Co-developing Components of a Positive Psychology Intervention for People with Dementia

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Psalm 107:1 – Give thanks to the Lord, for he is good; his steadfast love endures forever!

Overview

This thesis portfolio comprises three parts:

Part One: Systematic Literature Review

The systematic literature review used a positive psychology framework to synthesise the character strength-based interventions that have been used to increase wellbeing among older adults and to analyse the effectiveness of these. The review included 21 studies of variable quality, as measured through the Quality Assessment Tool for Studies with Diverse Designs (QATSDD; Sirriyeh et al., 2011). The results were analysed using a narrative synthesis, with the interventions being clustered by the character strength focused on. Interventions were heterogenous but generally had a positive effect on wellbeing in clinical and non-clinical populations. It was suggested that group and multicomponent interventions may be most effective, although further research is needed. Of particular relevance is co-produced interventions for clinical groups, to ensure they are meaningful and acceptable.

Part Two: Empirical Paper

The aim of the empirical paper was to understand which character strengths are most important for people with dementia (PWD), and therefore which strengths-based interventions are most meaningful and acceptable to PWD. A participatory design, utilising Delphi methodology, was incorporated into an iterative three stage framework, centring on generating qualitative data from focus groups which were analysed using thematic analysis. It was found that love, kindness and humour were deemed the most important character strengths for living with dementia. Qualitative data from the focus groups can be captured in three superordinate themes: (1) lack opportunity not capacity; (2) key considerations of positive psychology interventions for PWD; and (3) potential benefits of positive psychology interventions. Clinical and research implications are discussed.

Part Three comprises the Appendices.

Part three consists of the Appendices relating to the systematic literature review and the empirical paper, including a reflective statement and epistemological position to inform the context of the portfolio thesis.

Total word count (excluding appendices): 19,117.

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Part One: Systematic Literature Review

This paper is written in the format ready for submission to the *Journal of Aging and Mental Health.*

Please see Appendix C and D for the submission guidelines.

A systematic review of character strength-based interventions designed to improve wellbeing in older adults.

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Abstract

Objectives: This review used a positive psychology framework to synthesise the character strength-based interventions used to increase wellbeing among older adults and to assess the effectiveness of these.

Methods: Six online databases (APA PsycInfo, Academic Search Premier, CINAHL Complete, MEDLINE, APA PsycArticles) were searched. Methodological quality of the included papers was analysed using the Quality Assessment Tool for Studies with Diverse Designs. The data was analysed and integrated using a narrative synthesis.

Results: This review included 21 studies of variable quality. The search retrieved interventions aiming to improve the wellbeing of older adults for five of the 24-character strengths (hope, humour, spirituality, forgiveness and gratitude). Interventions were heterogenous and involved a range of populations, settings and designs, but generally had a positive effect on wellbeing or other positive constructs.

Conclusions: Overall there was evidence that character strength-based interventions are effective at increasing wellbeing in clinical and non-clinical populations. Groups and multicomponent interventions may be most effective, although further research is needed. Of relevance would be co-produced interventions for specific clinical groups, to ensure they are meaningful and acceptable.

Keywords

Character strength-based interventions; older adults; wellbeing

Introduction

With the population living longer, improving quality of life in older adults is a global priority (World Health Assembly, 2020) and in the UK within the National Health Service (NHS) supporting people to age well is a current priority to reduce demand on services (NHS, 2019). As older adults may face specific challenges to maintaining their wellbeing such as a deterioration in health, environmental factors (i.e., not being able to drive) and economic difficulties (Waterworth et al., 2019) there is a need for interventions to support older adults to live well. In understanding what it means to live well, the World Health Organisation (WHO) constitution states that health is more than merely the absence of illness, but is a complete state of mental, physical and social wellbeing (WHO, 2020). Therefore, interventions simply aiming to "fix what is wrong" are not enough to improve quality of life of older adults.

Relevant to this endeavour positive psychology is "devoted to the study and theory of the processes and conditions that contribute to flourishing or optimal functioning across groups, institutions, and individuals" (Gable & Haidt, 2005, p. 103). Acknowledging that psychology and particularly clinical psychology had previously been problem orientated, positive psychology brings a focus on positive qualities, to build individuals' strengths to support individuals to flourish (Seligman & Csikszentmihalyi, 2014). An emergent second wave positive psychology highlights the interplay and interdependence between positive and negative experiences (Lomas & Ivtzan, 2016); this perspective is of relevance for understanding how older adults can maintain wellbeing despite, or even as a result, of any threats and challenges they may face as they age.

Positive psychology interventions (PPIs) broadly aim to promote wellbeing and optimal functioning by enhancing pleasure, meaning and engagement (Duckworth et al., 2005). There have been a number of systematic reviews looking at the effectiveness of PPIs in healthy older people as well as in people with specific health conditions such as, breast cancer survivors, those with neurological disorders and chronic illnesses (Casellas-Grau et al., 2014; Lai et al., 2019; Sutipan et al., 2017; Yan et al., 2020). The findings of these studies indicate that PPIs can be effective at increasing wellbeing, with PPIs often focusing on enhancing a person's strengths (Macaskill, 2016). Therefore the Character Strengths and Virtues (CSV) is a useful framework which suggests that there are 24-character strengths that contribute to wellbeing and flourishing (Park & Peterson, 2009) and are outlined in table 1. They are defined as "positive traits reflected in thoughts, feelings and behaviours" (Park et al., 2004, p. 603). Research suggests the character strengths of love, curiosity, gratitude, zest and hope are most strongly associated with life satisfaction across different populations (Park et al., 2004; Peterson et al., 2007; Proyer et al., 2011) and therefore that life satisfaction could be improved by interventions targeting these strengths (Proyer et al., 2013). Humour is widely regarded as one of the strengths most consistently associated with wellbeing across age groups (Martínez-Martí & Ruch, 2014) and also specifically for older adults (Gonot-Schoupinsky & Garip, 2018). Therefore, since character strengths are valued by older adults and show a relationship with physical and subjective wellbeing in this population (Margelisch, 2017), they are a helpful framework for PPIs aiming to improve wellbeing in this population.

Table 1.

The 24-character strengths and their definitions according to Park & Peterson (2009)

Character strength	Definition
Creativity	Thinking of novel and productive ways to do things
Curiosity	Taking an interest in all of ongoing experience
Open-Mindedness	Thinking things through and examining them from all sides
Love of Learning	Mastering new skills, topics and bodies of knowledge
Perspective	Being able to provide wise counsel to others
Honesty	Speaking the truth and presenting oneself in a genuine way
Bravery	Not shrinking from threat, challenge, difficulty or pain
Persistence	Finishing what one starts
Zest	Approaching life with excitement and energy

Kindness	Doing favours and good deeds for others
Love	Valuing close relations with others
Social Intelligence	Being aware of the motives and feelings of self and others
Fairness	Treating people, the same according to notions of fairness and justice
Leadership	Organising group activities and seeing that they happen
Teamwork	Working well as a member of a group or team
Forgiveness	Forgiving those who have done wrong
Modesty	Letting one's accomplishments speak for themselves
Prudence	Being careful about one's choices; not saying or doing things that might later be regretted
Self-regulation	Regulating what one feels and does
Appreciation of beauty and excellence	Noting and appreciating beauty, excellence and/ or skilled performance in all domains of life
Gratitude	Being aware of and thankful for the good things that happen
Hope	Expecting the best and working to achieve it
Humour	Liking to laugh and joke, bringing smiles to other people
Spirituality	Having coherent beliefs about the higher purpose and meaning of life.

To understand how older adults can be best supported to live well from a positive psychology perspective, there is a need to synthesise the evidence base. Therefore, this systematic review aimed to examine PPIs designed for older adults, using the character strengths as a framework, with a particular focus on love, curiosity, gratitude, zest, hope and humour. To date, only one systemic review has explored the effectiveness of PPIs developed for older adults (Sutipan et al., 2017). However, this focused on healthy older people, despite interventions being needed to improve wellbeing for older clinical populations (NHS, 2019). Thus, building on the systematic review by Sutipan and colleagues (2017) this review aimed to:

(1) Update their review, since their search was conducted in 2014 new research will be captured.

(2) Expand the focus beyond healthy older adults to include older adults from clinical populations, including those with memory difficulties as no review has focused on older clinical populations.

(3) Strengthen the conceptualisation of PPIs, as across the literature this is a limitation of PPI reviews (Boiler et al., 2013). For this review a PPI is defined as an intervention with the primary or secondary aim to improve wellbeing, in line with Duckworth et al. (Duckworth et al., 2005).

(4) Capture different PPIs, using the CSV as a framework. For example, Sutipan and Colleagues (2017) concluded that reminiscence interventions are most common in older adults; however, this review will not include reminiscence interventions since this does not target a character strength and cannot formally be defined as a PPI (Van Agteren et al., 2021).

Therefore, this review aimed to answer the following research questions:

1. What character strength-based PPIs have been used for older adults to improve wellbeing or quality of life?
2. What is the effectiveness of character strengths-based interventions at improving wellbeing or quality of life for older adults?

Method

Search Strategy

The following databases were searched from August 2022 to December 2022: APA PsycInfo, Academic Search Premier, CINAHL Complete, MEDLINE, APA PsycArticles. These databases were chosen to allow for a broad search of relevant literature since PPIs are used by several disciplines. Previous reviews were identified that looked at character strength-based interventions (e.g., Yan et al., 2020) and PPIs more broadly (e.g., Sutipan et al., 2017). Through an iterative process of looking at the search terms used in these reviews, seeking consultation from an academic librarian and with the secondary researchers, search terms were developed and then refined through multiple scoping searches. Thus, the following search terms were derived:

(character strength*) OR "signature strength*" OR humour OR humor OR love OR zest OR gratitude OR curiosity OR hope

AND

intervention* OR treat* OR therap* OR program* OR group* OR support*

AND

wellbeing OR well-being OR "well being" OR "quality of life" OR wellness OR positive

AND

old* OR elder* OR geriatric*

Two limiters were applied to ensure articles were published in an academic journal and written in English. Furthermore, to narrow the papers to the most relevant, the “title” limiter was applied for the first search row (character strengths) to allow for practicalities of screening the large number of retrieved studies in the time available.

Selection Strategy

From the search results, duplicates were removed, and the title and abstracts of all papers were screened for appropriateness using the inclusion/exclusion criteria detailed in table 2. Those papers that were deemed appropriate were then screened in more detail by reading full texts. For the remaining papers, forward and backwards citation searching through reference list and citation searches (using the “cited by” function on google scholar) were conducted to ensure all relevant papers were included in the review.

Table 2.

Inclusion/ Exclusion Criteria

Inclusion criteria	Exclusion criteria
Study participants included older adults as defined by aged 60+ since this is typically the lower limit (Shenkin et al., 2017). This included people living in residential care and the community, and clinical and non-clinical populations. Where studies had a mixed age sample, only those which recorded outcomes separate for older adults were included.	Study participants under the age of 60 years, or where there was a mixed age sample without separate results for older adults.
Empirical study (of any research design) that could be understood from a positive psychology perspective. Therefore, in line with Sin and Lyubomirsky (2009) definition of a PPI, the study must have had a primary or secondary aim of increasing positive feelings, positive behaviours or positive cognitions and test a character strengths-based intervention. This was any intervention study that focused on at least one of the 24-character strengths (Park & Peterson, 2009).	An intervention study that only aimed to decrease negative behaviours, emotions or thought processes or did not focus on one of the 24-character strengths.
The effectiveness of the intervention was measured using a quantitative standardised outcome measure of wellbeing, quality of life or positive psychology related construct (such as a hope scale) to fit with the definition and aim of a PPI.	If the outcome measures utilised to evaluate efficacy of the intervention were not focused on the individual (either self or other report) or if the study only measured negative outcomes (e.g., depression or anxiety).
Studies were included from any country, since improving quality of life in older adults is a global priority (World Health Assembly, 2020).	Paper was not written in English as no budget was available for translation.
Studies must have been published from 2004 onwards, since this is when the 24-character strengths were first proposed (Peterson & Seligman, 2004).	Studies published earlier than 2004.

Data Extraction

A data extraction table was designed based on the relevant information needed to answer the research questions of the review (table 3). For example, in assessing the effectiveness of the interventions, only outcomes focused on a positive psychological resource (e.g., life satisfaction) were analysed, to fit within the positive psychology framework of the review. The data extraction table included: author names, country, sample, character strength focused on, intervention, comparative group, outcome measures, results and quality assessment.

Quality Assessment

The quality of the included papers was assessed using the Quality Assessment Tool for Studies with Diverse Designs (QATSDD; Sirreyeh et al., 2011; appendix E). This was chosen as it is designed to examine the quality of health intervention studies and is applicable to various research designs. This is beneficial as character strength-based interventions are relatively few (as highlighted from initial scoping searches), which means there is a need to include a range of designs to allow for a comprehensive analysis of the character strength-based intervention methods that exist in the literature for older adults. The QATSDD involved 16 items, with each item being rated a 0, 1, 2 or 3, with two items referring specifically to qualitative studies and two quantitative studies. Therefore "N/A" was used where needed. For a purely quantitative study, the maximum score was 42 whereas for a mixed design it was 48, with a higher score representing a higher quality study. A sample of papers were peer reviewed, with any discrepancies being discussed and resolved (see Appendix F for the quality assessment scores). Each paper's score was then converted into a percentage based on the total of included items.

Data Synthesis

Despite the review focusing on quantitative outcome measures, due to the heterogeneity of the papers a meta-analysis was not deemed appropriate. Therefore, a narrative synthesis was used since it is appropriate for a wide range of study designs (Popay et al.,2006). The stages detailed by Popay et al., (2006) were used as a guide to synthesise the results:

1. Developing a theoretical model of how the interventions work, why and for whom - the CSV was used as a theoretical model.
2. Developing a preliminary synthesis – grouping and clusters were used.
3. Exploring relationships in the data – idea webbing was used.
4. Assessing the robustness of the synthesis product

Results

The screening process is outlined in the Preferred Reporting items for Systematic Reviews and Meta-Analyses (PRISMA) diagram (Moher et al., 2009) in figure 1. The initial search generated 669 papers, leaving 425 after duplicates were removed. Following title and abstract screening, 33 studies were deemed suitable. After reading their full texts, 17 were considered appropriate with the other 16 not meeting the inclusion/exclusion criteria. Following reference list and citation searching, a further four papers were appropriate and included in the final study pool. Therefore 21 studies were included in the review.

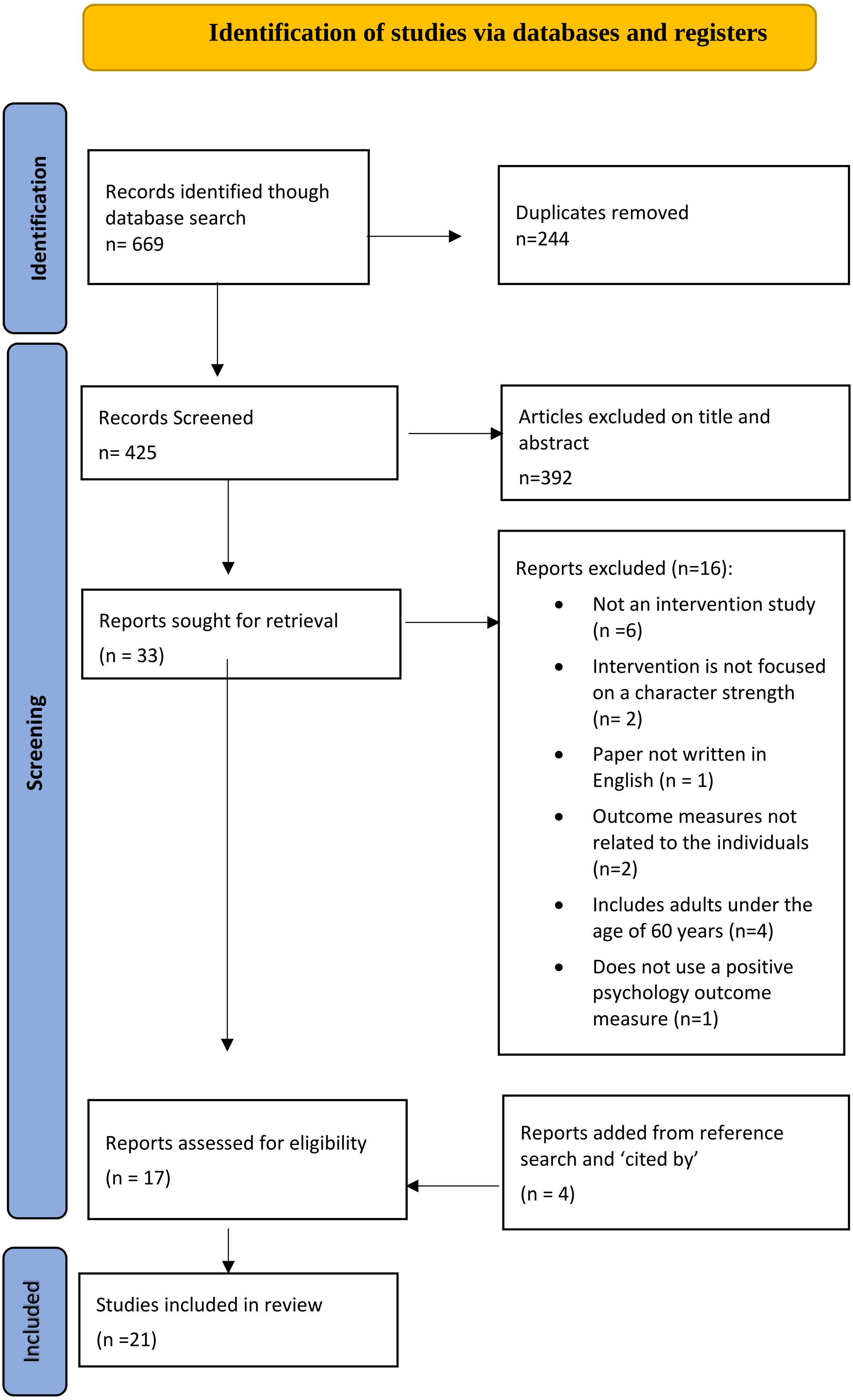

Figure 1.

Article Selection Summary (The Preferred Reporting Items for Systematic Reviews and Meta- Analyses (PRISMA) Flow Diagram) (Moher et al., 2009).

Table 3.

Data Extraction table.

