans. *Journal of Traumatic Stress*, *27*(2), 144–151. https://doi.org/10.1002/jts.21908

Maccarrone, J., Stripling, A., Iannucci, J., & Nierenberg, B. (2021). Exposure to trauma, PTSD and persistent pain in older adults: A systematic review. In *Aggression and Violent Behavior* (Vol. 57). Elsevier Ltd. https://doi.org/10.1016/j.avb.2020.101488

Maercker, A. (2021). Need for Age-Appropriate Diagnostic Criteria for PTSD. In *GeroPsych: The Journal of Gerontopsychology and Geriatric Psychiatry* (Vol. 34, Number 4, pp. 213–220). Hogrefe Publishing GmbH. https://doi.org/10.1024/1662-9647/a000260

Mackenzie, C. S., Krook, M. A., Murphy, D. J., & Rapaport, L. elle. (2025). Mental Health Literacy Reduces the Impact of Internalized Stigma on Older Adults' Attitudes and Intentions to Seek Mental Health Services. *Clinical Gerontologist*, *48*(2), 299–311. https://doi.org/10.1080/07317115.2024.2408762

Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample Size in Qualitative Interview Studies: Guided by Information Power. *Qualitative Health Research*, *26*(13), 1753–1760. https://doi.org/10.1177/1049732315617444

McGinty, G., Fox, R., Ben-Ezra, M., Cloitre, M., Karatzias, T., Shevlin, M., & Hyland, P. (2021). Sex and age differences in ICD-11 PTSD and complex PTSD: An analysis of four general population samples. *European Psychiatry*, *64*(1). https://doi.org/10.1192/j.eurpsy.2021.2239

National Institute for Health and Care Excellence. (2015). *Older people: independence and mental wellbeing (NG32).* https://www.nice.org.uk/guidance/ng32

NHS Education for Scotland. (2023). *New tools for trauma-informed practice in dementia care*. NHS Education for Scotland. https://www.nes.scot.nhs.uk/nes-current/new-tools-for-trauma-informed-practice-in-dementia-care/

Ogle, C. M., & Rubin, D. C. (2013). The Impact of the Developmental Timing of Trauma Exposure on PTSD Symptoms and Psychosocial Functioning Among Older Adults. *Developmental Psychology*. https://doi.org/10.1037/a0031985.supp

Ogle, C. M., Rubin, D. C., & Siegler, I. C. (2016). Accounting for posttraumatic stress disorder symptom severity with pre-and posttrauma measures: A longitudinal study of older adults. *Clinical Psychological Science*, *4*(2), 272–286. https://doi.org/10.1177/2167702615583227

Pless Kaiser, A., Cook, J. M., Glick, D. M., & Moye, J. (2019). Posttraumatic Stress Disorder in Older Adults: A Conceptual Review. In *Clinical Gerontologist* (Vol. 42, Number 4, pp. 359–376). Routledge. https://doi.org/10.1080/07317115.2018.1539801

Read, J., Harper, D., Tucker, I., & Kennedy, A. (2018). Do adult mental health services identify child abuse and neglect? A systematic review. In *International Journal of Mental Health*

Nursing (Vol. 27, Number 1, pp. 7–19). Blackwell Publishing. https://doi.org/10.1111/inm.12369

Rusmir, M., Rohner, S. L., Maercker, A., Salas Castillo, A. N., & Thoma, M. V. (2024). Predictors and (in-)stability of ICD-11 complex posttraumatic stress disorder in older adults: findings from a longitudinal study in Switzerland. *European Journal of Psychotraumatology*, *15*(1). https://doi.org/10.1080/20008066.2023.2299618

Rutherford, B. R., Zilcha-Mano, S., Chrisanthopolous, M., Salzman, C., Zhu, C., Cimino, N., Yehuda, R., Neria, Y., & Roose, S. P. (2021). Symptom profiles and treatment status of older adults with chronic post-traumatic stress disorder. *International Journal of Geriatric Psychiatry*, *36*(8), 1216–1222. https://doi.org/10.1002/gps.5514