Author, Year and Location	Aims	Character strength(s)	Participants	Intervention	Group Comparison	Outcome measures	Results	Quality assess ment
Duggleby et al., (2007) Canada	To evaluate the effectiveness of the ‘‘Living with Hope Program’’ (LWHP) in increasing hope and quality of life for older adult, community-living, terminally ill cancer patients.	Hope	Intervention group (N=30) Control group (N=30) Terminally ill cancer patients over the age of 60.	Hope programme conducted individually over 1 week. Viewed an award-winning hope video and a choice of 3 hope activities. Write or ask someone to help you to write a letter to someone. Begin a hope collection (anything that brings you hope e.g., poems, writings, photographs). Begin an about me collection – tell your life as a story.	Control group received normal treatment from palliative treatment services.	Hope: HHI Quality of life: MQOL	Post intervention completion, the treatment group reported significantly higher hope and quality of life scores than the control group.	71%
Wilson et al., (2010) Canada	To discriminate the effects of a four-week hope program on hope and depression.	Hope	Intervention group (N=8) Control group: (N=9) Aged 65+ with a diagnosis of depression, residing in a nursing home.	4-week programme whereby each participant was individually visited each weekday over the 4 weeks and provided with that day’s hope intervention. Week 1: hope card delivered containing inspirational message. Week 2: Hope card + recalling a time when they had hope. Week 3: Hope pictures and goal setting Week 4: Choice of picture	Control group received brief visit each weekday by a research assistant for the 4 weeks.	Hope: HHI	Two people dropped out of the intervention group because of negative experiences of the hope intervention. Post intervention completion, hope significantly decreased in the intervention group. A non-significant increase in hope was found in the control group.	45%
Walter et al., (2006)	To investigate the effects of humour therapy on quality of life in patients	Humour	Intervention group (N= 10 depression; 10	Humour therapy in addition to usual pharmacology:1 hr therapy once every 2 weeks, the group leader tells humorous stories or suggestive funny anecdotes. Also, use of slapstick humour and biographical	Control group received standard therapy	Quality of life: ACSA	Post intervention completion quality of life increased significantly for the depressed patients in the control and	36%

Switzerland	with depression or Alzheimer's Disease.		Alzheimer's disease) Control group (N=10 depression; 10 Alzheimer's disease) Aged 65+ in psychiatric inpatient units	memories are utilised to try and create shared humour.	group (Pharmacological)		experimental groups. No significant improvements in the Alzheimer's group (experimental or control).	
Shahidi et al., (2010) Iran	To compare the effectiveness of laughter yoga and group exercise therapy in decreasing depression and increasing life satisfaction in older women.	Humour	Laughter Yoga (N=23) Exercise (N=23) Control group (N=24) Depressed women aged 60+.	Laughter Yoga, method formed by Kataria in 1995. 10 sessions involving: brief talk about something delightful, clapping hands, moving hands up and down and swinging from side to side, chanting 'ho ho ha ha ha' and end the session with shouting 'I am the happiest person in the world'	Control: no intervention Exercise group: 10 sessions of aerobic exercise.	Life satisfaction: LSS	Post intervention completion laughter yoga group showed significant improvement in life satisfaction score compared to control. No significant difference between exercise group and control.	45%
Tse et al., (2010) China	To examine effectiveness of humour therapy in relieving chronic pain, enhancing happiness and life satisfaction and reducing loneliness among older people with chronic pain.	Humour	Intervention group (N=36), Control group (N= 34). Older adults residing in a nursing home experiencing pain in the previous 3 months with no cognitive impairments.	8-week group humour intervention (1 hr per week). Participants made a portfolio called "my happy collection" in week 1. From week 2 to week 8, each session started with jokes. Participants were also shown how to give higher priority to humour in their everyday lives, laughing exercises and games, sharing of their own funny stories, magic shows, and hot tips to stimulate humour and joy.	Control group received usual care	Happiness: SHS Life satisfaction: LSI-A	Post intervention completion happiness and life satisfaction significantly improved in the intervention group.	60%
Konradt et al., (2012)	To replicate the results from Hirsch et al., (2010) and see if the results could extend to less	Humour	Intervention group (N=49), Control group (N=50)	Personalised treatment plan plus 8-week (1.5hr sessions) humour group. In every session – music, singing, dancing, personal anecdotes, jokes shared.	Control group received personalised	Cheerfulness: STCI S-30 & STCI T-30	Both groups showed significant improvements in state cheerfulness. The experimental group also showed significant	60%

Germany	severely depressed patients.		Patients with depression admitted onto a psychiatric ward, aged 60+.	Homework – in every session asked to bring along jokes, stories or anecdotes.	treatment plan	Life satisfaction: LSS Resilience: RS-11	improvements in life satisfaction and trait cheerfulness. There were no significant differences in resilience.	
Ganz & Jacobs (2014) Israel	To examine the effect of a five-month intervention using a humour workshop among a sample of Israeli community-dwelling elderly people who attended senior centres.	Humour	Intervention group (N=50), Control group (N=42) Healthy older adults living in the community, with no cognitive impairment.	The "Humour as a Way of Life" program consisted of one session per week lasting 2-3 h per session. The program took approximately five months to complete. Week 1-4: Incorporation of humour into daily life and the development of supportive and mirthful environment Weeks 5-12: Create and review video recordings of humorous life stories or personal funny anecdotes.	Control group continued to attend the senior centres but with no intervention.	Wellbeing: GWS	One month following completion of the intervention wellbeing increased in the intervention group.	60%
Ellis et al., (2017) Australia	To evaluate the effects of a laughter yoga program for older people living in residential settings.	Humour	Intervention group (N=28) Older adults (aged 60+) living in residential setting. 13 participants had dementia	6 weekly group laughter yoga sessions, each 30 minutes. Included breathing and stretching and physical activity and chanting ho ho ha ha ha.	None.	Happiness: SHS	Post intervention completion, mean happiness scores increased.	57%
Giapraki et al., (2020) Greece	To investigate whether an intervention to foster the sense of humour among community dwelling older individuals could improve their subjective wellbeing as psychological flourishing.	Humour	Intervention group (N =20), Control group (N=20). Aged 65-91, no depressive or cognitive impairments.	4 group intervention sessions held once a week. Involved telling funny stories or incidents that happened to them.	Control group: focused on past memories	Wellbeing: PERMA Profiler	Post intervention completion there was an increase in positive emotions, engagement, meaning, accomplishments, health and relationships and a decrease in negative emotion. These were maintained 1 month later. There was no significant	67%

							change to happiness or loneliness.	
Zhao et al., (2020) China	To evaluate the effect of an 8-week humour intervention on reducing depression and anxiety and improving subjective wellbeing, cognitive functioning and sleep quality in nursing home residents.	Humour	Intervention group (N=37) Control group (N=37) Chinese nursing home residents, aged 60+	8 x 60 mins weekly group humour sessions involving: • 10 mins warming up e.g., finger exercises • 10 mins watching funny videos • 30 mins game time – asked to play games to generate muscle movement and laughter to release energy • 10 mins humour sharing	Control group maintained their usual lifestyle	Subjective wellbeing: MUNSH	Post intervention completion the intervention group showed significantly higher subjective wellbeing, this was maintained 2 months after.	67%
Kuru Alici & Bahceli (2021) Turkey	To examine the effects of laughter therapy on life satisfaction and loneliness in older adults living in nursing homes.	Humour	Intervention group (N=34) Control group (N=34) Older adults (65+) living in residential setting.	Laughter therapy twice a week for 6 weeks. Each session included 4 parts: warm up exercises, deep breathing and hand clapping, children's games and laughter exercises and breathing exercises and meditation.	Control group received usual care.	Life Satisfaction: LSS	No significant difference found in life satisfaction between the control and experimental group.	64%
Killen & Macaskill (2015) England	To assess whether a population aged 60 years and over would benefit from a gratitude intervention.	Gratitude	Online (N=48) Paper (N=40) healthy older adults aged 60+	Three good things gratitude intervention over 2 weeks. Completed the 3 good things exercise every night. Either completed it online or using paper.	None.	Gratitude: GQ-6 Flourishing: FS Life satisfaction: LSS	Post intervention completion, there was a significant increase in flourishing, and this was maintained 1 month later. There were no significant differences in gratitude and life satisfaction.	56%
Bartlett & Arpin (2019) USA	To examine the differences in gratitude, loneliness, subjective well-being, and health over 20 days for older individuals assigned to a gratitude or a control condition.	Gratitude	Intervention group (N=23), Control group (N=19) Older adults recruited from	Daily gratitude exercise – Write 3 good things that had happened that day. Lasted for 20 days.	Control group just completed the surveys.	Gratitude: GQ-6 General positivity: PA-PANAS.	Post intervention completion there were no significant increases in gratitude in either group but on days with greater gratitude, individuals reported greater well-being.	57%

			independent living facilities.					
Wu & Koo (2016) Taiwan	To investigate the effects of spiritual reminiscence on hope, life satisfaction, and spiritual well-being in elderly Taiwanese with mild or moderate dementia.	Spirituality	Intervention group (N=53) Control group (N=50). Aged 65+ with mild or moderate dementia,	Six-week spiritual reminiscence group. The six weekly themes were: Meaning in life; relationships, isolation and connecting; Hopes, fears and worries; growing older and transcendence; spiritual and religious beliefs; spiritual and religious practices.	Control group received no intervention	Hope: HHI Life satisfaction: LS Subjective wellbeing: SIW	Post intervention completion hope, life Satisfaction and the spirituality index of wellbeing all showed an increase in the intervention group.	48%
Salces-Cubero et al., (2019) Spain	To compare the efficacy of three separate strengths training-based interventions – Gratitude, Savouring, and Optimism – in older adults.	Gratitude Savouring & Optimism	Gratitude (N=36) Optimism (N=28) Savouring (N=28) Control (N=32) older adults (60+) with no cognitive impairment or physical health issues, who regularly attend day centres.	4 Group Sessions. Each intervention began with a presentation explaining the strength. • Gratitude: 3 good things; gratitude is the building blocks of life; asked to describe current aspects of their life that generated wellbeing and gratitude. • Optimism: goal setting; working through barrier thoughts; asked to use humour to share something negative that had happened. • Savouring: asked to bring in an object relating to a positive memory (past); present savouring – go for a 15-minute walk; future – imagine future positive events	Control group received usual activities at the day centres.	Life satisfaction: LSS Happiness: SHS Resilience: The resilience scale	Post intervention completion there was a significant improvement in life satisfaction, resilience and happiness for the Gratitude and Savouring group. These changes were maintained 1 month later. No changes for optimism and control groups.	69%
Mathieu (2008) USA	To assess whether a therapeutic recreation program specifically addressing happiness and humour could promote life satisfaction among older adults.	Humour & Gratitude	Intervention group (N=16), aged 65+	Ten weekly group sessions based on happiness and humour. Each session included an educational presentation, interactive activities and jokes. Members were also encouraged to discuss and share parts of their lives through funny anecdotes. A variety of playful props were also included such as whistles, candies, and other paraphernalia with cultural, historical, and	None.	Life Satisfaction: SwLS	Post intervention completion there was a significant improvement in life satisfaction.	25%

				symbolic references. Also involved 3 good things intervention.				
Ramirez et al., (2014) Spain	To increase quality of life in people over 60 years through training in positive psychology based on autobiographical memory, forgiveness and gratitude.	Forgiveness, gratitude	Intervention group (N=26), Placebo (N=20); aged 60-93, no cognitive impairment	Autobiographical Memory, Gratitude and Forgiveness (MAPEG) intervention: 9 x 1.5-hour weekly sessions (N=5 per group). Included letter of thanks, life review, letter of forgiveness.	Placebo: Focus on general memories.	Life Satisfaction: LSS Happiness: SHS	Post intervention completion the intervention group had a significant increase in life satisfaction and subjective happiness, but these returned to baseline 4 months post intervention. Placebo group saw no significant improvements.	52%
John & Tungol (2017) India	To develop a humour-based intervention programme to alleviate depression and enhance happiness in the elderly	Humour, gratitude, forgiveness, hope	Intervention group (N= 10). Aged 60+ living in residential setting with depression.	The humour based intervention programme involved 12 modules over 3 weeks: (1) General introduction, (2) A hopeful view, (3) Calm Yourself, (4) To know yourself better, (5) Healing the wounds which causes for unhappiness, (6) Listen with our heart and resolve anger, (7) Free from past fetters, (8) Forgiveness and letting go, (9) Fostering the interpersonal relationship, (10) Increasing your emotional bank account, (11) Counting the blessings and (12) Evaluation and planning.	None.	Happiness: OHQ	Post intervention completion, there was a significant increase in happiness.	35%
Bartholomaeus et al., (2019) Australia	To examine the effect of a community wellbeing intervention on the wellbeing, resilience, optimism, and social connection of older adults in the general population.	Gratitude / identifying personal strengths.	Intervention group (N=29) Control group (N=29) Older adults (60+)	An 8-week multi-component wellbeing and resilience programme. Derived from positive psychology, CBT and mindfulness. It includes: growth mindset, event-thought-reaction connection, “What’s most important?”, balance your thinking, cultivating gratitude, mindfulness, interpersonal problem solving, active constructive responding – relationships, capitalising on strengths, values-based goals	Control group received no intervention	Wellbeing: PERMA profiler Resilience: RS-6 Optimism: LOT-R	Post intervention completion there was no significant increase in wellbeing, resilience and optimism.	55%

Chamorro-Garrido et al., (2021) Spain	To verify whether an intervention based on Autobiographical Memory, Forgiveness, Gratitude, and sense of humour would increase quality of life in institutionalized older adults.	Gratitude, Forgiveness and Humour	Experimental (N = 36), Placebo (N= 39), and Control (N = 36). Older adults aged 62-96, residing in a residential home with no cognitive impairment	11 x 60 min – group sessions (N=9 per group). Included life review, letter of thanks, letter of forgiveness and humour techniques e.g., jokes / funny videos. Refresher sessions were held 2 weeks after the intervention, and in the 1st, 3rd, 6th, 8th, and 12th month following the intervention, in both the experimental and placebo groups. The objective of these sessions was to promote lasting benefits from the intervention	Control group received no intervention. Placebo group focused on general memories.	Life Satisfaction: LSS Happiness: SHS Wellbeing: SPWB	Post intervention completion there was an increase in life satisfaction, happiness and certain dimensions of psychological wellbeing. This was maintained for 1 year post intervention, except happiness which returned to baseline at 6 months.	60%
Freitas et al., (2021) Brazil	To analyse an intervention on Strengths Based Character Education for the Elderly (Educafi) and its effects on character strengths, psychological well-being, life satisfaction and depressive symptoms.	All 24 Character Strengths.	Intervention group (N=15) Active control (N=15) Control (n=11) Older adults (aged 60+), with no cognitive impairment or depression	Twice weekly sessions, 90 mins each. It was based on positive psychology, and character strengths, in addition to CBT. The focus was on one Character Strength on each day. Thus, Educafi lasted 26 meetings.	Active control: participated in other group activities. Control: no intervention	Character Strengths: VIA-IS-120 Wellbeing: PGCMS Life satisfaction: SWLS	No significant results were obtained.	60%

Herth Hope Index (HHI; Herth, 1992); McGill Quality of life questionnaire (MQOL; Cohen et al., 1995); Anamnestic Comparative Self-Assessment Scale (ACSA; Bernheim & Buyse, 1984); Diener life satisfaction scale (LSS; Diener et al., 1985); Subjective Happiness Scale (SHS; Lyubomirsky & Lepper, 1999); Revised Life Satisfaction Index-A (LSI-A;Chi & Boey, 1992); State-Trait-Cheerfulness Inventory (STCI S-30, STCI T-30; Ruch et al., 1997; Ruch & Carrell, 1998); Resilience Scale (RS-11; Schumacher et al., 2004); General Wellbeing Scale (GWS; Depuy, 1978); Oxford Happiness Questionnaire (OHQ; Hills & Argyle, 2002); PERMA profiler (Butler & Kern, 2016); The Memorial University of Newfoundland Scale of Happiness (MUNSH; Kozma & Stones, 1980); The Gratitude Questionnaire (GQ-6; McCullough et al., 2002); The Flourishing Scale (FS; Diener et al., 2009); Positive affect items on the PANAS (PA-PANAS; Watson et al., 1988); Life Satisfaction Scale (LS; Neugarten et al., 1961); The spirituality index of wellbeing (SIW; Daaleman & Frey, 2004); Life Satisfaction Scale (SwLS; Lohman, 1976); The Six item Brief Resilience Scale (RS-6; Smith et al., 2008); 10 item Life Orientation Test-Revised (LOT-R; Scheier et al., 1994); The resilience scale (Wagnild & Young, 1993); The scale of psychological wellbeing (SPWB; Ryff, 1989); The Philadelphia Geriatric Centre Morale Scale (PGCMS; Lawton, 1991); The Satisfaction with Life Scale (SWLS; Gouveia et al., 2005); The Values In Action Inventory of Strengths, shortened version (VIA-IS; Peterson & Seligman, 2004).

Study Characteristics

Included studies came from a range of countries (Canada, China, Germany, USA, Greece, Switzerland, Israel, Iran, Turkey, Australia, England, Taiwan, Spain, Brazil, India), involving a total of 1,297 older adults. All were published between 2006 and 2021. Of the 24-character strengths (Park & Peterson, 2004), five have been incorporated into interventions used with older adults: hope, humour, gratitude, spirituality and forgiveness. Most interventions focused on a single character strength (n=14), while others focused on several (n=3) or combined the character strength-based intervention with other interventions (n=4) (e.g., CBT or mindfulness).

Sample

Sample sizes across the studies varied from 10 (John & Tungol, 2017) to 124 (Salces-Cubero et al., 2019) participants. Thirteen studies focused on non-clinical populations (Bartholomaeus et al., 2019; Bartlett & Arpin, 2019; Chamorro-Garrido et al., 2021; Ellis et al., 2017; Freitas et al., 2021; Ganz & Jacobs, 2014; Giapraki et al., 2020; Killen & Macaskill, 2015; Kuru Alici & Bahceli, 2021; Mathieu, 2008; Ramirez et al., 2014, Salces-Cubero et al., 2019; Zhao et al., 2020). For those studies investigating the effectiveness in clinical populations, this included older adults living with dementia (Ellis et al., 2017; Walter et al., 2006; Wu & Koo, 2016), depression (John & Tungol, 2017; Konradt et al., 2012; Shahidi et al., 2010; Walter et al., 2006; Wilson et al., 2010), chronic pain (Tse et al., 2010) and terminal cancer (Duggleby et al., 2007).

Quality assessment

Following completion of the quality assessment, a decision was made to include all studies despite their variable quality. Overall, studies clearly stated their aims and objectives, had a clear description of the research setting, had a representative sample and had a good fit between their research question and data collection. However, there was a lack of sample size calculations to determine effect sizes, with only three studies explicitly detailing this in their methods (Kuru-Alici

& Bahceli, 2021; Salces-Cubero et al., 2019; Zhao et al., 2020). Furthermore, no studies detailed any patient and public involvement in the intervention design, although three were pilot studies (Duggleby et al., 2007; Ellis et al., 2017; John & Tungol, 2017).

Intervention Characteristics and effectiveness

Interventions differed with regards to delivery method and duration. All the humour, spirituality and multi-component interventions utilised a group format (N=16), whereas the gratitude and hope interventions delivered an individual intervention (N=4), apart from Salces-Cubero et al., (2019) who utilised a group intervention for both hope and gratitude. Most (n=18) interventions took place dyadically with a facilitator, apart from two gratitude interventions (Bartlett & Arpin, 2019; Killen & Macaskill, 2015) and one hope intervention (Duggleby et al., 2007) which required participants to individually manage and complete the intervention. The duration of the interventions varied from 1 week to 13 weeks. Interventions took place in a range of settings including in the community (Bartholomaeus et al., 2019; Duggleby et al., 2007; Freitas et al., 2021; Ganz & Jacobs, 2014; Giapraki et al., 2020; Killen & Macaskill, 2015; Mathieu, 2008; Ramirez et al., 2014, Salces-Cubero et al., 2019; Shahidi et al., 2010 Wu & Koo, 2016), residential settings (Bartlett & Arpin, 2019; Chamorro-Garrido et al., 2021; Ellis et al., 2017; John & Tungol, 2017; Kuru Alici & Bahceli, 2021; Tse et al., 2010; Wilson et al., 2010; Zhao et al., 2020) and on psychiatric wards (Konradt et al., 2012; Walter et al., 2006).

A wide range of positive outcome measures were used to evaluate the efficacy of the character strength-based interventions. These included measures focusing on character strengths (hope, optimism, gratitude, spirituality) and broader wellbeing measures (quality of life, happiness, life satisfaction, wellbeing, general positivity, flourishing, resilience). To further review the intervention characteristics and effectiveness, they will be clustered by the character strengths to allow analysis and synthesis of similarities and differences.

Humour Interventions

Twelve studies examined the effectiveness of humour interventions, all of which utilised a group format. Interventions were evaluated with a range of participant groups (non-clinical, depression, dementia, chronic pain) and delivered in a range of settings (psychiatric ward, community and residential). The duration of these interventions was between four and 12 weeks, with each session lasting between 30 minutes to three hours. Of these 12, three were purely devoted to laughter yoga/ therapy (Ellis et al., 2017; Kuru Alici & Bahceli, 2021; Shahidi et al., 2010). These included similar elements such as breathing exercises and chanting. There were mixed results for this, with two studies finding an increase in happiness (Ellis et al., 2017) and life satisfaction (Shahidi et al., 2010), whereas Kuru Alici and Bahceli (2021) found the intervention had no effects on life satisfaction. These three studies had an average methodological quality, with limitations including no sample size calculation and limited report of the outcome measure reliability and validity.

Across the other nine studies, common elements among the humour interventions included: telling jokes, funny stories and anecdotes and interacting with funny materials e.g., photos, videos and props (Chamorro-Garrido et al., 2021; Ganz & Jacobs, 2014; Giapraki et al., 2020; John & Tungol, 2017; Konradt et al., 2012; Mathieu, 2008; Tse et al., 2010; Walter et al., 2006; Zhao et al., 2020). Of these nine, three interventions combined the humour intervention within their multi-modal intervention (Chamorro-Garrido et al., 2021; John & Tungol, 2017; Mathieu, 2008). All these multimodal interventions found positive results, with an increase in life satisfaction, happiness and wellbeing being observed. Of the remaining six, five report positive outcomes, finding an increase in happiness, life satisfaction and wellbeing (Ganz & Jacobs, 2014; Giapraki et al., 2020; Konradt et al., 2012; Tse et al., 2010; Zhao et al., 2020). However, Walter and colleagues (2006) report no significant improvements compared to the control group.

Methodological quality of these nine studies was variable, with three being low, scoring less than 40%, and with a lack of rationale and detail across their methods (John & Tungol, 2017; Mathieu, 2008; Walter et al., 2006). In contrast, the other six scored highly, all above 60%, with strengths being that they clearly stated their aims and objectives, there was a detailed discussion of strengths and limitations and a good fit between their research questions and method of data collection and analysis.

Gratitude interventions

Eight studies (Bartlett & Arpin, 2019; Bartholomaeus et al., 2019; Chamorro-Garrido et al., 2021; John & Tungol, 2017; Killen & Macaskill, 2015; Mathieu, 2008; Ramirez et al., 2014; Salces-Cubero et al., 2019) explored the effectiveness of using a gratitude intervention with older adults from non-clinical populations, apart from John and Tungol (2017) who recruited older adults experiencing depression.

The most common gratitude intervention used was the ‘three good things’ intervention, which was used by five studies. Two studies used this in an individual format with participants recording three good things that happened each day for 14 (Killen & Macaskill, 2015) or 20 days (Bartlett & Arpin, 2019). Both studies found that this was not effective at increasing life satisfaction, although an increase in flourishing was observed. However, when the three good things intervention was used in a single group session, embedded within a wider intervention; either focusing on other character strengths (John & Tungol, 2017; Mathieu, 2008) or other gratitude interventions (Salces-Cubero et al., 2019), a significant increase in happiness, life satisfaction and resilience was reported.

Other gratitude interventions included writing a letter of thanks with both Chamorro-Garrido et al. (2021) and Ramirez et al. (2014) spending one session out of their multi-modal intervention completing this activity. Both studies found an increase in life satisfaction and happiness. Furthermore, two studies encouraged participants to become consciously grateful for what they have in their lives. This was found to be effective when incorporated among other gratitude activities with a significant increase in happiness, life satisfaction and resilience being found (Salces-Cubero et al., 2019). Whereas when it was incorporated within a multimodal intervention involving CBT and mindfulness no significant changes in wellbeing, resilience or optimism were found (Bartholomaeus et al., 2019).

Methodological quality was variable, ranging from low (Mathiue, 2008) to high (Salces-Cubero et al., 2019), with most falling in the average range (between 50-60%). These clearly stated their aims and objectives, had a representative sample and most used a control condition.

Hope and Optimism interventions

Hope and optimism are grouped together since Park & Peterson (2009) use these terms to describe the same character strength. Only Salces-Cubero et al., (2019) described their intervention as focusing on optimism, the rest detail hope. Therefore, the term hope will be used throughout for ease.

Three studies explored the effectiveness of hope interventions with different participant groups: healthy older people (Salces-Cubero et al., 2019), older adults living in residential setting with depression (Wilson et al., 2010) and with terminal cancer living in the community (Duggleby et al., 2007). One additional study focused on hope for one session in a multi-component intervention with depressed older adults (John & Tungol, 2017). Two interventions were individual (Duggleby et al.,2007; Wilson et al., 2010) and two were a group format (John & Tungol, 2017; Salces-Cubero et al., 2019), with mixed results for both delivery methods. The hope activities varied between the studies. Two studies made use of goal setting (Salces-Cubero et al., 2019;

Wilson et al., 2010), although it appears that this is not an effective method at increasing hope, with Salces-Cubero et al. (2019) finding no changes in life satisfaction, happiness or resilience and with Wilson and colleagues (2010) finding negative results; a reduction in hope. Other interventions included letter writing, collecting items that give you hope, appreciating the importance of hope, telling your life story, receiving hope cards and pictures and working through barrier thoughts. Duggleby et al. (2007) and John and Tungol (2017) found their interventions increased hope and happiness respectively.

Methodological quality varied among these studies. Duggleby et al. (2007) and Salces-Cubero et al. (2019) scored highly: effectively detailing their aims and objectives, using a control group and a good fit between the research question and method of data collection. Whereas both Wilson et al. (2010) and John and Tungol (2017) scored less than 50%, with particular limitations being small sample sizes, and lack of justification for analytic procedures and tools.

Forgiveness interventions

The effectiveness of forgiveness interventions was examined with non-clinical populations (Chamorro-Garrido et al., 2014; Ramirez et al., 2014) and with depressed older adults in residential settings (John & Tungol, 2017). All three studies focused on forgiveness for one group session within a multi-modal intervention. Two studies used letter writing to instil forgiveness (Chamorro-Garrido et al., 2014; Ramirez et al., 2014). However, John and Tungol (2017) do not detail the intervention methods used, contributing to a low methodological quality rating. All multi-component interventions report a positive effect on increasing happiness and life satisfaction. Methodological quality of studies by Chamorro-Garrido et al. (2014) and Ramirez et al. (2014) was average; they effectively described their aims and objectives and used control groups, although neither reported service user involvement or sample size consideration.

Spirituality interventions

One study focused on spirituality in people living with dementia in the community (Wu & Koo, 2016). This was a spirituality reminiscence intervention that involved six weekly group sessions. This intervention was effective at increasing hope, life satisfaction and wellbeing. This study had an average methodological quality, with a lack of justification and methodological detail in the write up.

Multi-component interventions

Six studies used multi-component group interventions all with healthy older adults, apart from John and Tungol (2017) who focused on older adults experiencing depression in residential settings. All utilised group sessions and involved focusing on several character strengths. Some studies combined interventions from other theoretical frameworks, for example life review (Chamorro-Garrido et al., 2021; Ramirez et al., 2014), CBT (Bartholomaeus et al., 2019; Freitas et al., 2021), mindfulness (Bartholomaeus et al., 2019) and psychoeducation around nutrition, exercise, recreation and attitude (Mathieu, 2008). The findings indicate that combining character strength-based interventions with CBT is not effective at increasing wellbeing, since both Freitas et al. (2021) and Batholomaeus et al. (2019) found no significant changes in wellbeing, life satisfaction, resilience or optimism. Whereas the other four studies all reported positive results, finding an increase in life satisfaction, happiness and wellbeing following completion of the intervention. The methodological quality of these studies varied from low to average. Those with average methodological quality, effectively stated their aims and objectives, but detailed no service user involvement (Bartholomaeus et al., 2019; Chamorro-Garrido et al., 2021; Freitas et al., 2021; Ramirez et al., 2014). However, Mathieu (2008) had a poor methodological quality, with no control group, did not detail the recruitment procedures or sample size calculation.

Effectiveness at follow up

For the studies that found a positive effect post intervention, six completed follow up assessments for the strengths of humour (Chamorro-Garrido et al., 2021; Giapraki et al., 2020; Zhao et al., 2020), gratitude (Chamorro-Garrido et al., 2021; Killen & Macaskill, 2015; Ramirez et al., 2014; Salces-Cubero et al, 2019), hope (Salces-Cubero et al, 2019) and forgiveness (Chamorro-Garrido et al., 2021; Ramirez et al., 2014). It was found these positive increases in wellbeing (Giapraki et al., 2020), flourishing (Killen & Macaskill, 2015), life satisfaction, resilience and happiness (Salces-Cubero et al, 2019) were maintained one month after completion of the intervention. Positive increases in wellbeing were also maintained two months after completion (Zhao et al., 2020) but increased life satisfaction and happiness were not maintained four months post intervention (Ramirez et al., 2014). Although, one study found that improvements in life satisfaction and happiness were maintained one year later, but they had refresher sessions in the 1st, 3rd, 6th, 8th and 12th month following the intervention (Chamorro-Garrido et al., 2021).

Discussion

This review aimed to synthesise the character strength-based interventions that have aimed to improve wellbeing among older adults, since there is a need for evidenced based interventions to improve wellbeing in this population (NHS, 2019). This built on the review conducted by Sutipan et al. (2017), by involving older clinical populations and using a clear framework to define PPIs, since this is a common limitation of previous reviews (Boiler et al., 2013). Therefore, this is the first review to systematically explore the effectiveness of character strength-based interventions among older adults.

Overall findings suggest that character strength-based interventions are effective at improving wellbeing among older adults in both clinical and non-clinical populations. This extends the findings of Sutipan and colleagues (2017) beyond interventions tested with non-clinical older adults. This has important clinical implications as there is a current drive for asset-based approaches to move away from more deficit focused models (Daly & Westwood, 2017). This study highlights that character strength-based interventions may be an effective transdiagnostic intervention for improving wellbeing, helping to contribute to a positive, asset focused approach to health care. However, whilst effectiveness can be seen across clinical and non-clinical populations, there are currently few studies focusing on clinical populations. Therefore, future research is needed to further understand the application of character strength-based approaches to older adult clinical populations. In the wider clinical application of character strength-based interventions the individual's needs, and context are important to consider in potentially determining effectiveness (Lyubomirsky & Layous, 2013), especially since the needs of each sub-clinical group will vary.

As highlighted by the quality assessment, no studies reported any service user involvement in the development of the intervention. Therefore, it is unclear why interventions focused on certain character strengths and whether these are most meaningful to older adults; particularly since out of those character strengths most strongly associated with life satisfaction across the literature (love, zest, gratitude, curiosity and hope), only gratitude and hope have been focused upon with this population (Park et al., 2004; Peterson et al., 2007; Proyer et al., 2011). Accordingly, there is a need for co-produced character strength-based interventions to understand which character strengths are most relevant for this population, as well as clinical sub-groups, to enhance the effectiveness and acceptability of interventions. Co-production is a current research priority (Health Research Authority / INVOLVE, 2016) with co-produced interventions being more relevant to the client group (NICE, 2013). One model that has co-production at the centre of designing a complex intervention is the medical research council framework (Skivington, 2021).

Therefore, future research could use this as a guide to develop meaningful strength-based interventions for older adults.

The findings of this review suggest that PPIs utilising a group format and focusing on multiple strengths may be most effective at improving wellbeing for older adults. This aligns with previous reviews analysing the effectiveness of PPIs across different populations (Carr et al., 2021). Group interventions are important for older adults, since they are at an increased risk of social isolation (Nicholson, 2012). Therefore, groups provide the opportunity for social interaction which can positively increase an individual's wellbeing (Haslam et al., 2010). Furthermore, groups with multiple components are suggested by the NICE guidelines for improving wellbeing in older adults (NICE, 2015), and therefore, the implementation of character strength-based interventions could help clinical services to meet this recommendation. This could either be by incorporating character strength interventions into existing group-based interventions, or by having a standalone character strength-based intervention, since there is evidence for the effectiveness of both. However, the current evidence suggests it is not effective when combined with CBT.

Limitations

Due to the heterogeneity of the included studies with regards to intervention, participants, setting and strength focused on, combined with the variable quality of studies, further research evidence is needed to conclude that a group format focusing on multiple strengths is most effective. Included studies often lacked sample size calculations as well as inclusion of valid and reliable measurement tools. Therefore, since only one of the included studies was a randomised-controlled trial (Wu & Koo, 2016), this may be a helpful next development (Kendall, 2003) to overcome these limitations, and provide more robust evidence for the effectiveness of character strength-based interventions. Whilst it is recognised that randomised controlled trials are costly in time and money (Hariton & Locascio, 2018), this is the next step needed to build on the current research evidence.

There are limitations to the search terms used within this review. For example, upon initial scoping searches, when all the character strengths were used in the search terms, this retrieved 242,000 papers. Thus, it was not a feasible number of papers to screen within the scope of this review. Hence, only those character strengths with the greatest evidence base (Park et al., 2004; Peterson et al., 2007; Proyer et al., 2011) were inputted into the search terms. However, this means it is possible that studies which would have met the inclusion/ exclusion criteria may have been missed; despite forward and backwards citation searching done to try and mitigate the effects of this. Other systematic reviews looking at character strength-based interventions did not individually input each character strength, but instead used the term 'strength-based interventions' (e.g., Yan et al., 2019). Therefore, this was used alongside the individual strengths in this review.

Furthermore, it can be difficult to define what constitutes a character strength-based intervention due to the multiple meanings each strength holds, with them often being poorly defined (Niemiec & Pearce, 2021). For example, in attempting to explore love interventions, it is unclear whether this is to include family or relational interventions. Therefore, only interventions that explicitly detail the character strength were included. The combined effect of these limitations means that, while this review identified that only five-character strengths have developed interventions that have been evaluated with older adults (humour, gratitude, hope, spirituality and forgiveness), there may be others that were not captured by this search.

Conclusion

Overall, character strength-based interventions are seen as an effective way to increase wellbeing among older adults, in both clinical and non-clinical populations. It is suggested that multicomponent and group interventions may be most effective at increasing wellbeing, and therefore could provide a framework for clinical services implementing strength-based approaches. However, there were limitations in the evidence base as study designs were heterogenous and therefore further evidence is needed. Future research should aim to co-develop character strength-based interventions, to ensure the intervention targets the most relevant character strengths and meets the needs of the specific target groups, with the needs of each clinical group being diverse.

References

Bartholomaeus, J. D., Van Agteren, J. E., Iasiello, M. P., Jarden, A., & Kelly, D. (2019). Positive Aging: The impact of a community wellbeing and Resilience Program. *Clinical Gerontologist, 42*(4), 377–386. https://doi.org/10.1080/07317115.2018.1561582

Bartlett, M. Y., & Arpin, S. N. (2019). Gratitude and loneliness: Enhancing health and well-being in older adults. *Research on Aging, 41*(8), 772–793. https://doi.org/10.1177/0164027519845354

Bemheim, J., & Buyse, M. (1984). The anamnestic comparative self-assessment for measuring the subjective quality of life of cancer patients. *Journal of Psychosocial Oncology*, *1,* 25–38.

Bolier, L., Haverman, M., Westerhof, G. J., Riper, H., Smit, F., & Bohlmeijer, E. (2013). Positive psychology interventions: A meta-analysis of randomized controlled studies. *BMC Public Health*, *13*(1), 1-20. https://doi.org/10.1186/1471-2458-13-119

Butler, J., & Kern, M. (2016). The PERMA-Profiler: A brief multidimensional measure of flourishing. *International Journal of Wellbeing, 6*(3), 1-48. https://doi.org/10.5502/ijw.v6i3.526

Carr, A., Cullen, K., Keeney, C., Canning, C., Mooney, O., Chinseallaigh, E., & O'Dowd, A. (2021). Effectiveness of positive psychology interventions: A systematic review and meta-analysis. *The Journal of Positive Psychology*, *16*(6), 749–769. https://doi.org/10.1080/17439760.2020.1818807

Casellas-Grau, A., Font, A., & Vives, J. (2014). Positive psychology interventions in breast cancer. A systematic review. *Psycho-Oncology*, *23*(1), 9–19. https://doi.org/10.1002/pon.3353

Chamorro-Garrido, A., Ramírez-Fernández, E., & Ortega-Martínez, A. R. (2021). Autobiographical memory, gratitude, forgiveness and sense of humor: An intervention in older adults. *Frontiers in Psychology, 12*, 1-17. https://doi.org/10.3389/fpsyg.2021.731319

Chi, I., & Boey, K. (1992). Validation of measuring instruments of mental health status of the elderly in Hong Kong. *Clinical Gerontologist, 13*(4), 33-51. https://doi.org/10.1300/J018v13n04_04

Cohen, S., Mount, B., Strobel, M., & Bui, F. (1995). The McGill quality of life questionnaire: A measure of quality of life appropriate for people with advanced disease. A preliminary study of validity and acceptability. *Palliative Medicine*, *9,* 207–219. https://doi.org/10.1177/026921639500900306

Daaleman, T., & Frey, B. (2004). The Spirituality Index of Well-Being: A new instrument for health-related quality of life research. *Annals of Family Medicine, 2*(5), 499− 503. https://doi.org/ 10.1370/afm.89

Daly, M., & Westwood, S. (2017). Asset-based approaches, older people and social care: an analysis and critique. *Ageing and Society, 38*(6), 1087-1099. https://doi.org/10.1017/S0144686X17000071

Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*(1), 71-75. https://doi.org/10.1207/s15327752jpa4901_13.

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2009). New measures of well-being: Flourishing and positive and negative feelings. *Social Indicators Research*, *39*, 247-266. https://doi.org/10.1007/978-90-481-2354-4 12

Duckworth, A., Steen, T., & Seligman, M. (2005). Positive psychology in clinical practice. *Annual Review of Clinical Psychology*, *1*(1), 629-651. https://doi.org/10.1146/annurev.clinpsy.1.102803.144154

Duggleby, W. D., Degner, L., Williams, A., Wright, K., Cooper, D., Popkin, D., & Holtslander, L. (2007). Living with hope: Initial evaluation of a psychosocial hope intervention for older

Palliative Home Care Patients. *Journal of Pain and Symptom Management, 33*(3), 247–257. https://doi.org/10.1016/j.jpainsymman.2006.09.013

Dupuy, H. (1978). General Well-Being Schedule (GWB). *APA PsycTests*. https://doi.org/10.1037/t04083-000

Ellis, J. M., Ben-Moshe, R., & Teshuva, K. (2017). Laughter yoga activities for older people living in residential aged care homes: A feasibility study. *Australasian Journal on Ageing*, *36*(3), 28-31. https://doi.org/10.1111/ajag.12447

Freitas, E. R., Barbosa, A. J., & Neufeld, C. B. (2021). Strengths based character education for the elderly: A quasi-experimental study. *Psicologia: Teoria e Pesquisa, 37*, 1-12. https://doi.org/10.1590/0102.3772e372120

Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology*, *9*(2), 103-110. https://doi.org/10.1037/1089-2680.9.2.103

Ganz, F. D. K., & Jacobs, J. M. (2014). The effect of humor on elder mental and physical health. *Geriatric Nursing*, *35*(3), 205–211. https://doi.org/10.1016/j.gerinurse.2014.01.005

Giapraki, M., Moraitou, D., Pezirkianidis, C., & Stalikas, A. (2020). Humor in aging: Is it able to enhance wellbeing in community dwelling older adults? *Psychology: the Journal of the Hellenic Psychological Society*, *25*(1), 128-150. https://doi.org/10.12681/psy_hps.25342

Gonot-Schoupinsky, F. N., & Garip, G. (2018). Laughter and humour interventions for well-being in older adults: A systematic review and Intervention Classification. *Complementary Therapies in Medicine, 38*, 85–91. https://doi.org/10.1016/j.ctim.2018.04.009

Gouveia, V., Barbosa, G., Andrade, E., & Carneiro, M. (2005). Medindo a satisfação com a vida dos médicos no Brasil. *Jornal Brasileiro de Psiquiatria*, *54*(4), 298-305.

Hariton, E., & Locascio, J. (2018). Randomised controlled trials- the gold standard for effectiveness research. *An International Journal of Obstetrics and Gynaecology, 125*(13), 1716. https://doi.org/10.1111/1471-0528.15199.

Haslam, C., Haslam, A., & Jetten, J. (2010). The social treatment: The benefits of group interventions in residential care settings. *Psychology and Aging, 25*(1), 157-167. https://doi.org/ 10.1037/a0018256.

Health Research Authority / INVOLVE. (2016). *Impact of public involvement on ethical aspects of research.* www.invo.org.uk/posttypepublication/public-involvement-in-researchimpact-on-ethical-aspects-ofresearch

Herth, K. (1992). Abbreviated instrument to measure hope: development and psychometric evaluation. *Journal of Advanced Nursing, 17,* 1251-1259. https://doi.org/ 10.1111/j.1365-2648.1992.tb01843.x

Hills, P., & Argyle, M. (2002). The Oxford Happiness Questionnaire: A compact scale for the measurement of psychological well-being. *Personality and Individual Differences*, *33*(7), 1071–1082. https://doi.org/10.1016/S0191-8869(01)00213-6

Hirsch, R., Junglas, K., Konradt, B., & Jonitz, M. (2010). Humour therapy in the depressed elderly: results of an empirical study. *Z Gerontol Geriatri, 43*(1), 42-52. https://doi.org/ 10.1007/s00391-009-0086-9.

John, M. M., & Tungol, J. (2017). Humour based intervention program (HBIP): A pilot study. *Indian Journal of Positive Psychology*, *8*(4), 611-615. https://doi.org/10.15614/ijpp%2F2017%2Fv8i4%2F165892.

Kendall, J. (2003). Designing a research project: randomised controlled trials and their principles. *Emergency Medicine Journal, 20*(2), 164-168. http://doi.org/10.1136/emj.20.2.164

Killen, A., & Macaskill, A. (2015). Using a gratitude intervention to enhance well-being in older adults. *Journal of Happiness Studies*, *16*(4), 947–964. https://doi.org/10.1007/s10902-014-9542-3.