Scottish Government. (2024). *Trauma-informed workforce and services*. https://www.gov.scot/publications/psychological-trauma-and-adversity/pages/workforce-and-services/

Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic Growth: Conceptual Foundations and Empirical Evidence. In *Psychological Inquiry* (Vol. 15, Number 1, pp. 1–18). Routledge. https://doi.org/10.1207/s15327965pli1501_01

Weathers, F.W., Blake, D.D., Schnurr, P.P., Kaloupek, D.G., Marx, B.P., & Keane, T.M. (2013). *The Clinician-Administered PTSD Scale for DSM-5 (CAPS-5)*. [Assessment] Available from www.ptsd.va.gov.

World Health Organization. (2025, October 1). *Ageing and health*. https://www.who.int/news-room/fact-sheets/detail/ageing-and-health

World Health Organization. (2019). *International statistical classification of diseases and related health problems* (11th ed.). https://icd.who.int/

World Health Organization. (2020). Diagnostic guidelines for disorders for mental, behavioural or neurodevelopmental disorders,section on disorders specifically associated with stress, (eds.M. First & G. Reed).

Yehuda, R., Schmeidler, J., Labinsky, E., Bell, A., Morris, A., Zemelman, S., & Grossman, R. A. (2009). Ten-year follow-up study of PTSD diagnosis, symptom severity and psychosocial indices in aging holocaust survivors. *Acta Psychiatrica Scandinavica*, *119*(1), 25–34. https://doi.org/10.1111/j.1600-0447.2008.01248.x

Appendices

Appendices for Systematic Review

Appendix 1.1: PRISMA Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	p.6
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	p.7
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	p.8-10
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	p.10
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	p.11
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	p.12
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	p.77-81
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	p.12-15
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	p.12-15
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	p.13
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	p.13
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	p.14
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	p.14-15

Section and Topic	Item #	Checklist item	Location where item is reported
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	p.12-13
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	p.12-13
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	p.13
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	p.14-15
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	p.14-15
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	p.14-15
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	p.14
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	n/a
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	p.16-19
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	p.17
Study characteristics	17	Cite each included study and present its characteristics.	p.18-20
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	p.23-34
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	p.27
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	p.26
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	p.27-29
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	p.27-29
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	p.27-29
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	p.26
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	n/a

Section and Topic	Item #	Checklist item	Location where item is reported
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	p.30-32
	23b	Discuss any limitations of the evidence included in the review.	p.33-34
	23c	Discuss any limitations of the review processes used.	p.33-34
	23d	Discuss implications of the results for practice, policy, and future research.	p.33-34
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	p.11
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	p.11
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	n/a
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	p.6
Competing interests	26	Declare any competing interests of review authors.	p.6
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	n/a

From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71. This work is licensed under CC BY 4.0. To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/

Appendix 1.2: Search strategy

Conducted on 21st of January 2026

PubMED

1. Acceptance and commitment [Mesh terms]
2. ("acceptance and commitment therapy"[title/abstract] OR “ACT” [title/abstract] OR "psychological health"[title/abstract] OR "mental health"[title/abstract] OR “openness” [title/abstract] OR “awareness”[title/abstract] OR "committed action"[title/abstract] OR "third wave"[title/abstract])
3. #1 OR #2
4. Aged [Mesh term]
5. (“Older adult*”[title/abstract] OR “Older people” [title/abstract] OR “elderly” [title/abstract] OR “geropsychology” [title/abstract] OR “late* life” [title/abstract] OR “aging” [title/abstract] OR “Gerontology” [title/abstract] OR “Geriatrics” [title/abstract] OR “aging population"[title/abstract] OR “seniors” [title/abstract]
6. #4 OR #5
7. “psychological flexibility”[title/abstract] OR “psychological inflexibility” [title/abstract] OR “experiential avoidance”[title/abstract]
8. #3 AND #6 AND #7

PsycINFO (EBSCOhost)