Konradt, B., Hirsch, R. D., Jonitz, M. F., & Junglas, K. (2012). Evaluation of a standardized humor group in a clinical setting: A feasibility study for older patients with depression. *International Journal of Geriatric Psychiatry*, *28*(8), 850–857. https://doi.org/10.1002/gps.3893.

Kozma, A., & Stones, M. (1980) The measurement of happiness: development of the Memorial University of Newfoundland Scale of Happiness (MUNSH). *Journal of Gerontology, 35*(6), 906-912. https://doi.org/10.1093/geronj/35.6.906

Kuru Alici, N., & Zorba Bahceli, P. (2021). Effects of laughter therapy on life satisfaction and loneliness in older adults living in nursing homes in Turkey: A parallel group randomized controlled trial. *Rehabilitation Nursing*, *46*(2), 104–112. https://doi.org/10.1097/rnj.0000000000000266

Lai, S., Lim, K., Low, W., & Tang, V. (2019). Positive psychological interventions for neurological disorders: A systematic review. *The Clinical Neuropsychologist*, *33*(3), 490–518. https://doi.org/10.1080/13854046.2018.1489562

Lawton, M. (1991). A multidimensional view of quality of life in frail elders. In R. P. Abeles (Ed.), *The concept and measurement of quality of life in the frail elderly* (pp. 3-27). Academic Press.

Lomas, T., & Ivtzan, I. (2016). Second wave positive psychology: Exploring the positive–negative dialectics of wellbeing. *Journal of Happiness Studies*, *17*(4), 1753-1768. https://doi.org/10.1007/s10902-015-9668-y

Lohmann, N. (1976). *Assessment tools for recreation therapy and related fields*. Ravensdale, WA: Idyll Arbor, Inc.

Lyubomirsky, S., & Layous, K. (2013). How do simple positive activities increase well-being? *Current Directions in Psychological Science*, *22*(1), 57–62. https://doi.org/10.1177/0963721412469809

Lyubomirsky, S., & Lepper, H. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research, 4,* 137–155. https://doi.org/10.1023/A:1006824100041

Macaskill, A. (2016). Review of positive psychology applications in clinical medical populations. *Healthcare*, *4*(3), 66-77. https://doi.org/10.3390/healthcare4030066

Margelisch, K. (2017). Character strengths, their valuing and their association with well-being in middle and older age (an exploratory research study) [unpublished]. https://doi.org/10.7892/boris.107586

Martinez-Marti, M.., & Ruch, W. (2014). Character strengths and well-being across the life span: Data from a representative sample of German-speaking adults living in Switzerland. *Frontiers in Psychology*, *5*, 1-10. https://doi.org/10.3389/fpsyg.2014.01253

Mathieu, S. I. (2008). Happiness and Humor Group promotes life satisfaction for senior center participants. *Activities, Adaptation & Aging*, *32*(2), 134–148. https://doi.org/10.1080/01924780802143089

McCullough, M., Emmons, R., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology, 82*(1), 112-127. https://doi.org/10.1037//0022-3514.82.1.112

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Prisma Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Medicine, 6*(7), 1-6. https://doi.org/10.1371/journal.pmed.1000097.

Neugarten, B., Havighurst, R., & Tobin, S. (1961). The measurement of life satisfaction. *Journal Gerontology, 16*(2), 134− 43. https://doi.org/10.1093/geronj/16.2.134

NHS (2019) *The NHS Long Term Plan.* https://www.longtermplan.nhs.uk/wp-content/uploads/2019/08/nhs-long-term-plan-version-1.2.pdf

NICE. (2013). *Patient and Public Involvement Policy.* https://www.nice.org.uk/media/default/About/NICE-Communities/Public-involvement/Patient-and-public-involvement-policy/Patient-and-public-involvement-policy-November-2013.pdf

NICE. (2015). *Older people: Independence and wellbeing.* https://www.nice.org.uk/guidance/ng32/chapter/Context

Nicholson, N. (2012). A review of social isolation: An important but underassessed condition in older adults. *The Journal of Primary Prevention, 33*, 137-152. https://doi.org/10.1007/s10935-012-0271-2

Niemiec, R., & Pearce, R. (2021). The Practice of Character Strengths: Unifying Definitions, Principles, and Exploration of What's Soaring, Emerging, and Ripe with Potential in Science and in Practice. *Frontiers, 11,* 1-16. https://doi.org/10.3389/fpsyg.2020.590220

Park, N., & Peterson, C. (2009). Character strengths: Research and practice. *Journal of College and Character*, *10*(4), 1-10. https://doi.org/10.2202/1940-1639.1042

Park, N., Peterson, C., & Seligman, M. E. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, *23*(5), 603-619. https://doi.org/10.1521/jscp.23.5.603.50748

Peterson, C. & Seligman, M. (2004). *Character Strengths and Virtues: A handbook of classification.* Oxford University Press.

Peterson, C. & Seligman, M. (2004). *Values in Action Inventory of Strengths (VIA-IS).* Values in Action Institute.

Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman, M. E. (2007). Strengths of character, orientations to happiness, and life satisfaction. *The Journal of Positive Psychology*, *2*(3), 149–156. https://doi.org/10.1080/17439760701228938

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, Lisa., Rodgers, Mark., Britten, N., Roen, K., & Duffy, S. (2006). *Guidance on the conduct of narrative synthesis in systematic reviews: A product from the ESRC Methods Programme.* Lancaster University. https://doi.org/10.13140/2.1.1018.4643.

Proyer, R. T., Gander, F., Wyss, T., & Ruch, W. (2011). The relation of character strengths to past, present, and future life satisfaction among German-speaking women. *Applied Psychology: Health and Well-Being*, *3*(3), 370–384. https://doi.org/10.1111/j.1758-0854.2011.01060.x

Proyer, R. T., Ruch, W., & Buschor, C. (2013). Testing strengths-based interventions: A preliminary study on the effectiveness of a program targeting curiosity, gratitude, hope, humor, and zest for enhancing life satisfaction. *Journal of Happiness Studies*, *14*(1), 275–292. https://doi.org/10.1007/s10902-012-9331-9

Ramírez, E., Ortega, A. R., Chamorro, A., & Colmenero, J. M. (2014). A program of positive intervention in the elderly: Memories, gratitude and forgiveness. *Aging & Mental Health*, *18*(4), 463–470. https://doi.org/10.1080/13607863.2013.856858

Ruch, W., & Carrell, A. (1998). Trait cheerfulness and the sense of humor. *Personality and Individual Differences, 24*(4), 551–558. https://doi.org/10.1016/S0191-8869(97)00221-3.

Ruch, W., Koehler, G., & Van Thriel, C. (1997). To be in good or bad humour: Construction of the state form of the State-Trait-Cheerfulness-Inventory-STCI. *Personality and Individual Differences, 22*(4), 477-491. https://doi.org/10.1016/S0191-8869(96)00231-0

Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069–1081. https://doi.org/10.1037/0022-3514.57.6.1069

Salces-Cubero, I. M., Ramírez-Fernández, E., & Ortega-Martínez, A. R. (2019). Strengths in older adults: Differential effect of savoring, gratitude and optimism on well-being. *Aging & Mental Health*, *23*(8), 1017–1024. https://doi.org/10.1080/13607863.2018.1471585

Seligman, M., & Csikszentmihalyi, M. (2014). Positive Psychology: An Introduction. In *Flow and the Foundations of Positive Psychology* (pp. 279-298). Springer.

Scheier, M., Carver, C., & Bridges, M. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the life orientation test. *Journal of Personality and Social Psychology*, *67*(6), 1063–1078. https//doi.org/10.1037/0022-3514.67.6.1063

Schumacher, J., Leppert, K., Gunzelmann, T., Strauss, B., & Braehler, E. (2004). Die Resilienzskala – Ein Fragebogen zur Erfassung der psychischen Widerstandsfaehigkeit als Personmerkmal. Zeitschrift für Klinische Psychologie, Psychiatrie und Psychotherapie. *Z Klin Psychol Psychiatr Psychother 53*, 16–39.

Shahidi, M., Mojtahed, A., Modabbernia, A., Mojtahed, M., Shafiabady, A., Delavar, A., & Honari, H. (2010). Laughter yoga versus group exercise program in elderly depressed women: A randomized controlled trial. *International Journal of Geriatric Psychiatry*, *26*(3), 322–327. https://doi.org/10.1002/gps.2545

Shenkin, S. D., Harrison, J. K., Wilkinson, T., Dodds, R. M., & Ioannidis, J. P. A. (2017). Systematic reviews: guidance relevant for studies of older people. *Age and Ageing*, *46*(5), 722–728. https://doi.org/10.1093/ageing/afx105

Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, *65*(5), 467–487. https://doi.org/10.1002/jclp.20593

Sirriyeh, R., Lawton, R., Gardner, P., & Armitage, G. (2011). Reviewing studies with diverse designs: The development and evaluation of a new tool. *Journal of Evaluation in Clinical Practice*, *18*(4), 746–752. https://doi.org/10.1111/j.1365-2753.2011.01662.x

Skivington, K., Matthews, L., Simpson, S., Craig, P., Baird, J., Blazeby, J., Boyd, K., Craig, N., French, D., McIntosh, E., Petticrew, M., Rycroft-Malone, J., White, M., & Moore, L. (2021). A new framework for developing and evaluating complex interventions: update of Medical Research Council guidelines. *BMJ. 374,* 1-11. https://doi.org/10.1136/bmj.n2061

Smith, B., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, *15*(3), 194–200. https://doi.org/10.1080/10705500802222972

Sutipan, P., Intarakamhang, U., & Macaskill, A. (2017). The impact of positive psychological interventions on well-being in healthy elderly people. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being, 18*(1), 269-291. https://doi.org/10.1007/s10902-015-9711-z

Tse, M., Lo, A., Cheng, T., Chan, E., Chan, A., & Chung, H. (2010). Humor therapy: Relieving chronic pain and enhancing happiness for older adults. *Journal of Aging Research*, *2010,* 1–9. https://doi.org/10.4061/2010/343574

Van Agteren, J., Iasiello, M., Lo, L., Bartholomaues, J., Kopsaftis, Z., Carey, M., & Kyrios, M. (2021). A systematic review and meta-analysis of psychological interventions to improve mental wellbeing. *Nature Human Behaviour, 5,* 631-652. https://doi.org/ 10.1038/s41562-021-01093-w

Wagnild, G., & Young, H. (1993). Development and psychometric evaluation of the resilience scale. *Journal of Nursing Measurement, 1*(2), 165–178.

Walter, M., Hänni, B., Haug, M., Amrhein, I., Krebs-Roubicek, E., Müller-Spahn, F., & Savaskan, E. (2006). Humour therapy in patients with late-life depression or Alzheimer's disease: A pilot study. *International Journal of Geriatric Psychiatry*, *22*(1), 77–83. https://doi.org/10.1002/gps.1658

Waterworth, S., Raphael, D., Gott, M., Arroll, B., Benipal, J., & Jarden, A. (2019). An exploration of how community-dwelling older adults enhance their well-being. *International Journal of Older People Nursing*, *14*(4). https://doi.org/10.1111/opn.12267

Watson D., Clark L. A., Tellegen A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063

Wilson, D. M., Marin, A., Bhardwaj, P., Lichlyter, B., Thurston, A., & Mohankumar, D. (2010). A hope intervention compared to friendly visitors as a technique to reduce depression among older nursing home residents. *Nursing Research and Practice*, *2010*, 1–6. https://doi.org/10.1155/2010/676351

World Health Assembly (2020). *Decade of healthy ageing: the global strategy and action plan on ageing and health 2016–2020: towards a world in which everyone can live a long and healthy life: report by the Director-General. World Health Organization.* https://apps.who.int/iris/handle/10665/355618

World Health Organisation (2020) *Basic Documents. Forty Ninth Edition.* https://apps.who.int/gb/bd/pdf_files/BD_49th-en.pdf

Wu, L., & Koo, M. (2016). Randomized controlled trial of a six-week spiritual reminiscence intervention on hope, life satisfaction, and spiritual well-being in elderly with mild and moderate dementia. *International Journal of Geriatric Psychiatry*, *31*(2), 120–127. https://doi.org/10.1002/gps.4300

Yan, T., Chan, C., Chow, K., Zheng, W., & Sun, M. (2020). A systematic review of the effects of character strengths-based intervention on the psychological well-being of patients suffering from chronic illnesses. *Journal of Advanced Nursing*, *76*(7), 1567–1580. https://doi.org/10.1111/jan.14356

Zhao, J., Yin, H., Wang, X., Zhang, G., Jia, Y., Shang, B., Zhao, J., Wang, C., & Chen, L. (2020). Effect of humour intervention programme on depression, anxiety, subjective well-being, cognitive function and sleep quality in Chinese nursing home residents. *Journal of Advanced Nursing*, *76*(10), 2709–2718. https://doi.org/10.1111/jan.14472

Part Two: Empirical Paper

This paper is written in the format ready for submission to the *Journal of Aging and Mental Health.*

Please see Appendix C for the submission guidelines.

The co-design of a dementia specific positive psychology intervention: learning from the views of people living with dementia.

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Abstract

Objectives: This study aimed to understand which character strengths are most important for people with dementia (PWD), and therefore which strengths-based interventions are most meaningful and acceptable to PWD.

Methods: A participatory design, utilising Delphi methodology, was incorporated into an iterative three stage framework: (1) literature reviewed for Positive Psychology (PP) interventions and patient public involvement to define the character strengths; (2) modified Delphi (N=10) identified which of the 24-character strengths are most important for PWD; (3) focus groups (N=14) to explore which PP interventions are most acceptable and meaningful. Qualitative data from the focus groups was analysed using thematic analysis.

Results: Love, kindness and humour were deemed the most important character strengths for living with dementia. Qualitative data from the focus groups can be captured in three superordinate themes: (1) lack opportunity not capacity; (2) key considerations of PP interventions for PWD; and (3) potential benefits of PP interventions.

Conclusions: Love, kindness and humour come naturally to PWD, but people may lack social opportunity to use these strengths. Therefore, a group-based PP intervention promoting fun, social relationships and connection to one's values is deemed most meaningful and acceptable as this may provide a social context to use these strengths.

Keywords

Dementia; character strengths; positive psychology intervention; coproduction

Introduction

Supporting individuals to live well with dementia is an international priority (Gauthier et al., 2022) and despite the negative discourses that surrounds dementia (Alzheimer's Research UK, 2019), people with dementia (PWD) can have positive experiences, actively seek these out and grow through the adversity they face (Wolverson et al., 2016). Individual experiences of living well with dementia inevitably vary based on psychological characteristics, physical health and fitness, level of social engagement and connectedness, ability to have independence, quality of relationships and their role in society (Quinn et al., 2022). Therefore, holistic and positive approaches to psychosocial support are needed to help people to live well, with these being valued and used by clinical psychologists in the implementation of person-centred care (British Psychological Society, 2016).

In seeking to understand what it means to live well with dementia, qualitative research reveals the importance of the strengths people bring to living with dementia, such as love, gratitude, hope and humour, which allows them to face and fight their illness and maintain a sense of personal identity and growth (Wolverson et al., 2016). For example, PWD can experience humour and place an importance on this to maintain wellbeing (Hickman et al., 2018). It is suggested that positive psychological resources are a predictor of living well with dementia (Lamont et al., 2020) and that maintaining a positive outlook can contribute to couples’ resilience to live with the challenges dementia brings (Conway et al., 2020). Therefore, in seeking to develop interventions that grow an individual’s resources and strengths to improve wellbeing (Csikszentmihalyi & Seligman, 2000), a positive psychological framework could be helpful.

Positive psychology (PP) is ‘devoted to the study and theory of the processes and conditions that contribute to flourishing or optimal functioning across groups, institutions, and individuals’ (Gable & Haidt, 2005, p. 103). More recent developments of 2nd wave PP approaches, recognise the dialectical interplay and interdependence between positive and negative experiences (Lomas & Ivtzan, 2016). This approach resonates with living with dementia whereby individuals note the challenges living with dementia poses, whilst actively striving to keep living well and to seek out positive experiences (Wolverson et al., 2010; Wolverson et al., 2016). Therefore, using a PP framework in dementia research is not to deny the hardships PWD may face (Bartlett et al., 2017) but aims to enhance our understanding of what it means to live with dementia in order to support individuals to live well.

Consequently, PP interventions could be helpful to support PWD to live well, as in their broadest sense they aim to promote wellbeing by enhancing positive affect, meaning and engagement (Duckworth et al., 2005). PP interventions are effective at improving wellbeing in older adults (Ho et al., 2014; Salces-Cubero et al., 2019), and more broadly across a range of populations, with multi component interventions generally being most effective (Carr et al., 2021). Currently, few PP interventions have been evaluated with PWD, although qualitative research suggests gratitude diaries are perceived as acceptable and useful to PWD (Pearson et al., 2021). Furthermore, humour therapy for PWD in a residential setting demonstrates positive benefits, such as increasing happiness and reducing agitation (Low et al., 2014). Therefore, it appears focusing on these strengths might be helpful at improving wellbeing**.**

From an assets/ strength-based perspective, the Character Strengths and Virtues (CSV) framework (Park et al., 2004) could be of relevance to understand how PWD could be supported to live well. This PP framework delineates 24-character strengths that contribute to wellbeing and these combined to define six virtues: wisdom and knowledge, courage, humanity, justice, temperance and transcendence (Park & Peterson, 2009). Character strengths are defined as ‘positive traits reflected in thoughts, feelings and behaviours’ (Park et al., 2004, p. 603), thus being the psychological processes that define the core characteristics of the virtues (Park & Peterson, 2009). The 24-character strengths have been utilised in the development of strengths-based interventions to improve wellbeing, since they show a strong relationship with different models of wellbeing (Wagner et al., 2020). Thus, the CSV set within the context of a second wave PP perspective could provide an overarching framework to develop PP interventions specific to PWD, given the existing evidence in other populations (e.g., Yan et al., 2020).

In the design of interventions, PWD should be actively involved, with co-production now a priority within dementia research (Vernooij-Dassen et al., 2021) as this allows research to be respectful and collaborative (Innovations in dementia, 2023). Few interventions in dementia care have been co-produced, with the focus of the intervention being decided upon by research teams following a review of research evidence and theory (e.g., Cotelli et al., 2012; Spector et al., 2003) or involving the opinions of carers and professionals (Burton et al., 2019), possibly because of the view that PWD are incapable of consenting or being actively involved in research (Dementia Action Alliance, 2017). A key element of co-producing interventions is combining the knowledge of the research evidence and theory brought by the researcher with the lived experiences, preferences and choices of PWD (Gove et al., 2017). Studies that actively involve PWD in the design of the intervention, report the interventions being more personalised and tailored to the needs of the people using them (Dodd et al., 2021), highlighting the benefits of this approach.

Co-production naturally sits within current approaches to systematic development of complex interventions, with the Medical Research Council (MRC) detailing four phases to the development of a complex intervention: development, feasibility, evaluation and implementation (Skivington et al., 2021). As such, this research aimed to contribute towards the development phase of a dementia-specific multi-component PP intervention by answering two research questions: (1) from the perspective of PWD which character strengths are deemed most important to live well with dementia? (2) for these identified character strengths, which strength-based interventions would be most meaningful and acceptable to PWD?

Method

A participatory, modified Delphi design was incorporated within an iterative three stage framework that centred on generating qualitative data through focus groups. The three stages can be seen in Figure 1. Based on the approach used by Yates and Colleagues (2020) these involved (1) evidence gathering and Patient and Public Involvement (PPI), (2) modified Delphi and (3) focus groups. This iterative approach allowed new insights to be incorporated across the stages, combining research evidence with the voices of PWD. There are different approaches to involving PWD actively in research, with INVOLVE (2012) describing these as consultation, collaboration and user controlled. This study predominantly used consultation, whereby PWD were consulted systematically in the key decision-making processes.