1. DE “acceptance and commitment therapy”
2. TI ("acceptance and commitment therapy" OR “ACT” OR "psychological health" OR "mental health" OR “openness” OR “awareness” OR "committed action" OR "third wave") OR AB ("acceptance and commitment therapy" OR “ACT” OR "psychological health" OR "mental health" OR “openness” OR “awareness” OR "committed action" OR "third wave") OR KW ("acceptance and commitment therapy" OR “ACT” OR

"psychological health" OR "mental health" OR “openness” OR “awareness” OR "committed action" OR "third wave")

3. #1 OR #2
4. DE “aged”
5. TI (“Older adult*” OR “Older people” OR “elderly” OR “geropsychology” OR “late* life” OR “aging” or “Gerontology” OR “Geriatric*” OR “aging population" OR “senior*”) OR AB (“Older adult*” OR “Older people” OR “elderly” OR “geropsychology” OR “late* life” OR “aging” or “Gerontology” OR “Geriatric*” OR “aging population" OR “senior*”) OR KW (“Older adult*” OR “Older people” OR “elderly” OR “geropsychology” OR “late* life” OR “aging” or “Gerontology” OR “Geriatric*” OR “aging population" OR “senior*”)
6. #4 OR #5
7. TI (“psychological flexibility” OR “psychological inflexibility” OR “experiential avoidance”) OR AB (“psychological flexibility” OR “psychological inflexibility” OR “experiential avoidance”) OR KW (“psychological flexibility” OR “psychological inflexibility” OR “experiential avoidance”)
8. #3 AND #6 AND #7

CINAL (EBSCOhost)

1. ((“acceptance and commitment therapy”))
2. TI (("acceptance and commitment therapy" OR “ACT” OR "psychological health" OR "mental health" OR “openness” OR “awareness” OR "committed action" OR "third wave")) OR AB (("acceptance and commitment therapy" OR “ACT” OR "psychological health" OR "mental health" OR “openness” OR “awareness” OR "committed action" OR "third wave"))
3. #1 OR #2
4. MH aged
5. TI ((“Older adult*” OR “Older people” OR “elderly” OR “geropsychology” OR “late* life” OR “aging” or “Gerontology” OR “Geriatric*” OR “aging population" OR “seniors”)) OR AB ((“Older adult*” OR “Older people” OR “elderly” OR

“geropsychology” OR “late* life” OR “aging” or “Gerontology” OR “Geriatrics” OR “aging population" OR “senior*”))

6. #4 OR #5
7. TI ((“psychological flexibility” OR “psychological inflexibility” OR “experiential avoidance”))
8. #3 AND #6 AND #7

Web of Science

TI=(*search term*) OR AB=(*search term*) OR AK=(*search term*)

1. ((TI=("acceptance and commitment therapy" OR “ACT” OR "psychological health" OR "mental health" OR “openness” OR “awareness” OR "committed action" OR "third wave")) OR AB=("acceptance and commitment therapy" OR “ACT” OR "psychological health" OR "mental health" OR “openness” OR “awareness” OR "committed action" OR "third wave")) OR AK=("acceptance and commitment therapy" OR “ACT” OR "psychological health" OR "mental health" OR “openness” OR “awareness” OR "committed action" OR "third wave")
2. ((TI=((“Older adult*” OR “Older people” OR “elderly” OR “geropsychology” OR “late* life” OR “aging” or “Gerontology” OR “Geriatrics” OR “aging population" OR “seniors”))) OR AB=((“Older adult*” OR “Older people” OR “elderly” OR “geropsychology” OR “late* life” OR “aging” or “Gerontology” OR “Geriatrics” OR “aging population" OR “seniors”))) OR AK=((“Older adult*” OR “Older people” OR “elderly” OR “geropsychology” OR “late* life” OR “aging” or “Gerontology” OR “Geriatrics” OR “aging population" OR “seniors”))
3. ((TI=((“psychological flexibility” OR “psychological inflexibility” OR “experiential avoidance”))) OR AB=((“psychological flexibility” OR “psychological inflexibility” OR “experiential avoidance”))) OR AK=((“psychological flexibility” OR “psychological inflexibility” OR “experiential avoidance”))
4. #1 AND #2 AND #3