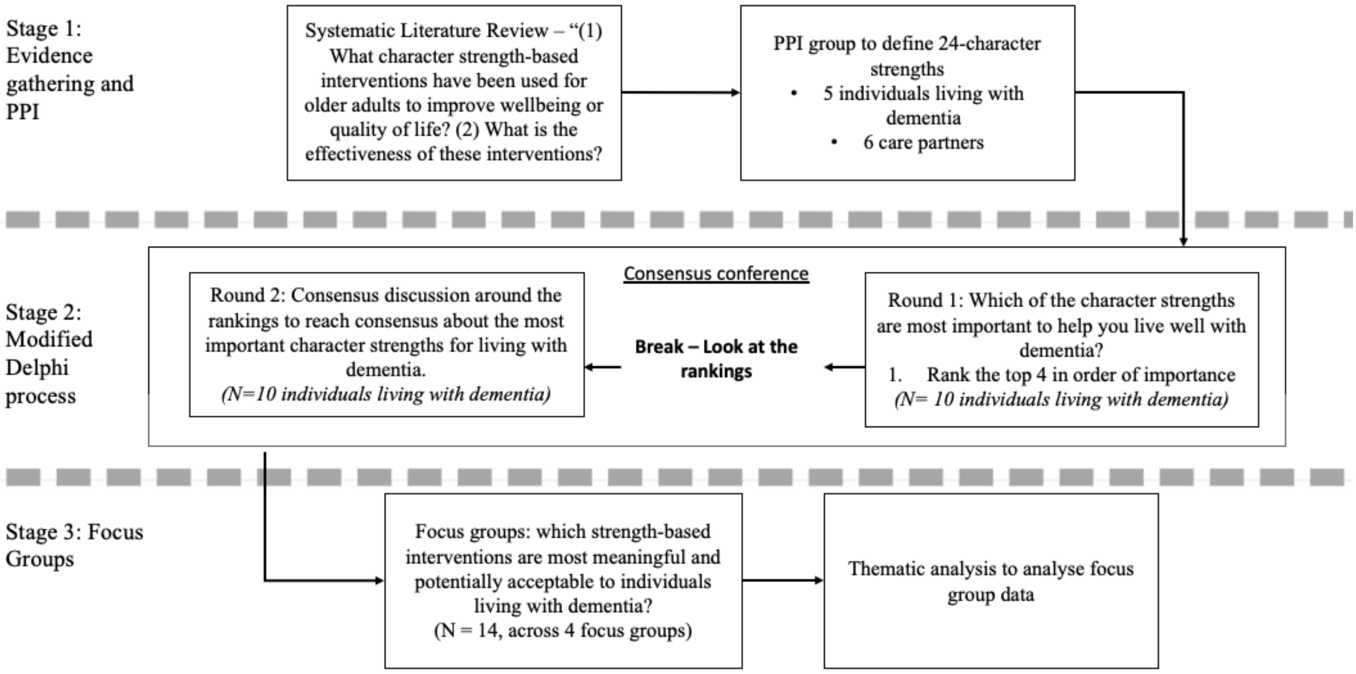

Figure 1.

Outline of the research procedure

Stage 1: Evidence gathering and Patient and public involvement

Aim: To review the evidence for existing character strength-based interventions and to co-produce definitions of the character strengths.

Stage 1a: Systematic literature review

A systematic literature review was undertaken (see Jackman et al., 2023) to review the evidence base regarding existing character strength-based interventions that have been used with older adults. The following questions were investigated: (1) what character strength-based interventions have been used for older adults to improve wellbeing or quality of life? (2) what is the effectiveness of these interventions?

Stage 1b: Patient and public involvement

Participants: An established PPI group in the North of England, was approached and agreed to being involved in the research. The group was comprised of five PWD and six care partners. PPI was a vital first step as it ensured the research was meaningful to this population and that all resources created for later stages were appropriate and accessible to their needs. This was particularly important since the researcher is 'outside' the participant group.

Procedure: The researcher attended the PPI group to seek consultation about how to define the 24-character strengths in a way that is meaningful to PWD. This involved all participants being given 24 cards, each with a character strength, their synonym(s) (taken from Park et al., 2004) and definition on (defined by Park & Peterson, 2009). Participants were asked to collaboratively discuss each of the 24-character strengths, synonyms and definitions. Individuals then chose their favourite synonym from the list and together group members created and agreed definitions of each strength in the context of living with dementia. These definitions were then used for the subsequent research stages.

Stage two: Modified Delphi process

Aim: Multi-modal PP interventions typically target three strengths (e.g., Salces-Cubero et al., 2019). Therefore, the aim of the modified Delphi was to refine the 24-character strengths down into the strengths deemed most important for living with dementia. This was to ensure the focus of an intervention would be relevant to this population.

Design: A participatory research design utilised a modified Delphi method. A modified Delphi is often used when there is a lack of available evidence coupled with a need to bring together expert opinions and insights to gain consensus around a research question (Powell, 2003). Modified Delphi is a widely used approach in clinical research (Jorm, 2015) and has been adapted as an accessible method to involve PWD (Morbey et al., 2019). The Delphi comprised two rounds, where each round informed the next and participants could see the answers from the previous round, in line with common modified Delphi designs (Barrett & Heale, 2020). This methodology supported PWD to take an expert by experience position and come to a systematic agreement across the two rounds about the most important character strengths for living with dementia. The most important character strengths identified formed the content of subsequent focus groups.

Participants: A dementia self-advocacy group based in Yorkshire was contacted via email by the researcher in January 2022 and an overview of the study was shared (appendix H). Following this, the group's facilitator confirmed the group's interest in participating in the study. Participant inclusion criteria can be seen in Table 1.

Table 1.

Participant inclusion criteria for stages 2 and 3

Inclusion criteria	Justification
Fluent in English speaking and reading.	The researcher only speaks English, and they need to ensure sound understanding of the character strengths.
Identify themselves as living with dementia.	No confirmation of their dementia diagnosis was sought, but by recruiting through charities supporting PWD, there is the assumption individuals will be living with dementia.
Living in a community setting	The strengths relevant to individuals living in community settings may differ to individuals residing in a residential setting.
Able to give informed consent	To ensure ethical completion and participation. See the ethics section for considerations around capacity.
Able to participate in interviews (either as a group or one to one)	To be able to provide the data required for the study.

Procedure: The lead researcher attended a group session prior to data collection to verbally explain the research and share the information sheet (Appendix I). This allowed participants time to read and consider it. On the day of data collection (one month later), the study was re-explained both verbally and visually using an information sheet. Participants were given a further chance to ask questions. Informed consent (Appendix L) was recorded. All participants completed a demographic information form (Appendix M).

The two-round modified Delphi was completed in one 3-hour session, with a break. All four researchers facilitated the session (see Appendix N for the plan of the session and consensus discussion guide).

Round 1: Participants formed small groups with one facilitator, and each participant was given 24 cards. Each card had one character strength alongside its definition (defined in stage one). Participants were then asked without consultation with others, to pick and then rank the four strengths they deemed most important for living with dementia (1= most important; 4=least important) by placing a ranking sticker next to the character strength. All participants rankings were collated by the researcher(s) and displayed to allow all participants to see how the strengths had been rated by other participants. During a short break, participants had the opportunity to view all other participants' rankings.

Round 2: Following the break, all participants came together for a consensus discussion (Yates et al., 2020) allowing participants to discuss the rankings of the character strengths, with the aim for discrepancies to be resolved and agreed. There is not a standard definition of consensus, with most studies using a priori of 50-97% (Nasa et al., 2021), therefore, 50% agreement was used as the lower limit to conclude consensus. Discussions focused on those character strengths that were collectively ranked the highest. Character strengths with no rankings were excluded. All participants were invited to discuss these rankings, justifying their choice in ranking. A final vote was then taken, by asking participants to raise their hands for the strengths that were most important to them for living with dementia. This ensured at least 50% consensus about the most important character strengths for living with dementia.

Stage three: Focus groups

Aim: Focusing on the strengths deemed most important for living with dementia (stage two), the aim of stage three was to understand which strength-based interventions would be most meaningful and acceptable to PWD.

Design: A qualitative research design, utilising focus group methods.

Participants: The aim was to conduct 3-6 focus groups as this is usually deemed sufficient to reach at least 90% of themes for a given topic (Guest et al., 2016). Seven dementia charities across the Yorkshire region of the UK were approached by the researcher via email for recruitment. This involved the recruitment poster (Appendix J) being shared with the charity lead to allow them to discuss participation with their group members. In line with the Alzheimer's Society guidance the aim was to recruit 3-6 participants for each focus group (Alzheimer's Society, n.d). After charity leads had discussed participation with their groups, six group leads responded via email and three groups agreed to participate, with this forming four focus groups given the large number of people attending one group. Participant inclusion criteria can be seen in table 1.

Procedure: A resource booklet was created (Appendix O) as a discussion guide and visual aid. This included the following questions for each strength: (1) Do you agree that x [character strength] is important for living with dementia? (2) What helps you to keep showing x? (3) If you have been invited to a group and they were going to focus on x, what would you want it to involve or look like? (4) How could services support you to show x? Evidence based interventions targeting the most important character strengths (identified in the literature review in stage one) were also briefly summarised and presented in the booklet. Where character strengths had no developed interventions for older adults, separate scoping searches were done to identify and describe interventions used with any population.

On the day of data collection, the information sheet (Appendix K) was shared with each participant and read aloud by the researcher. Participants were given a chance to ask questions. Informed consent (Appendix L) was recorded. All participants provided demographic information to contextualise the data (Appendix M). Focus groups were semi-structured and lasted approximately 60 minutes. Each focus group was audio recorded and transcribed.

Data analysis

Reflexive thematic analysis was used to analyse the qualitative data from the focus groups since the research was aiming to understand subjective perspectives and analyse patterns across the qualitative data set (Braun & Clarke, 2021). The six phases identified by Braun & Clarke (2021) were followed, using an inductive approach (see table 2 and appendix R). An ontology of critical realism and a contextualism (Madill et al., 2000) epistemology informed the analysis (see appendix B for an epistemological statement).

Table 2.

The six phases of thematic analysis (Braun & Clarke, 2021)

Six phases:	Procedure
Familiarising yourself with the dataset	Audio recordings were listened too and transcribed. Transcripts were read and re-read. Initial analytic ideas were recorded.
Coding	Transcripts were read and interesting/ meaningful segments were identified with a code label.
Generating initial themes	Based on these codes, patterns were sought, and initial themes were derived. Interpretation of the data from the researchers fed into the process.
Developing and reviewing themes	Through consultation with the secondary researchers, the themes were revised and developed across several iterations (Appendix S)
Refining, defining and naming themes	Brief summaries were written for each theme to ensure a coherent story is told. This led to further refinement through further discussions with the secondary researchers.
Writing up	The themes were written up and embedded within the wider report.

Ethical considerations

A university ethics committee approved the study (Appendix G). All materials used were reviewed by PWD prior to the start of the study to ensure accessibility. Informed consent was sought from all participants. In line with the Mental Capacity Act (Department of Health, 2005), capacity was assumed upon meeting the participant, but the researcher continued to assess this throughout. Across the research all participants were deemed to have capacity to consent. All data was audio recorded on an encrypted laptop and was transcribed and anonymised. A sources of support document was shared following participation (Appendix P).

Researcher Context

In line with a contextualism epistemology, the researcher's context is important to consider in generating meaning from the data and knowledge produced. The lead researcher is a white British, middle class, young female who is outside of the participant group and is a Trainee Clinical Psychologist. The researcher had personal and professional experiences of dementia. The researcher attended the monthly sessions at the dementia self-advocacy group involved in stage two, meaning the researcher built a relationship with the participants involved in this stage. All participants in stage three were unknown to the researcher prior to data collection. Since the researchers are involved in co-producing meaning with the participants, reflexivity was essential throughout the research process. Therefore, the researcher was involved in reflexive practice groups, supervision and kept a research journal (see Appendix A for the reflective statement).

Results

Stage one: Evidence gathering and Patient and Public Involvement

The literature review (Jackman et al., 2023) highlighted pre-existing PP interventions for older adults for strengths of hope, humour, gratitude, spirituality and forgiveness, with overall positive results for their effectiveness.

The PPI group's preferred strength synonyms and their written definitions can be seen in Appendix Q. The definitions written by the PPI group were compared to Park and Peterson's (2009) by the research team. For critical thinking, forgiveness and humility, the definition used by Park and Peterson (2009) was used alongside the PPI groups for greater clarity and understanding.

Stage two: Modified Delphi process

Stage two involved seven females and three males who had been living with dementia between <1 year to 6 years and were aged between 65 and 85 years. The results from round one (the individual rankings) can be seen in table 3, whereby the rankings were reversed scored (i.e., a ranking of 1 received 4 points and a ranking of 4 received 1 point). Following the consensus discussions, love, kindness and humour met the pre-defined consensus criteria of 50% as being perceived to be the most important character strengths for living with dementia.

Table 3.

Results from round 1 (rankings; 1=most important = 4 points; 4 = least important = 1 points)

Character strength	Rankings	Points	Consensus
Love	1, 1, 1, 1, 1, 2 ,3	25	80%
Kindness	1, 2, 2, 3, 3, 3	16	70%
Honesty	1, 2, 2	10	
Self-control	2, 3, 3, 4	8	
Humour / Playfulness	2,4, 4, 4	6	50%
Creativity	1, 4	5	
Forgiveness	3, 3	4	
Gratitude	2, 4	4	
Humility	1	4	
Teamwork	1	4	
Bravery	3, 4	3	
Faith / purpose	2	3	
Love of Learning	2	3	
Openness to experience	4, 4	2	
Perseverance	3	2	
Optimism	4	1	
Critical Thinking		0	
Wisdom		0	
Zest / Vitality		0	
Social Intelligence		0	
Fairness		0	
Leadership		0	
Prudence		0	
Wonder		0	

Stage three: Focus groups

Stage three involved four focus groups. Focus groups one and two involved participants attending groups at the same dementia charity, with focus groups three and four involving participants from different charities. Overall, there were 14 participants: 7 males and 7 females all aged between 65 and 86 years old. Participants were of a White (N=13) and Asian (N=1) British ethnicity and had been living with dementia between <1 year to 8 years.

Thematic analysis:

Three superordinate themes and five subordinate themes were identified and are summarised in table 4. They are reported in detail below.

Table 4.

Summary of themes

Superordinate theme	Subordinate theme
Lack of opportunity not capacity	‘It’s part of your nature’.
	‘I wish I didn’t have the label’.
Key considerations of PP interventions for PWD	‘We are all individuals’.
	‘Being around people is very important’.
	‘You’ve got to have some fun’
Potential benefits of PP interventions	

Theme: Lack of opportunity not capacity

Participants perceived love, kindness and humour to be universal traits meaning they also saw themselves remaining able to experience and draw on these in living with dementia, although acknowledged the barriers due to the reduced social experiences brought about by their diagnosis of dementia.

1. Sub-theme: *'It's part of your nature'*

Love, kindness and humour were all viewed as innate character strengths that are important '*whether you have got dementia or not'* –P9. There was a common opinion that PWD do not lose the capacity or ability to use these character strengths and they hope to continue to use them; *'And long may I keep doing that [showing kindness]'* –P9. Thus, interventions aiming to 'train' or 'teach' strengths were not perceived as meaningful because participants felt strongly that love, kindness to others and humour *'come naturally'* -P8 and are trait like. *'I don't think you manufacture it [humour]. Its either there or its not'* -P9. Participants did not perceive benefits in the counting kindness intervention, as *'Well I don't think there is any need in writing it. If you are doing kindness, you are doing kindness. Making a record of it, for what? You are not proving to somebody what you have done, kindness is kindness out of kindness and I'm helping her and him or anyone, so this is out of kindness'* –P11. This highlights how participants perceived themselves as able to engage in these strengths naturally and spontaneously, and therefore do not need teaching to use them.

The one exception was self-kindness, which participants identified was different and they felt did not occur as naturally. It was acknowledged *'That's [self-kindness] a lot more difficult'* -P2. When individuals thought of kindness, they defined it as caring for others and that being their priority; *'we're too busy looking after others aren't we? [barriers to self-kindness]'* –P3. Indeed, for many participants caring for others has been an important role throughout their life and therefore did not appear to be a specific barrier for PWD. *'Oh, I've always looked after the elderly, or someone who's got a broken leg'*-P1. Self-kindness appeared to be an alien concept, with participants finding the term difficult to grasp: *'How would you define being kind to yourself?'* -P10. This highlights how participants' understanding of kindness appeared other-focused.

2. Sub-theme: *'I wish I didn't have the label'*

Participants viewed their diagnosis of dementia as a barrier in being able to continue to use innate strengths, describing a loss of relationships and meaningful roles within their lives. Negative social experiences *'When I go up to people and say I have dementia. They don't want to talk to me'*-P13 meant that some participants had withdrawn from social contexts or tried to conceal their diagnosis as *'I wish I didn't have the label [dementia]. You see, when you write forms you have to put it on. But then people don't want anything to do with you.'* –P14. Participants also identified that other people perceived them as not capable, as *'Yes…well… the thing is…when you get diagnosed with dementia. People don't understand it. You see I used to be a secretary but as soon as they found out I have dementia, well they wouldn't let me do it anymore. I wasn't even able to be on the committee. I can still do things, just some things take me longer'* -P14. Therefore, the stigma surrounding the diagnosis of dementia contributed to the lack of opportunity to continue to use their strengths.

Theme: Key considerations of PP interventions for PWD

In considering what PP interventions might need to include to increase wellbeing in PWD, participants felt interventions should be flexible and personalised. Although, two common components that were deemed important were that they should be fun and involve connection with others.

3. Sub-theme: *'We are all individuals'*

In discussing the interventions that exist currently to promote love, kindness and humour, there were individual differences in the acceptability of these interventions, based on participants' personality and interests. For example, one participant commented about a humour intervention *'No, I'm not that type of person [to tell funny stories]'*-P1. Participants stated it is important that interventions are flexible and adaptable as PWD should be seen as individuals as *'Everyone is different'* –P6. Therefore, in ensuring that a PP intervention is meaningful for PWD, it would be important to connect with individuals' interests and hobbies: *'I actually think it's finding the interests of the person as well. Trying to keep them interacting with things. It's no good you trying to force something on somebody, because we're all individuals'* -P10. This highlights how there is not one PP intervention that is consistently seen as acceptable and meaningful.

4. Subtheme: *'Being around people is very important'*

A common element that was deemed important for a PP intervention was the importance of spending time with others. This was because love, kindness and humour were all seen as occurring within relationships, as *'you do don't you, you laugh between you'*-P3. Furthermore, being with others allows people to use their strengths, as well as providing opportunities for these strengths to be experienced, creating a sense of reciprocity: *'When you come to a group like this, you have to sort of be kind, and expect people to be kind back. It moves in two directions'*-P2. Given that *'being around people is very important'* –P12 all participants felt that a group format to delivering PP interventions would be beneficial for PWD.

5. Subtheme: *'You've got to have some fun'*

Participants also spoke of the importance of any intervention being fun, with this being a key criterion when discussing the acceptability of interventions *'Oh, I wouldn't mind. It [laughter* *yoga] could be fun'* -P4. Furthermore, in participants experiences this is what has kept them going back to groups they have been a part of: *'The group you know, they just started laughing, it was real fun…and its good. They keep coming to it. They feel the benefit of it, they like it. In fact, one guy said can you come every day. Its basic exercise, nothing tiring but it's fun'* -P9. The importance of having fun was particularly important in the context of living with dementia as *'none of us know what's ahead do we'* -P5. Therefore, there was a sense of making the most of each day as *'you've got to have some fun haven't you. There is no point in sitting there and thinking, uh, I have this in my head, you can do things, do things while you can'* –P7. Therefore, this highlights the importance of PP interventions encouraging playfulness and being enjoyable.

6. Theme: Potential benefits of PP interventions.

Throughout the focus groups, participants made a link between expressing love, kindness and humour, and this increasing their wellbeing, '*bring[ing] you alive a bit'* –P3. Therefore, these strengths may help to buffer against negative emotions and bring a sense of acceptance to the challenges living with dementia brings as it helps to you to not *'dwell on things'*-P4 and maintain a sense of your identity: *'Especially when you are living with dementia, it [love] helps you keep your life happy and more of you. So, I think it's more of a necessity as well.'*-P11. Furthermore, the benefit of engaging with these strengths may positively influence a person's emotion and behaviour, for example, *'love makes you more content, it makes you happy sort of thing. So, without love you are going to start being depressed, and not want to be involved in things or do things'*-P10. Therefore, it appears showing love, kindness and humour, contributes to enhanced wellbeing when living with dementia, with these strengths being seen as *'important'* –P12 and *'good for you'* –P1.

Discussion

This study aimed to capture the voices of PWD in the design phase of a co-developed dementia-specific multi-component PP intervention. This research highlights how PWD have important opinions and insights about what interventions are likely to be helpful for increasing their wellbeing and illustrates that PWD can actively participate in the systematic design of such interventions.

In stage two, love, kindness and humour were seen as the most important character strengths for living with dementia. This is consistent with previous findings whereby love has been described as the most important strength for PWD (McGee et al., 2022), with Kitwood (1997) conceptualising it as a central psychological need to maintain a sense of personhood. Humour has consistently been seen as an active strength that helps PWD to live well, being an important feature within relationships, helping to buffer against adversity (Hickman et al., 2018; Wolverson et al., 2016). Kindness has received less attention in the dementia literature and therefore little is known about its role in contributing to wellbeing when living with dementia. The results from this study highlight kindness to others is spontaneous and that through showing kind acts towards others, it helps to increase positive emotions. Peterson and Park (2020) detail a structure of character which places the 24-character strengths along two dimensions of self vs other, and heart vs head. Love, kindness and humour all fall into the heart and other oriented quadrant. It is possible that as PWD begin to encounter cognitive challenges (head-orientated), the heart orientated strengths become increasingly important for their wellbeing.

This study identifies that love, kindness to others and humour are seen as occurring naturally to PWD. Participants placed emphasis on being able to continue to use these strengths, as they have been important throughout their life. Participants highlighted that spontaneously showing self-kindness was more difficult, therefore a self-kindness intervention could be meaningful to PWD to improve wellbeing. As participants found the term self-kindness difficult to grasp, psychoeducation about what this means may be important. Within the PP literature, self-kindness interventions are not seen to be effective at increasing wellbeing, with the focus on kindness to others being more valuable (e.g., Haydon et al., 2022). However, taking ideas from the compassion focused literature, evidence is emerging that developing self-compassion helps to bring self-kindness for PWD. This is important as PWD can be self-critical when coping with the challenges dementia brings, for example when forgetting things (Craig et al., 2018). Therefore, since clinical approaches to working with PWD are often deficit focused (Grand et al., 2011), it could be important for clinical psychologists to combine strength-based approaches with their psychological therapies, for example in using compassion focused therapy to develop self-kindness, especially since this is valued by PWD.

In understanding what helps individuals to show love, kindness and humour, there were individual differences in the acceptability of interventions. This highlights the importance of the person-activity fit (Lyubomirsky & Layous, 2013) as PP interventions may only increase an individual's wellbeing if there is concordance between a person's needs and the social context within which an appropriate intervention is conducted. The findings highlight how PP interventions might help individuals to connect to what is important to them, potentially to maintain a sense of their identity (Wolverson et al., 2016). This highlights how PP interventions for PWD will need to be person centered (Mitchell & Agnelli, 2015). Therefore, it would be important for clinical psychologists to conduct a holistic assessment of needs with PWD, to aid the delivery of person-centered psychological support (Edvardsson et al., 2010).

Social interaction was deemed important within a multi-component PP intervention focused on love, kindness and humour as these strengths were perceived as relational. Therefore, group formats may be most beneficial, which is in line with pre-existing psychosocial interventions, whereby social interaction may actively contribute to intervention efficacy (Dugmore et al., 2015). Furthermore, groups can increase the enjoyment of interventions. For example, Spector et al. (2011) details how group cognitive stimulation therapy was deemed as fun as it was characterised by laughing and smiling between participants, which kept people returning to the group. This is important in dementia since social stigma can negatively impact an individual's wellbeing (Pratt & Wilkinson, 2003) and PWD have an increased risk of social isolation, particularly after the impact of COVID-19 (Curelaru et al., 2021). Therefore, engaging in a group allows increased connection with others and social inclusion (Osman et al., 2016). This highlights the importance of clinical services continuing to offer group interventions (e.g., reminiscence therapy) as is recommended in the NICE guidelines (NICE, 2018).

Strengths, limitations and future research

This study used an innovative research design, being only the second study to adapt a modified Delphi with PWD (Morbey et al., 2019). Both studies emphasise the importance of each item to be ranked being written in an accessible way. Hence PPI was essential to define the character strengths. Furthermore, being creative in research is important to allow PWD to be actively involved (Phillipson & Hammond, 2018). Therefore, providing participants with tangible resources for the first round was an effective way for participants to independently engage with the materials and express their opinions. This contrasts with a usual modified Delphi whereby participants need to hold in mind large amounts of information to assign a value to them (Yates et al., 2020). However, there is still much to learn about how to conduct a modified Delphi most effectively with PWD. Some participants experienced fatigue by the consensus discussion and therefore it could have been beneficial to complete it over two sessions. This highlights how a modified Delphi can be effectively used with PWD but requires careful planning and adaptations.

Context is important to consider when generating meaning from the findings, particularly as a contextualism epistemology was taken (Madill et al., 2000). The sample as a whole comprised of individuals who regularly attend groups and was a volunteer sample. Therefore, as they identified love, kindness to others and humour come naturally, it is unclear whether this same finding would be shared by other PWD. It is possible that the individuals in this study already had a relatively high level of wellbeing, and a limitation of this work is this was not something that was objectively measured. Furthermore, as participants were regularly attending groups, it is wondered whether this has contributed to the finding that a PP intervention should take place in a group setting, however a group may not suit everyone. Due to the limited sample, future research is needed to capture more voices, particularly those from marginalised groups as presently there are health inequalities for PWD (UK Dementia Research Institute, 2022). For example, it would be helpful to understand whether character strength-based interventions would be valued by those from a global majority, since they are twice as likely to be diagnosed with Alzheimer's Disease, yet less likely to access support from services (Alzheimer's Society, 2020). Therefore, future research is needed to develop interventions that are meaningful to this population that considers the cultural context.

The scope of this research meant that the evidence base was identified, and the initial concept of a character strength-based intervention was developed, with this being seen as feasible and acceptable to PWD. However, future research is now needed to co-design a character strength-based intervention that is specific to PWD, particularly since there are few character strength-based interventions focused on love, kindness and humour that have been designed and evaluated with older adults (Jackman et al., 2023). Therefore, using the MRC framework as a guideline (Skivington et al., 2021), future research is needed to continue this development and feasibility phase of co-designing an intervention. Some important elements to consider may be around the acceptability of online versus face-to-face delivery, frequency and duration of the intervention and the potential involvement of care partners.

Conclusion:

This study contributed towards the initial development phase of a co-designed PP intervention for PWD. It was highlighted that love, kindness and humour are important strengths for living well with dementia, and therefore an intervention focused on these may be most meaningful. The findings revealed that a PP intervention needs to provide a social context to use these strengths, that provides opportunity for fun and relationships in a person-centered way. It is hoped that by focusing on people’s strengths, this will support people to live well with dementia and draw emphasis to the need to move away from deficit-focused discourses.

References

Alzheimer's Research UK. (2019). *Dementia Attitudes Monitor 2018: Wave 1.* Dementia statistics. https://www.dementiastatistics.org/wp-content/uploads/2019/02/Dementia-Attitudes-Monitor-Wave-1-Report.pdf#zoom=100

Alzheimer's Society. (n.d.*). Dementia-Friendly Focus Groups*. Retrieved December 7, 2021, from https://www.alzheimers.org.uk/dementia-professionals/dementia-experience-toolkit/research-methods/dementia-friendly-focus-groups

Alzheimer's Society. (2020, September 30). *Improving dementia and Alzheimer's support in Black communities.* https://www.alzheimers.org.uk/blog/improving-dementia-support-black-communities

Barrett, D., & Heale, R. (2020). What are Delphi studies? *Evidence-Based Nursing, 23*(3), 68-69. https://doi.org/10.1136/ebnurs-2020-103303

Bartlett, R., Windemuth-Wolfson, L., Oliver, K., & Dening, T. (2017). Suffering with dementia: the other side of "living well''. *International Psychogeriatrics, 29*(2), 177-179. https://doi.org/10.1017/S104161021600199X

Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide.* Sage.

British Psychological Society (2016) *Psychological Dimensions of Dementia: Putting the Person at the Centre of Care.* https://doi.org/10.53841/bpsrep.2016.inf267

Burton, A., Ogden, M., & Cooper, C. (2019). Planning and enabling meaningful patient and public involvement in Dementia Research. *Current Opinion in Psychiatry, 32*(6), 557–562. https://doi.org/10.1097/yco.0000000000000548

Carr, A., Cullen, K., Keeney, C., Canning, C., Mooney, O., Chinseallaigh, E., & O'Dowd, A. (2021). Effectiveness of positive psychology interventions: a systematic review and meta-analysis.

*The Journal of Positive Psychology, 16(*6), 749-769. https://doi.org/10.1080/17439760.2020.1818807

Conway, L., Wolverson, E., & Clarke, C. (2020). Shared experiences of resilience amongst couples where one partner is living with dementia—a grounded theory study. *Frontiers in Medicine, 7,* 1-8. https://doi.org/10.3389/fmed.2020.00219

Cotelli, M., Manenti, R., & Zanetti, O. (2012). Reminiscence therapy in dementia: A Review. *Maturitas, 72*(3), 203–205. https://doi.org/10.1016/j.maturitas.2012.04.008

Craig, C., Hiskey, S., Royan, L., Poz, R., & Spector, A. (2018). Compassion focused therapy for people with dementia: A feasibility study. *International Journal of Geriatric Psychiatry, 33*(12), 1727–1735. https://doi.org/10.1002/gps.4977

Csikszentmihalyi, M., & Seligman, M. (2000). Positive psychology. *American Psychologist, 55*(1), 5-14. https://doi.org/10.1037/0003-066X.55.1.5

Curelaru, A., Marzolf, S. J., Provost, J-C. & Zeon, H. (2021). Social isolation in dementia: The effects of covid-19. *The Journal for Nurse Practitioners, 17*(8), 950–953. https://doi.org/10.1016/j.nurpra.2021.05.002

Dementia Action Alliance. (2017, May 15). *Launching the dementia statements*. https://www.dementiaaction.org.uk/news/23236_news_launching_the_dementia_statements

Department of health. (2005). *Mental Capacity Act 2005*. https://www.legislation.gov.uk/ukpga/2005/9/contents

Dodd, E., Ismail, S., Christopher, G., Wildschut, T., Sedikides, C., & Cheston, R. (2021). Nostalgic conversations: The co-production of an intervention package for people living with dementia and their spouse. *Dementia, 21*(2), 489–502. https://doi.org/10.1177/14713012211047350

Duckworth, A., Steen, T., & Seligman, M. (2005). Positive psychology in clinical practice. *Annual Review of Clinical Psychology*, *1*, 629-651. https://doi.org/10.1146/anurev.clinpsy.1.102803.144154

Dugmore, O., Orrell, M., & Spector, A. (2015). Qualitative studies of psychosocial interventions for dementia: a systematic review. *Aging & Mental Health, 19*(11), 955-967. https://doi.org/10.1080/13607863.2015.1011079

Edvardsson, D., Fetherstonhaugh, D., & Nay, R. (2010). Promoting a continuation of self and normality: Person-centered care as described by people with dementia, their family members and Aged Care Staff. *Journal of Clinical Nursing*, *19*(17-18), 2611–2618. https://doi.org/10.1111/j.1365-2702.2009.03143.x

Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology, 9*(2), 103-110. https://doi.org/10.1037/1089-2680.9.2.103

Gauthier, S., Webster, C., Servaes, S., Morais, J., Rosa-Neto, P. (2022). *World Alzheimer Report 2022: Life after diagnosis: Navigating treatment, care and support.* Alzheimer’s Disease International. https://www.alzint.org/u/World-Alzheimer-Report-2022.pdf

Gove, D., Diaz-Ponce, A., Georges, J., Moniz-Cook, E., Mountain, G., Chattat, R., & Øksnebjerg, L. (2017). Alzheimer Europe's position on involving people with dementia in research through PPI (patient and public involvement). *Aging & Mental Health, 22*(6), 723–729. https://doi.org/10.1080/13607863.2017.1317334

Grand, J., Caspar, S., & MacDonald, S. (2011). Clinical features and multidisciplinary approaches to dementia care. *Journal of Multidisciplinary Healthcare, 4*, 125-147. https://doi.org/10.2147/jmdh.s17773

Guest, G., Namey, E., & McKenna, K. (2016). How many focus groups are enough? building an evidence base for nonprobability sample sizes. *Field Methods, 29*(1), 3–22. https://doi.org/10.1177/1525822x16639015

Haydon, M., Walsh, L., Fritz, M., Rahal, D., Lyubomirsky, S., & Bower, J. (2022). Kindness interventions for early-stage breast cancer survivors: An online, pilot randomized controlled trial. *The Journal of Positive Psychology*, 1–12. https://doi.org/10.1080/17439760.2022.2093786

Hickman, H., Clarke, C., & Wolverson, E. (2018). A qualitative study of the shared experience of humour between people living with dementia and their partners. *Dementia, 19*(6), 1794–1810. https://doi.org/10.1177/1471301218805895

Ho, H., Yeung, D., & Kwok, S. (2014). Development and evaluation of the positive psychology intervention for older adults. *The Journal of Positive Psychology, 9*(3), 187-197. https://doi.org/10.1080/17439760.2014.888577

Innovations in Dementia. (2023). *The Dementia Enquirers Gold Standards for Co-Research.* https://bit.ly/3YQ7sj6.

INVOLVE (2012) *Briefing notes for researchers: involving the public in NHS, public health and social care research*. National Institute for Health Research. https://www.invo.org.uk/wp-content/uploads/2012/04/INVOLVEBriefingNotesApr2012.pdf

Jackman, V., Wolverson, E., Clarke, C., & Quinn, C. (2023) A systematic review of character strength based interventions designed to improve wellbeing in older adults [manuscript in preparation].

Jorm, A. (2015). Using the Delphi expert consensus method in mental health research. *Australian & New Zealand Journal of Psychiatry, 49*(10), 887-897. https://doi.org/ 10.1177/0004867415600891

Kitwood, T. (1997). *Dementia reconsidered: The person comes first.* Open University Press.

Lamont, R., Nelis, S., Quinn, C., Martyr, A., Rippon, I., Kopelman, M., Hindle, J., Jones, R., Litherland, R., & Clare, L. (2020). Psychological predictors of 'living well' with dementia: Findings from the ideal study. *Aging & Mental Health, 24*(6), 956–964. https://doi.org/10.1080/13607863.2019.1566811

Lomas, T., & Ivtzan, I. (2016). Second wave positive psychology: Exploring the positive–negative dialectics of wellbeing. *Journal of Happiness Studies, 17*(4), 1753-1768. https://doi.org/10.1007/s10902-015-9668-y

Low, L., Goodenough, B., Fletcher, J., Xu, K., Casey, A., Chenoweth, L., Fleming, R., Spitzer, P., Bell, J., & Brodaty, H. (2014). The effects of humor therapy on nursing home residents measured using observational methods: The smile cluster randomized trial. *Journal of the American Medical Directors Association, 15*(8), 564–569. https://doi.org/10.1016/j.jamda.2014.03.017

Lyubomirsky, S., & Layous, K. (2013). How do simple positive activities increase well-being? *Current Directions in Psychological Science, 22*(1), 57–62. https://doi.org/10.1177/0963721412469809

Madill, A., Jordan, A., & Shirley, C. (2000). Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies. *British Journal of Psychology, 9* 1(1), 1-20. https://doi.org/10.1348/000712600161646

McGee, J., McElroy, M., Meraz, R., & Myers, D. (2022). A qualitative analysis of virtues and strengths in persons living with early-stage dementia informed by the values in action framework. *Dementia, 22*(1), 46–67. https://doi.org/10.1177/14713012221131857

Mitchell, G., & Agnelli, J. (2015). Person-centered care for people with dementia: Kitwood reconsidered. *Nursing Standard, 30*(7), 46–50. https://doi.org/10.7748/ns.30.7.46.s47

Morbey, H., Harding, A., Swarbrick, C., Ahmed, F., Elvish, R., Keady, J., Williamson, P., & Reilly, S. (2019). Involving people living with dementia in research: an accessible modified Delphi survey for core outcome set development. *Trials, 20*(1), 1-10. https://doi.org/10.1186/s13063-018-3069-6

Nasa, P., Jain, R., & Juneja, D. (2021). Delphi methodology in healthcare research: How to decide its appropriateness. *World Journal of Methodology, 11*(4), 116–129. https://doi.org/10.5662/wjm.v11.i4.116

NICE (2018) *Dementia: assessment, management and support for people living with dementia and their carers.* https://www.nice.org.uk/guidance/ng97/resources/dementia-assessment-management-and-support-for-people-living-with-dementia-and-their-carers-pdf-1837760199109

Osman, S., Tischler, V., & Schneider, J. (2016). 'Singing for the brain': A qualitative study exploring the health and well-being benefits of singing for people with dementia and their carers. *Dementia, 15*(6), 1326–1339. https://doi.org/10.1177/1471301214556291

Park, N., & Peterson, C. (2009). Character strengths: Research and practice. *Journal of College and Character*, 10(4), 1-10. https://doi.org/10.2202/1940-1639.1042

Park, N., Peterson, C., & Seligman, M. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology, 23*(5), 603-619. https://doi.org/10.1521/jscp.23.5.603.50748

Pearson, M., Clarke, C., & Wolverson, E. (2021). The meaning and experience of gratitude for people living with dementia*. Dementia*, *21*(1), 335-352. https://doi.org/10.1177/14713012211040675.

Peterson, C., & Park, N. (2020). Character Strengths and Virtues: Their role in wellbeing. Donaldson, S. I., Csikszentmihalyi, M., Nakamura, J. (Eds.), *Applied Positive Psychology* (pp.49-63). Routledge.

Phillipson, L., & Hammond, A. (2018). More than talking. *International Journal of Qualitative Methods, 17*(1), 160940691878278. https://doi.org/10.1177/1609406918782784

Powell, C. (2003). The Delphi technique: Myths and realities. *Journal of Advanced Nursing, 41*(4), 376–382. https://doi.org/10.1046/j.1365-2648.2003.02537.x

Pratt, R., & Wilkinson, H. (2003). A psychosocial model of understanding the experience of receiving a diagnosis of dementia. *Dementia, 2*(2), 181–199. https://doi.org/10.1177/1471301203002002004

Quinn, C., Pickett, J., Litherland, R., Morris, R., Martyr, A., & Clare, L. (2022) Living well with dementia: what is possible and how to promote it. *International Journal of Geriatric Psychiatry*. *37*(1), 1-7. https://doi.org/10.1002/gps.5627.

Salces-Cubero, I., Ramírez-Fernández, E., & Ortega-Martínez, A. (2019). Strengths in older adults: Differential effect of savoring, gratitude and optimism on well-being. *Aging & Mental Health, 23*(8), 1017-1024. https://doi.org/10.1080/13607863.2018.1471585.

Skivington, K., Matthews, L., Simpson, S., Craig, P., Baird, J., Blazeby, J., Boyd, K., Craig, N., French, D., McIntosh, E., Petticrew, M., Rycroft-Malone, J., White, M., & Moore, L. (2021). A new framework for developing and evaluating complex interventions: update of Medical Research Council guidelines. *BMJ. 374,* 1-11. https://doi.org/10.1136/bmj.n2061

Spector, A., Gardner, C., & Orrell, M. (2011). The impact of cognitive stimulation therapy groups on people with dementia: Views from participants, their carers and group facilitators. *Aging & Mental Health, 15*(8), 945–949. https://doi.org/10.1080/13607863.2011.586622

Spector, A., Thorgrimsen, L., Woods, B., Royan, L., Davies, S., Butterworth, M., & Orrell, M. (2003). Efficacy of an evidence-based cognitive stimulation therapy programme for people with dementia: randomised controlled trial. *The British Journal of Psychiatry, 183*(3), 248-254. https://doi.org/10.1192/bjp.183.3.248

UK Dementia Research Institute. (2022). *Diversity and dementia. How is research reducing health disparities?* https://ukdri.ac.uk/uploads/UK-DRI_Dementia_Health_Inequalities_Report_2022.pdf

Vernooij-Dassen, M., Moniz-Cook, E., Verhey, F., Chattat, R., Woods, B., Meiland, F., Franco, M., Holmerova, I., Orrell, M., & de Vugt, M. (2021). Bridging the divide between biomedical and psychosocial approaches in Dementia Research: The 2019 Interdem manifesto. *Aging & Mental Health, 25*(2), 206–212. https://doi.org/10.1080/13607863.2019.1693968

Wagner, L., Gander, F., Proyer, R. T., & Ruch, W. (2020). Character strengths and PERMA: Investigating the relationships of character strengths with a multidimensional framework of well-being. *Applied Research in Quality of Life, 15*(2), 307-328. https://doi.org/10.1007/S11482-018-9695-Z

Wolverson, E., Clarke, C., & Moniz-Cook, E. (2010). Remaining hopeful in early-stage dementia: a qualitative study. *Aging & Mental Health, 14*(4), 450-460. https://doi.org/10.1080/13607860903483110

Wolverson, E., Clarke, C., & Moniz-Cook, E. (2016). Living positively with dementia: a systematic review and synthesis of the qualitative literature. *Aging & Mental Health, 20*(7), 676-699. https://doi.org/10.1080/13607863.2015.1052777

Yan, T., Chan, C., Chow, K., Zheng, W., & Sun, M. (2020). A systematic review of the effects of character strength-based interventions on the psychological wellbeing of patients suffering from chronic illnesses. *Journal of Advanced Nursing, 76*(7), 1567-1580. https://doi.org/10.1111/jan.14356

Yates, J., Stanyon, M., Challis, D., Coleston-Shields, D., Dening, T., Hoe, J., Jawahar, K., Lloyd-Evans, B., Moniz-Cook, E., Poland, F., Streater, A., Trigg, E., Orrell, M. (2020). Developing a model of best practice for teams managing crisis in people with dementia: a consensus approach. *BMC Psychiatry, 20*(1), 1-14. https://doi.org/10.1186/s12888-020-02899-0

Part Three: Appendices

Appendix A: Reflective statement

As I sit here, looking back over the last 3 years I am filled with a sense of achievement. My relationship with my thesis has taken many forms, at times feeling very close to me and at others feeling more distant from me. Trying to balance the thesis alongside competing demands has been a challenge, but one I am pleased to have had the opportunity to complete. I have certainly learned a lot. It has been a long journey, with ups and downs, and one I hope to summarise below.