Semantic Scholar

1. Acceptance and commitment therapy" "older adults" "psychological flexibility"

Conducted on 25th of March 2025

ProQuest Dissertations and Theses

1. mainsubject(Aged)
2. title("Older adult*" OR "Older people" OR "elderly" OR "geropsychology" OR "late* life" OR "aging" OR "Gerontology" OR "Geriatric*" OR "aging population" OR "senior*")
3. abstract("Older adult*" OR "Older people" OR "elderly" OR "geropsychology" OR "late* life" OR "aging" OR "Gerontology" OR "Geriatric*" OR "aging population" OR "senior*")
4. #1 OR #2 OR #3
5. title("psychological flexibility" OR "psychological inflexibility" OR "experiential avoidance")
6. abstract("psychological flexibility" OR "psychological inflexibility" OR "experiential avoidance")
7. #5 OR #6
8. mainsubject("acceptance and commitment therapy")
9. title("acceptance and commitment therapy" OR "ACT" OR "psychological health" OR "mental health" OR "openness" OR "awareness" OR "committed action" OR "third wave")
10. abstract("acceptance and commitment therapy" OR "ACT" OR "psychological health" OR "mental health" OR "openness" OR "awareness" OR "committed action" OR "third wave")
11. #8 OR #9 OR #10

12. #4 AND #7 AND #11

Appendices Major Research Project

Appendix 2.1: COREQ checklist (move 3 pages)

Item No	Guide Questions/Description	Reported on Page #
Domain 1: Research team and reflexivity		
Personal Characteristics		
1. Interviewer/ facilitator	Which author/s conducted the interview or focus group?	P.54
2. Credentials	What were the researcher's credentials? E.g., PhD, MD	P.54
3. Occupation	What was their occupation at the time of the study?	P.54
4. Gender	Was the researcher male or female?	P.54
5. Experience and training	What experience or training did the researcher have?	P.54
Relationship with participants		
6. Relationship established	Was a relationship established prior to study commencement?	P.53-55
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research?	P.53
8. Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	P.55
Domain 2: study design		
Theoretical framework		
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	P.55
Participant selection		
10. Sampling	How were participants selected? e.g., purposive, convenience, consecutive, snowball	P.52
11. Method of approach	How were participants approached? e.g., face-to-face, telephone, mail, email	P.53
12. Sample size	How many participants were in the study?	P.52

Item No	Guide Questions/Description	Reported on Page #
13. Non-participation Setting	How many people refused to participate or dropped out? Reasons?	n/a
14. Setting of data collection	Where was the data collected? e.g., home, clinic, workplace	P.53
15. Presence of nonparticipants	Was anyone else present besides the participants and researchers?	P.53
16. Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	P.53
Data collection		
17. Interview guide	Were questions, prompts, and guides provided by the authors? Was it pilot tested?	P.53
18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	N/A
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	P.54
20. Field notes	Were field notes made during and/or after the interview or focus group?	P.54
21. Duration	What was the duration of the interviews or focus group?	P.54
22. Data saturation	Was data saturation discussed?	N/A
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	N/A
Domain 3: analysis and findings		
Data analysis		
24. Number of data coders	How many data coders coded the data?	P.54-55
25. Description of the coding tree	Did the authors provide a description of the coding tree?	p.54-55 and appendix 2.9
26. Derivation of themes	Were themes identified in advance or derived from the data?	P.54-55
27. Software	What software, if applicable, was used to manage the data?	P.54
28. Participant checking	Did participants provide feedback on the findings?	N/A
Reporting		
29. Quotations presented	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g., participant number	P.59-67

Item No	Guide Questions/Description	Reported on Page #
30. Data and findings consistent	Was there consistency between the data presented and the findings?	P. 59-67
31. Clarity of major themes	Were major themes clearly presented in the findings?	P.59-67
32. Clarity of minor themes	Is there a description of diverse cases or a discussion of minor themes?	P.59-67

Appendix 2.2: Major Research Project Proposal

Available at: OSF | MRP proposal V0.7.docx

Appendix 2.3: Proceed to Ethics Email

University of Glasgow
School of Health & Wellbeing

HM/PR

9th December 2024

Aoife Dunne
[redacted]student.gla.ac.uk

Dear Aoife,

Major Research Project Proposal

Older adult's experiences of trauma symptoms

The above project has been reviewed by your University Research Supervisor and by a member of staff not involved in your project and has now been deemed fit to proceed to ethics.