Developing a research idea

Prior to starting the doctorate, I did not have a clear idea for my thesis like some of my peers and the idea of choosing a research topic daunted me; how was I going to find a gap in the literature that was meaningful? In receiving the list of potential supervisors' topics of interest, I recall being drawn to thinking about looked after children or people living with dementia; perhaps due to my own personal family experiences of these. Upon initial literature searches, I was struck by the problem saturated narratives surrounding much of the psychological literature in these areas which of course represented a portion of my personal experiences, but I was also aware of a whole host of positive experiences that did not appear to be represented in the literature. I was aware that everyone's experiences are different, but I was sure my experiences were not in isolation. As I delved deeper into the literature, it became clear that there was limited research that privileged the voices of these groups of people. This alongside the community psychology teaching we were receiving on the course, made me aware of my power as a researcher and made me question how I was going to use this power to allow untold stories to be heard.

Empirical

In deciding to go with research involving people living with dementia, I was clear that I wanted to focus on positive experiences and involve people living with dementia in the research. My supervisor spoke about her interests in positive psychology interventions in dementia and this fitted with what I was passionate about. In developing my initial research proposal, I was confronted with the diverse positive psychology interventions that exist and remember thinking "which one is going to be most meaningful to people living with dementia?". It felt arbitrary to choose one, particularly given that the literature did not obviously favour one. Therefore, the importance of co-designing an intervention with people living with dementia became clear, as they are best placed to know what is going to be most meaningful.

I started attending a monthly group for people living with dementia. This began to bring my research to life, and I looked forward to attending these groups as they were filled with humour, happiness and sense of connection. One man's story has always stuck with me where he said when he first got diagnosed with dementia, when he went to sit next to someone, they moved away from him as they were worried they would "catch it". This highlighted to me that as a society we need to learn more about what living with dementia means, as people were being fed unhelpful narratives through the media. The strengths these people brought to living with dementia were apparent and therefore, capturing this in my research felt important to begin to challenge some of these discourses.

In developing my research proposals, I remember being confronted with these negative discourses, with people challenging whether people living with dementia had the capacity to be actively involved in research. I had also set out to do multiple stages, which understandably led people to question the feasibility of this alongside the other demands of being a trainee clinical psychologist. Whilst actively involving people living with dementia came with its challenges, and created multiple stages to my study, it felt important to not shy away from the challenge. Looking back, I am pleased to have taken this risk and believe having people living with dementia involved in the key decision-making processes has added to the richness of my study.

I had received my ethical approval by summer of 2022 which meant my thesis could no longer take a back seat and I was excited to begin data collection. Having the session for the modified Delphi felt exciting, as I was intrigued to see which character strengths were going to be deemed to be most important to living with dementia. Although I felt the pressure of it going well, with only having the one chance to collect this data and with the focus groups resting on the outcome of this. In seeing the initial rankings, I remember being surprised. I had expected bravery, perseverance and teamwork to be more highly ranked and I was surprised by self-control receiving multiple rankings. This is possibly due to my own preconceptions through my experiences of dementia when working as a care assistant and seeing family live with dementia.

Recruitment for my focus groups was a mixed experience. I initially emailed six charities, and I was fortunate that five replied to me. The initial enthusiasm received enhanced my motivation as they saw it being meaningful research. However, trying to book in a date was more difficult, receiving no further responses from another two groups. I was left in a dilemma around whether to continue to email, but also feeling that I did not want to put pressure on people. I still had positive contact from three groups and managed to secure dates for these. Unfortunately, one group cancelled the week of the focus group as there was a miscommunication with regards to the process of collecting informed consent. I remember feeling frustrated and sad by this. From this experience I have learned the importance of having a conversation with the charity leads either over the telephone or via MS Teams to ensure clarity over the research process, allowing time for questions to be asked and a relationship to be formed. I had originally hoped to have the data collected by October 2022, and as October came, I had only completed two focus groups and had another booked in for January. I still needed at least one more, so I had to go back to the drawing board and email another dementia group. I was thankful that they showed enthusiasm and was able to get another focus group booked in.

Sadly, the group lead died unexpectedly which came as a shock to me and the group and I was upset by the news. I was left in a dilemma and had to decide whether to complete the focus group with the people from this group, as understandably they were all grieving. I gave the choice to them, and they all said they would like to take part. It felt important to me and the group to do this research since he was so passionate about making a difference to dementia care. Thus, whilst this was an upsetting experience, it fuelled my motivation for the remaining of my thesis.

From completing the modified Delphi, I was aware of the fatigue participants experienced by the end of the session, which resulted in the final round of rankings not being as systematic as I first hoped. Therefore, I learned from this experience and approached my focus groups with flexibility. In each focus group I started with a different character strength, to ensure each received rich data and wasn’t impacted by fatigue. Furthermore, I was led by the participants, and placed greater emphasis on richness rather than breadth. This meant for focus group two, only love was covered in detail.

The focus groups were the highlight of my research journey and I thoroughly enjoyed listening to people’s experiences and opinions. Many were characterised by mixed emotions, noting the challenges and prejudice people face, whilst also sharing in the joy and laughter that came with connecting with other people. Being outside of the participant group helped me develop a curious position as I did not know what it was like to be someone living with dementia. Throughout some of the focus groups, participants expressed frustrations with the current lack of provision and support in the NHS for people living with dementia. Therefore, I felt in a tricky position where I had to balance working within that system, whilst also understanding the frustrations felt by the individuals I was speaking too.

The point where I had collected all my data felt like a big achievement; it was now just down to me to write it up. Developing the themes from the focus groups took many iterations, it felt challenging to capture all these experiences in a meaningful way to answer the research questions. I had to learn to detach from certain quotes and look at the data from a fresh perspective, learning how to zoom in and out. Writing up my research was a back-and-forth process, going through many drafts to capture the multiple stages in a clear and concise way.

Systematic Literature Review (SLR)

My SLR topic emerged naturally based on my empirical paper as I questioned what character strength-based interventions existed in the literature for older adults, with me not being able to find a review detailing this. The process of defining the search terms was a lengthy process and felt challenging. This involved many meetings with an academic librarian, supervision and multiple searches and screening processes. There were questions around how to define such abstract terms and how to revise the search terms to filter the large number of irrelevant papers that were being retrieved. Throughout this iterative process, my motivation was slowly decreasing as I felt tired by the revisions needed. Finally, I had my search terms and I felt excited to be able to screen for my final pool of papers. Having a relatively large pool of final papers felt difficult as I tried to synthesise such a large heterogenous research base, and at times I wished I had chosen something else. Throughout the process I felt a sense of uncertainty and doubt as to whether I was doing it “correctly”. Although logically I felt the SLR should be straightforward, with clear stages and not needing to rely on other people for data. I learnt that completing an SLR is not a linear process, as I perhaps first assumed, and that whilst at the time the cyclical nature created a sense of stuckness, I believe it helped me to get to grips with the data and produce a more thought through research paper.

Summary

Throughout the research process I have connected to the virtue of wisdom which has allowed me to grow the character strengths of creativity, curiosity, open-mindedness, love of learning and perspective (Park & Peterson, 2009). I have valued the importance of creativity in data collection, something that has challenged my assumptions of research being “boring”. I have learned to be curious, taking a not knowing position rather than being the “expert researcher” I previously thought I needed to be. Open-mindedness has come in helping me to detach from my assumptions and tolerate the uncertainty of the research process. I have learned to take different perspectives, knowing when to step back and enjoy the views, rather than marching with my head down until to end. A love of learning has allowed the people I have met and research I have completed to impact me as a person, not just as a researcher. I believe this research journey has shaped how I practice as a clinical psychologist, seeing and valuing the strengths people bring, which feels important in what can often be a deficit focused system.

As this thesis marks the end of my last 20 years in education, I feel a mix of emotions: sadness, relief and joy. I have enjoyed the learning process, learning more about the ‘type’ of researcher I hope to be. Supervision has been invaluable, and I am thankful to Emma, Chris and Catherine for keeping me grounded, reading my drafts and imparting their wisdom. The skills I have learned will equip me as I begin my career as a clinical psychologist. As my concluding learning points and advice to anyone taking on a thesis: celebrate the small achievements, run your own race and don’t do it alone.

References:

Park, N., & Peterson, C. (2009). Character strengths: Research and practice. *Journal of College and Character*, 10(4), 1-10. https://doi.org/10.2202/1940-1639.1042

Appendix B: Epistemological statement

This epistemological statement is written to share the researcher's beliefs about the nature of reality (ontology) as well as how knowledge is acquired (epistemology). It is hoped that this will aid any reader's interpretation by having a clear insight of the assumptions underpinning the research within this thesis.

Ontology can be viewed on a spectrum, with realism at one end and relativism at the other. However due to these approaches reducing reality to either what can be empirically tested (Bhasker, 1998) or solely created through language and discourse (Fletcher, 2016), a critical realism ontological position was introduced. This separates ontology and epistemology, stating that there is a discoverable truth that is out there (realism ontology), but recognises that human experiences shape how we relate to the world, with our understanding of reality being mediated by language and culture (epistemological realism; Maxwell, 2012). Thus, critical realism was the ontological approach taken to this thesis. This means the researcher was seeking to understand participant's perceptions of reality, which will be ultimately influenced by their context, and the researcher's context in the analysis of this.

In line with a critical realist ontological position, the researcher occupied a contextualism epistemology (Madill et al., 2000). This recognises that knowledge is shaped by context of the researcher and participants, with them co-producing meaning together, whilst searching for a provisional and contextual truth (Braun & Clarke, 2013). Therefore, context is important to consider throughout this thesis in the knowledge produced and interpretations made, recognising that we all have a different view on reality.

This position of a critical realist ontology, with a contextualism epistemology informed the thesis and the methodology used. As the systematic literature review used a narrative synthesis to analyse quantitative data, this could be seen as aligning more with a realist ontology. However, in the interpretation of these, context was considered to understand how this affected the causal relationships. For example, in drawing meaning from the studies and synthesising the results, the findings were understood in relation to the participants context and setting. Therefore, in the knowledge produced and assumptions made, it is important that these are seen within their context, offering a contextual truth of what character strength-based interventions may be most effective for older adults.

For the empirical study, the use of a modified Delphi assumed that a common experience, "truth", could be sought, but by using the qualitative focus groups it aimed to understand subjective experiences of this to help the researcher understand the participants contextual experiences of these character strengths. Therefore, in the finding that love, humour and kindness are the most important character strengths for living with dementia, this finding should not be taken out of the context of people living with dementia in a community setting, already attending groups, as it is possible that a different contextual truth would be discovered if the study recruited people living with dementia in a residential setting. Whilst it is recognised that each participant in this study will have different assumptions and beliefs, it is recognised that they occupy a similar context all being British, living in Yorkshire in 2022/23, and in a community setting. Therefore, it would be important for further research to look at perspectives of people in a different context, to help enrich our view of reality.

As well as understanding the participants context, the researcher's reflexivity is essential in understanding their assumptions, biases and personal context as this will influence the data gathered, interpretation of the results and knowledge produced. Therefore, the researcher engaged in reflexive practice groups, as well as keeping a reflective journal. In understanding this, the researcher questioned how they were experiencing the data, being an outsider of the group (not someone living with dementia), therefore holding a contrasting view of reality to the included participants. Furthermore, the researcher has previously worked in a dementia care home, and therefore these experiences are likely to influence the researchers' assumptions about what it means to live with dementia and thus what character strength-based interventions may be most meaningful. However, as the participants in this study were all living in the community, they also probably held a different view of reality to those previously experienced by the researcher. Thus, it is not possible to remove these prior assumptions, but it is important to bring light to them.

In summary, in line with a critical realist ontology and contextualism epistemology, the systematic literature review and empirical study sought perceptions of reality but one that is influenced by the researchers and participants context. Of particular relevance are the researchers' prior experiences of dementia, being outside of the participant group, their view on what strengths are most important and the participants immediate context. It is hoped that through this reflexive process, it minimised the degree of bias in the knowledge constructed.

References:

Bhaskar, R. (1998). *Philosophy and scientific realism*. In M. Archer, R. Bhaskar, A. Collier, T. Lawson, & A. Norrie (Eds.), Critical realism: Essential readings (pp. 16–47). London: Routledge.

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners.* London: SAGE.

Fletcher, A. (2016). Applying critical realism in qualitative research: methodology meets method. *International Journal of Social Research Methodology, 20*(2)*,* 189-194. https://doi.org/10.1080/13645579.2016.1144401

Madill, A., Jordan, A., & Shirley, C. (2000). Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies. *British Journal of Psychology, 9* 1(1), 1-20. https://doi.org/10.1348/000712600161646

Maxwell, J. (2012). *A realist approach for qualitative research.* Thousand Oaks, CA:SAGE.

Appendix C: Author guidelines for the empirical paper and systematic literature review submission to the Journal of Aging and Mental health

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Please confirm that all mandatory laboratory health and safety procedures have been complied with in the course of conducting any experimental work reported in your paper. Please ensure your paper contains all appropriate warnings on any hazards that may be involved in carrying out the experiments or procedures you have described, or that may be involved in instructions, materials, or formulae.

Please include all relevant safety precautions; and cite any accepted standard or code of practice. Authors working in animal science may find it useful to consult the International Association of Veterinary Editors' Consensus Author Guidelines on Animal Ethics and Welfare and Guidelines for the Treatment of Animals in Behavioural Research and Teaching. When a product has not yet been approved by an appropriate regulatory body for the use described in your paper, please specify this, or that the product is still investigational.

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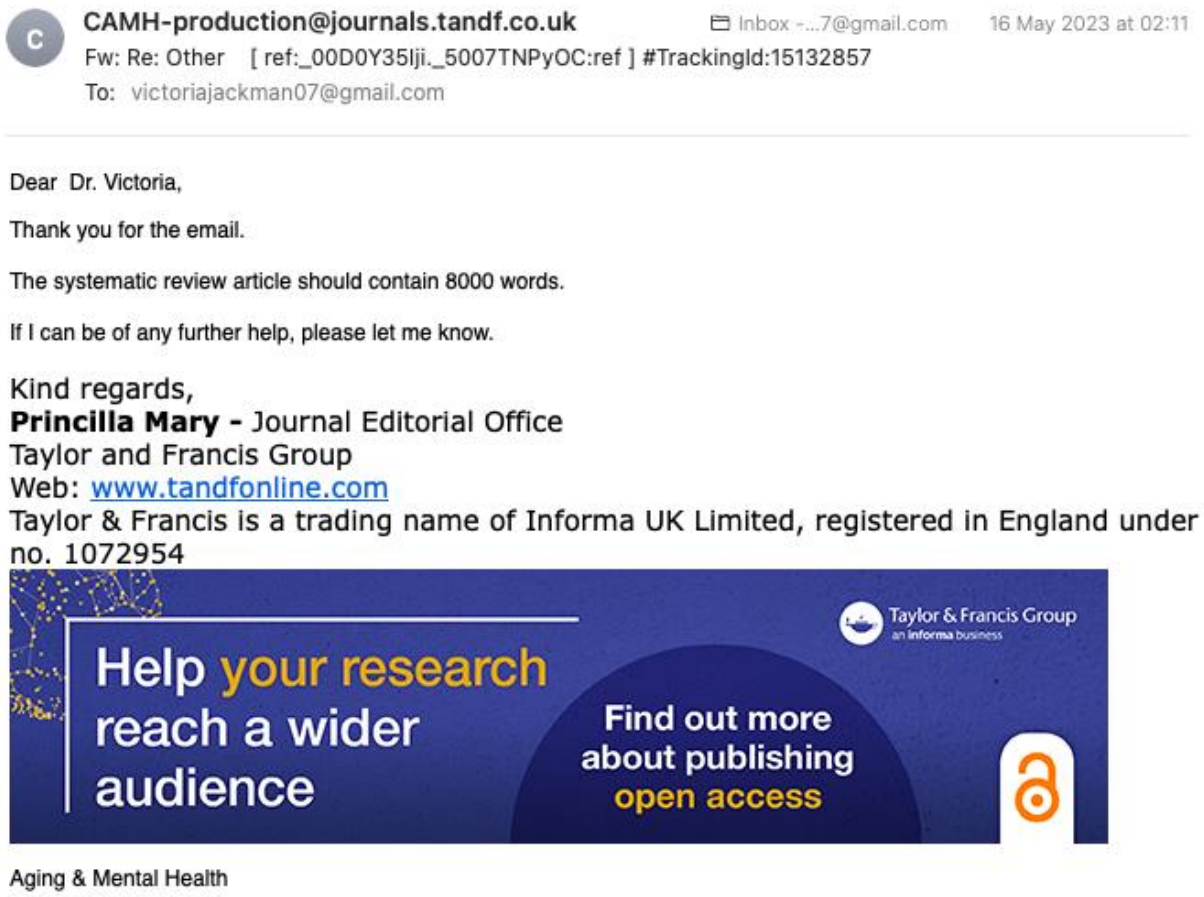
Queries

Should you have any queries, please visit our Author Services website or contact us here.

Updated 5th of April 2023

Appendix D: Additional guidance for the systematic literature review



CAMH-production@journals.tandf.co.uk Inbox -...7@gmail.com 16 May 2023 at 02:11
Fw: Re: Other [ref:_00D0Y35lji._5007TNPyOC:ref] #TrackingId:15132857
To: victoriajackman07@gmail.com

Dear Dr. Victoria,

Thank you for the email.

The systematic review article should contain 8000 words.

If I can be of any further help, please let me know.