Congratulations and good luck with the study.

Yours sincerely

Prof Hamish McLeod
Professor of Clinical Psychology
DClinPsy Research Director

School of Health & Wellbeing
College of Medical, Veterinary and Life Sciences
University of Glasgow
Mental Health and Wellbeing, Clarice Pears Building
90 Byres Road, Glasgow G12 8TB
Email: dclinpsy@glasgow.ac.uk

The University of Glasgow, charity number SC004401

Appendix 2.4: Management approval letter

Coordinator/administrator: Euan Rennie
Telephone Number:
E-Mail: euan.rennie@nhs.scot
Website: https://www.nhsggc.org.uk/about-us/professional-support-sites/research-innovation

Research & Innovation
Gartnavel Royal Hospital
Admin Building, Level 2
1055 Great Western Road
Glasgow, G12 0XH
Scotland, UK

13/05/2025

Miss Aoife Dunne
Trainee Clinical Psychologist,
NHS Greater Glasgow & Clyde / University of Glasgow

NHS GG&C Board Approval

Dear Miss Aoife Dunne

Study Title:	Older Adults experience of Trauma Symptoms
Principal Investigator:	Miss Aoife Dunne
GG&C HB site	NHS Greater Glasgow and Clyde
Sponsor	University of Glasgow
R&I reference:	UGN25MH092
REC reference:	25/EM/0064
Protocol no: (including version and date)	V2 14.04.2025

I am pleased to confirm that Greater Glasgow & Clyde Health Board is now able to grant **Approval** for the above study.

Conditions of Approval

1. **For Clinical Trials** as defined by the Medicines for Human Use Clinical Trial Regulations, 2004
   a. During the life span of the study GGHB requires the following information relating to this site
      i. Notification of any potential serious breaches.
      ii. Notification of any regulatory inspections.

It is your responsibility to ensure that all staff involved in the study at this site have the appropriate GCP training according to the GGHB GCP policy (www.nhsggc.org.uk/content/default.asp?page=s1411), evidence of such training to be filed in the site file. Researchers must follow NHS GG&C local policies, including incident reporting.

2. **For all studies** the following information is required during their lifespan.
   a. First study participant should be recruited within 30 days of approval date.
   b. Recruitment Numbers on a monthly basis
   c. Any change to local research team staff should be notified to R&I team
   d. Any amendments – Substantial or Non Substantial
   e. Notification of Trial/study end including final recruitment figures
   f. Final Report & Copies of Publications/Abstracts

g. You must work in accordance with the current NHS GG&C COVID19 guidelines and principles.

Please add this approval to your study file as this letter may be subject to audit and monitoring.

Your personal information will be held on a secure national web-based NHS database.

I wish you every success with this research study

Yours sincerely.

Euan Rennie
Senior Research Administrator

CC: Alastair Wilson

Appendix 2.5: Study Documentation

Participant consent form available at: OSF | Consent form V3.1 23.06.25.docx

Privacy notice available at: OSF | Privacy notice V1.2 25.02.25.docx

Participant information sheet available at: OSF | participant info sheet V4.1 23.06.25.docx

Appendix 2.6 : Interview Schedule

Available at : OSF | Interview schedule V1.1 24.02.25.docx

Appendix 2.7 : Data availability statement

The study data cannot be shared for important ethical and privacy concerns. The data is of a highly personal nature and participants have not given consent for the study data to be shared with third parties. Interested authors should contact the named author for any information pertaining to the study data.

Appendix 2.8 : Data analysis plan

Available at : OSF | data analysis plan.docx

Appendix 2.9 : Detailed data analysis record

Available at : OSF | Detailed data analysis record.docx

Appendix 2.10 : Example of codes and data for theme *'Trauma as a constant companion'*

Theme	Subtheme	Code	Data
Trauma as a constant companion	Life constricted by trauma symptoms	Avoidance as a coping strategy	'I mean, there is ahh there is some things that you've got to go to, but am.. ahh.. I feel a lot of anxiety if I've got to put myself out of my comfort zone. And out of my comfort zone is out of my house.' (P1) 'And I don't go to football matches, well I might, occasionally go if it's a small match, but I wouldn't go to a big match, you know. I'm watching television, you know, it's.. so I'm still a fan and I still watch it, but amm I have a season ticket.' (P1) 'Put it back of my mind, put it in the back of my mind or something.' (P5) 'Yeah, I avoid doing a lot of things now' (P6)
		Hypervigilance	'I live in constant alert' (P1) 'Again, I'm going back to.. being in.. in environments I'm not comfortable with, you know, I don't feel safe. I may be on high alert you know that way.' (P2) 'Aye You know, I'm watching about me. I'm I'm I'm you know. Whats going on here? You know what's happening' (P4)

			‘I miss nothing, I I see everything that's going on. I'm always on the lookout um..in every scenario I'm in I'm always thinking ahead or a potential problem or danger even.’ (P5)
		Anxiety	‘much much just this constant panicky feeling about something dire is going to happen has been with me for many, many years now’ (P1) ‘The anxiety, I was worrying about things that never happened’ (P3) ‘But my thoughts had my head, the build up to, the unknown. You know what's going to happen? I cannae control any of this, I cannae you know? And what if something happens? What dae I do? We’re in foreign place and I don't know how to deal with this. And I don't know, you know, its all that kind of the unknown. I'm creating problems arenae there, only there in my head’ (P4) ‘Just falling apart, not being able to think, not being able to concentrate, just very nervous and anxious and…I wouldn't say ever tearful or anything, but just totally out of control.’ (P6)
	Past breaking through to the present	nightmares	‘Aye that’s when that's when the nightmares kick in.’ (P4) It's the same any other kind of pressure that he’s put on me ahm comes into these dreams, and then I wake up, really scared and anxious. (P6) ‘at least twice a week, waking up, sweating or waking up from the dream feeling awful and sweating’ (P7)

			‘The scenes that I can view in a nightmare that waking me up are… some parts are real and the other things are just beyond belief, especially in a hospital setting’ (P8)
		Continued impact of traumatic experiences	‘Im on my own and I'm I'm still thinking about these things and It's it's hard. Just, you know, I look back at the photos and I was (cries). Cruel man, he was a cruel man.’ (P1) ‘my life's been ruined by him. I'm 65 now, and although I'm saying I've got to a kind of level field with it, I'm still dealing with it every day, I'm still dealing with it.’ (P4) ‘Don't want to, you know, again, back to [daughter]. Cannae bath them cannae get them changed. Go to the swimming. Take them in the swimming. Put them in a, you know, they're maybe three and four that you're putting them in to a a a cubicle themselves. Get yourself ready, you know. Couldnae deal with it, couldnae deal with it.’ (P4) ‘I've got a partner, so I suppose it is hard to trust because I think I was too trusting before.’ (P6)
		Intrusive thoughts	‘They can keep me awake at night’ (P2) ‘That'll be you know, they they kind of empty moments. Something like that will come in. That's like, you know, we're sitting here and that that's in my head, you know.’ (P4)

			‘But I can't get it out, can't get rid of it sometimes’ (P5) I try and avoid them. Sometimes it's it's not possible. I know if there's any events that my ex husbands at, I get... the the week before that's seems to be where my subconscious comes into it, and I don't know if it's a safe thing, but it's to see so that I kinda prepare for facing him.’ (P6) ‘when I'm supposed should be relaxing and including reading. You know reading for pleasure. I keep thinking, let me find a book that's actually just a nice, simple story. But it's what I'm trying to read for instance’ (P7)