Kind regards,
Princilla Mary - Journal Editorial Office
Taylor and Francis Group
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Aging & Mental Health

Appendix E: Quality assessment tool for studies with diverse designs (QATSDD; Sirriyeh et al., 2011)

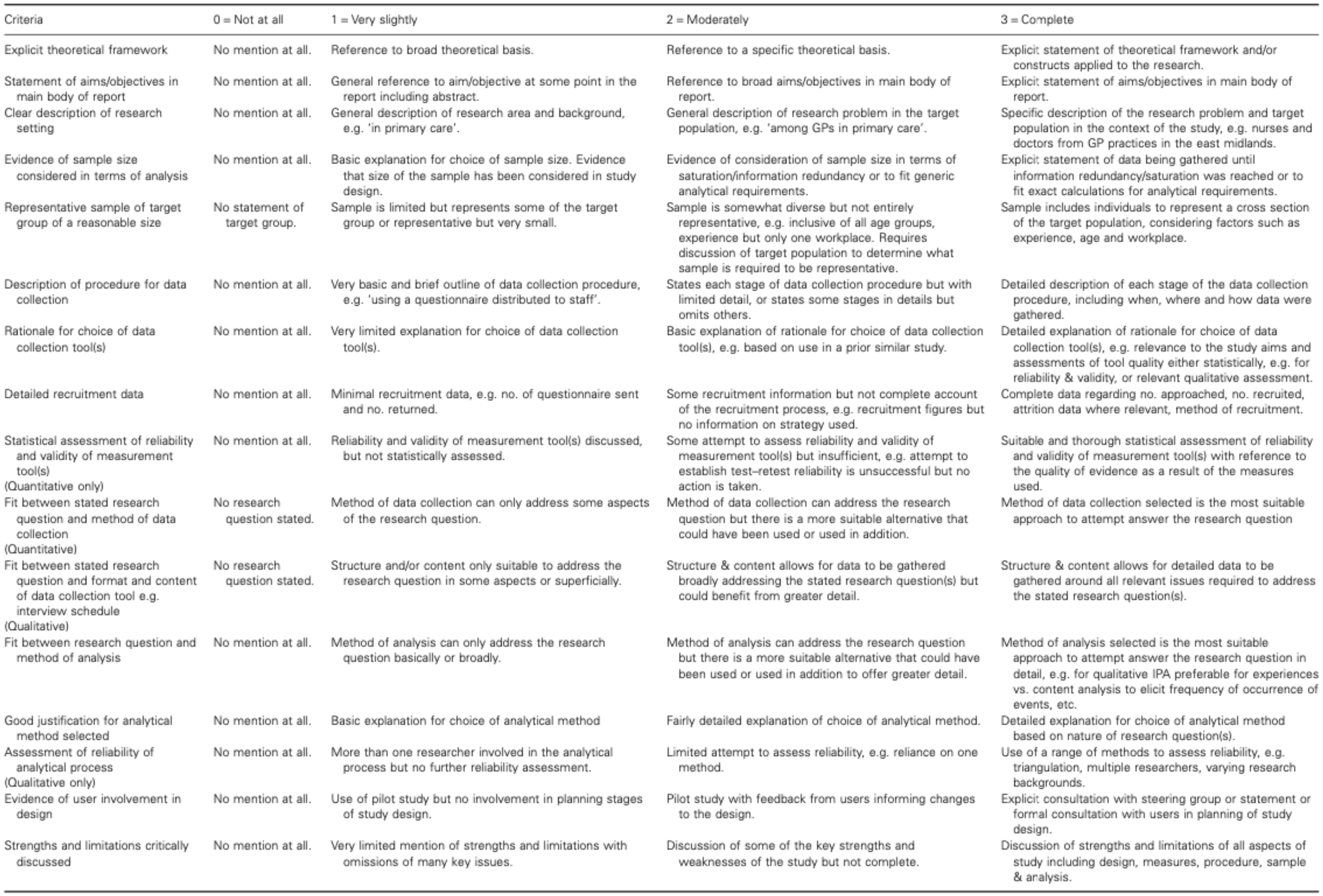


Table 1 Quality assessment tool and scoring guidance notes

Criteria	0 = Not at all	1 = Very slightly	2 = Moderately	3 = Complete
Explicit theoretical framework	No mention at all.	Reference to broad theoretical basis.	Reference to a specific theoretical basis.	Explicit statement of theoretical framework and/or constructs applied to the research.
Statement of aims/objectives in main body of report	No mention at all.	General reference to aim/objective at some point in the report including abstract.	Reference to broad aims/objectives in main body of report.	Explicit statement of aims/objectives in main body of report.
Clear description of research setting	No mention at all.	General description of research area and background, e.g. 'in primary care'.	General description of research problem in the target population, e.g. 'among GPs in primary care'.	Specific description of the research problem and target population in the context of the study, e.g. nurses and doctors from GP practices in the east midlands.
Evidence of sample size considered in terms of analysis	No mention at all.	Basic explanation for choice of sample size. Evidence that size of the sample has been considered in study design.	Evidence of consideration of sample size in terms of saturation/information redundancy or to fit generic analytical requirements.	Explicit statement of data being gathered until information redundancy/saturation was reached or to fit exact calculations for analytical requirements.
Representative sample of target group of a reasonable size	No statement of target group.	Sample is limited but represents some of the target group or representative but very small.	Sample is somewhat diverse but not entirely representative, e.g. inclusive of all age groups, experience but only one workplace. Requires discussion of target population to determine what sample is required to be representative.	Sample includes individuals to represent a cross section of the target population, considering factors such as experience, age and workplace.
Description of procedure for data collection	No mention at all.	Very basic and brief outline of data collection procedure, e.g. 'using a questionnaire distributed to staff'.	States each stage of data collection procedure but with limited detail, or states some stages in details but omits others.	Detailed description of each stage of the data collection procedure, including when, where and how data were gathered.
Rationale for choice of data collection tool(s)	No mention at all.	Very limited explanation for choice of data collection tool(s).	Basic explanation of rationale for choice of data collection tool(s), e.g. based on use in a prior similar study.	Detailed explanation of rationale for choice of data collection tool(s), e.g. relevance to the study aims and assessments of tool quality either statistically, e.g. for reliability & validity, or relevant qualitative assessment.
Detailed recruitment data	No mention at all.	Minimal recruitment data, e.g. no. of questionnaire sent and no. returned.	Some recruitment information but not complete account of the recruitment process, e.g. recruitment figures but no information on strategy used.	Complete data regarding no. approached, no. recruited, attrition data where relevant, method of recruitment.
Statistical assessment of reliability and validity of measurement tool(s) (Quantitative only)	No mention at all.	Reliability and validity of measurement tool(s) discussed, but not statistically assessed.	Some attempt to assess reliability and validity of measurement tool(s) but insufficient, e.g. attempt to establish test–retest reliability is unsuccessful but no action is taken.	Suitable and thorough statistical assessment of reliability and validity of measurement tool(s) with reference to the quality of evidence as a result of the measures used.
Fit between stated research question and method of data collection (Quantitative)	No research question stated.	Method of data collection can only address some aspects of the research question.	Method of data collection can address the research question but there is a more suitable alternative that could have been used or used in addition.	Method of data collection selected is the most suitable approach to attempt answer the research question
Fit between stated research question and format and content of data collection tool e.g. interview schedule (Qualitative)	No research question stated.	Structure and/or content only suitable to address the research question in some aspects or superficially.	Structure & content allows for data to be gathered broadly addressing the stated research question(s) but could benefit from greater detail.	Structure & content allows for detailed data to be gathered around all relevant issues required to address the stated research question(s).
Fit between research question and method of analysis	No mention at all.	Method of analysis can only address the research question basically or broadly.	Method of analysis can address the research question but there is a more suitable alternative that could have been used or used in addition to offer greater detail.	Method of analysis selected is the most suitable approach to attempt answer the research question in detail, e.g. for qualitative IPA preferable for experiences vs. content analysis to elicit frequency of occurrence of events, etc.
Good justification for analytical method selected	No mention at all.	Basic explanation for choice of analytical method	Fairly detailed explanation of choice of analytical method.	Detailed explanation for choice of analytical method based on nature of research question(s).
Assessment of reliability of analytical process (Qualitative only)	No mention at all.	More than one researcher involved in the analytical process but no further reliability assessment.	Limited attempt to assess reliability, e.g. reliance on one method.	Use of a range of methods to assess reliability, e.g. triangulation, multiple researchers, varying research backgrounds.
Evidence of user involvement in design	No mention at all.	Use of pilot study but no involvement in planning stages of study design.	Pilot study with feedback from users informing changes to the design.	Explicit consultation with steering group or statement or formal consultation with users in planning of study design.
Strengths and limitations critically discussed	No mention at all.	Very limited mention of strengths and limitations with omissions of many key issues.	Discussion of some of the key strengths and weaknesses of the study but not complete.	Discussion of strengths and limitations of all aspects of study including design, measures, procedure, sample & analysis.

Appendix F: Quality assessment scores

Paper	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**Percentage**
Wilson et al., (2010)	1	2	3	1	1	2	3	3	1	0	N/A	1	1	N/A	0	0	45%
Duggleby et al., (2007)	2	3	2	2	2	3	2	3	3	3	1	2	2	0	1	3	71%
Zhao et al., (2020)	2	3	3	3	2	2	2	3	2	0	N/A	3	1	N/A	0	2	67%
Konradt et al., (2012)	3	3	2	0	2	1	1	1	2	3	N/A	3	2	N/A	0	2	60%
Matthieu (2008)	1	2	2	0	2	1	1	0	0	0	0	1	1	0	0	1	25%
John & Tungal (2017)	2	1	1	0	2	2	2	2	0	0	0	1	2	0	1	1	35%
Giapraki et al., (2020)	2	3	1	0	2	2	3	2	2	3	N/A	3	2	N/A	0	3	67%
Tse et al., (2010)	1	3	2	0	2	3	1	3	2	3	N/A	2	1	N/A	0	2	60%
Walter et al., (2007)	1	3	3	0	2	0	1	1	0	0	N/A	2	0	N/A	0	2	36%
Ganz & Jacobs (2014)	1	3	3	2	3	2	1	3	1	0	N/A	2	1	N/A	1	2	60%
Shahidi et al., (2010)	3	2	2	1	2	0	1	2	1	0	N/A	2	1	N/A	0	2	45%
Kuru Alici et al., (2021)	1	3	2	3	2	2	1	3	1	3	N/A	3	2	N/A	0	1	64%
Ellis et al., (2017)	1	3	3	0	3	1	1	3	1	2	N/A	2	1	N/A	1	2	57%
Bartlett & Arpin (2019)	1	3	2	0	2	3	1	2	0	3	N/A	3	3	N/A	0	1	57%
Killen & Macaskill (2015)	3	3	2	0	2	3	3	1	1	2	1	2	2	0	0	2	56%
Wu & Koo (2016)	3	3	2	0	2	1	1	1	1	2	N/A	1	1	N/A	0	2	48%
Ramirez et al., (2014)	2	3	2	0	2	2	1	1	1	3	N/A	2	2	N/A	0	1	52%
Bartholomaeus et al., (2019)	2	3	2	0	2	1	1	2	1	3	N/A	2	2	N/A	0	2	55%
Chamorro-Garrido et al., (2021)	2	3	2	0	2	2	1	2	1	3	N/A	2	2	N/A	0	3	60%
Freitas et al., (2021)	3	3	1	0	2	2	1	3	1	3	N/A	2	1	N/A	0	3	60%
Salces-Cubero et al., (2019)	2	3	2	3	2	2	1	2	3	3	N/A	3	1	N/A	0	2	69%

Appendix G: Ethical approval

Removed for submission.

Appendix H: Stage 2 summary sent to the charity lead for recruitment

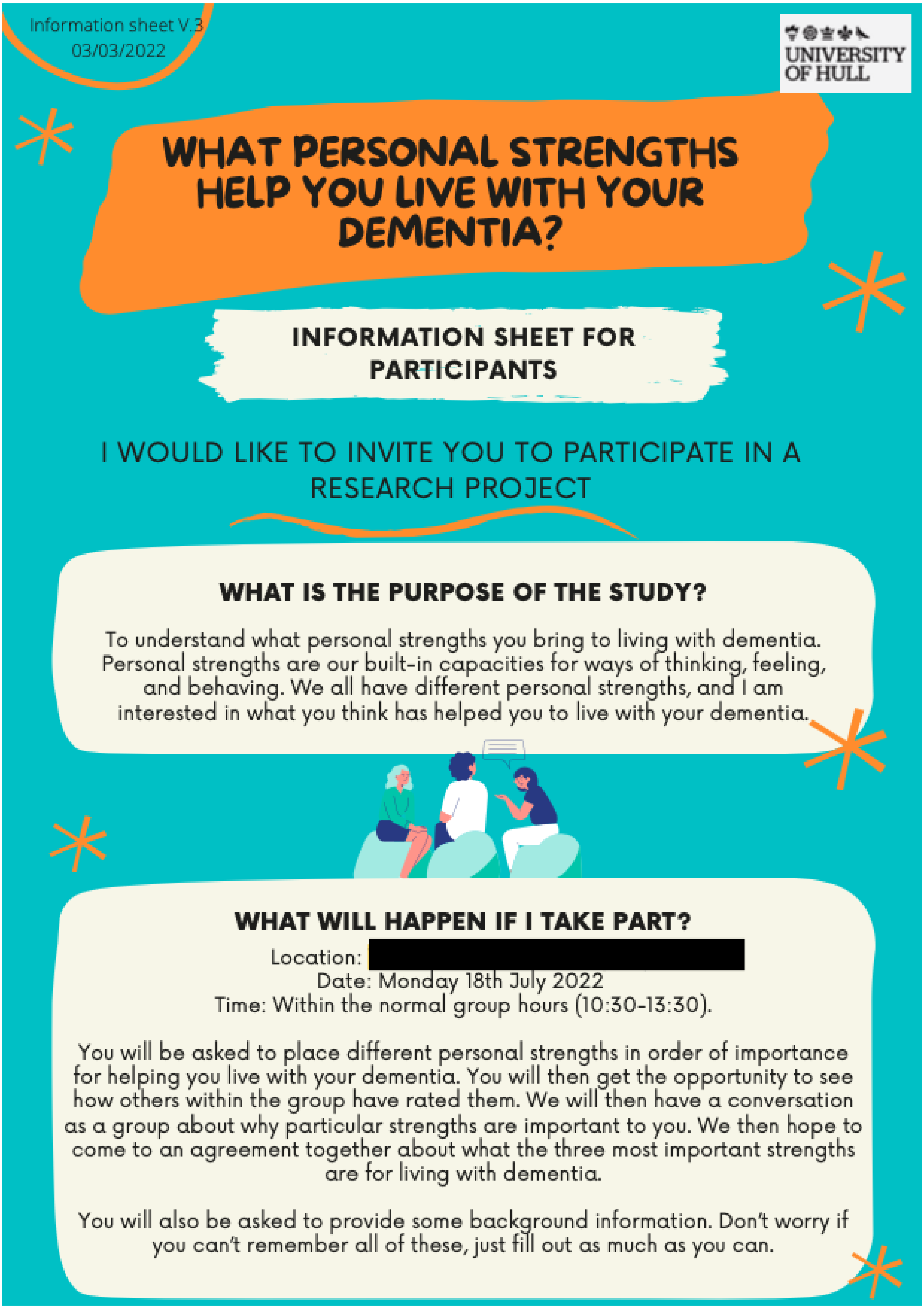
Hi, I'm Victoria.

I am wondering if you can help me in my research. I'm interested in finding out ways to better support people living with dementia and would be interested in hearing about your experiences

I would like to talk to you about what you think are some of the personal strengths that you bring to living with dementia. Personal strengths are our built-in capacities for particular ways of thinking, feeling, and behaving. We all have different character strengths and I am interested in what you think has helped you to live with your dementia.

I would love to come to your group and meet you all.

Appendix I: Information sheet (stage 2)



Information sheet V.3
03/03/2022

UNIVERSITY OF HULL

WHAT PERSONAL STRENGTHS HELP YOU LIVE WITH YOUR DEMENTIA?

INFORMATION SHEET FOR PARTICIPANTS

I WOULD LIKE TO INVITE YOU TO PARTICIPATE IN A RESEARCH PROJECT

WHAT IS THE PURPOSE OF THE STUDY?

To understand what personal strengths you bring to living with dementia. Personal strengths are our built-in capacities for ways of thinking, feeling, and behaving. We all have different personal strengths, and I am interested in what you think has helped you to live with your dementia.

WHAT WILL HAPPEN IF I TAKE PART?

Location: [redacted]
Date: Monday 18th July 2022
Time: Within the normal group hours (10:30-13:30).

You will be asked to place different personal strengths in order of importance for helping you live with your dementia. You will then get the opportunity to see how others within the group have rated them. We will then have a conversation as a group about why particular strengths are important to you. We then hope to come to an agreement together about what the three most important strengths are for living with dementia.

You will also be asked to provide some background information. Don't worry if you can't remember all of these, just fill out as much as you can.

UNIVERSITY OF HULL

WHAT ARE THE POSSIBLE BENEFITS OF TAKING PART?

Taking an active role in research can be beneficial. It is hoped that the information gathered from this study will contribute towards a positive psychology approach to support individuals living with dementia.

WHAT ARE THE POSSIBLE DISADVANTAGES OF TAKING PART?

The research will require you to think about your experiences of living with dementia. If this feels too distressing, then you do not need to take part.

HOW WILL WE USE INFORMATION ABOUT YOU?

We will only use information you provide - background information and the audio recording of the session.

All data will be stored securely on an encrypted laptop.

You are free to withdraw at any point during participation, without having to give a reason. However, you will be unable to withdraw any of your data.

The data will only be shared with the research team. Data may be used to support future research and may be shared anonymously with other researchers.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

The results of the study will be written in a thesis as part of a Doctorate in Clinical Psychology at The University of Hull and may also be published in an academic journal or presented at conferences. We will write our reports in a way that no-one can work out you took part in the study. Direct quotes may be used in the write up but these will be anonymised.

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT ME:

Tel: 07976071643
E-mail: v.thomas-2020@hull.ac.uk

THANK YOU FOR READING THIS INFORMATION SHEET AND FOR CONSIDERING TAKING PART IN THIS RESEARCH.

YOURS SINCERELY,
VICTORIA JACKMAN

Appendix J: Recruitment Poster (Stage 3)

Are you living with dementia?

INCREASING LOVE, KINDNESS AND HUMOUR

WHAT IS THE PURPOSE OF THE STUDY?

Love, Kindness and Humour are some of the personal strengths that individuals living with dementia felt are important to help them live well. I am interested in understanding your views on what approaches appeal to you for an intervention focusing on love, kindness and humour.

WHAT WILL HAPPEN IF I TAKE PART?

The researcher will invite you to take part in a group discussion with around 4 other individuals living with dementia. I will describe different techniques to improve love, kindness and humour, and I would like to hear your feedback on these. This can be either in person or online. If you would feel more comfortable in an interview, let me know and I can arrange this. This would take no more than 1 hour.

HOW DO I GET INVOLVED?

If you would like to be involved or have any further questions please contact Victoria Jackman:

Email: v.thomas-2020@hull.ac.uk
Tel: 07976071643

Would you like to be involved in research?

UNIVERSITY OF HULL

Appendix K: Information Sheet (Stage 3)

Information sheet V.4
15/09/2022

UNIVERSITY OF HULL

INCREASING LOVE, KINDNESS AND HUMOUR TO HELP LIVE WITH YOUR DEMENTIA

INFORMATION SHEET FOR PARTICIPANTS

I WOULD LIKE TO INVITE YOU TO PARTICIPATE IN A RESEARCH PROJECT

WHAT IS THE PURPOSE OF THE STUDY?

Love, Kindness and Humour are some of the personal strengths that individuals living with dementia felt are important to help them live with their dementia.

I would be interested in which techniques appeal most to you to help increase your Love, Kindness and Humour. This will be used to create an intervention to support people to live with dementia.

WHAT WILL HAPPEN IF I TAKE PART?

I will be in contact to arrange a time and location to meet for the focus group. If you would feel more comfortable in an interview, let me know and I can arrange this.

You will get the opportunity to try different techniques to help you increase your Love, Kindness and Humour. I would be keen to get your feedback on these.

You will also be asked for some background information. Don't worry if you can't remember all of these, just fill out as much as you can.

UNIVERSITY OF HULL

WHAT ARE THE POSSIBLE BENEFITS OF TAKING PART?

Taking an active role in research can be beneficial. It is hoped that the information gathered from this study will contribute towards a co-developed positive psychology approach to support individuals living with dementia.

WHAT ARE THE POSSIBLE DISADVANTAGES OF TAKING PART?

The research will require you to try out and talk about different techniques relating to Love, Kindness and Humour. If that feels it will be too distressing and uncomfortable then you do not need to take part in the research.

HOW WILL WE USE INFORMATION ABOUT YOU?

We will only use information you provide - background information and the audio recording of the session.

All data will be stored on an encrypted laptop.

You are free to withdraw at any point during participation, without having to give a reason. However, you will be unable to withdraw any of your data.

The data will only be shared with the research team. Data may be used to support future research and may be shared anonymously with other researchers.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

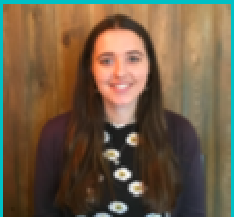
The results of the study will be written in a thesis as part of a Doctorate in Clinical Psychology at The University of Hull and may also be published in an academic journal or presented at conferences. We will write our reports in a way that no-one can work out you took part in the study. Direct quotes may be used in the write up but these will be anonymised.

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT ME:

Tel: 07976071643
E-mail: v.thomas-2020@hull.ac.uk

THANK YOU FOR READING THIS INFORMATION SHEET AND FOR CONSIDERING TAKING PART IN THIS RESEARCH.

YOURS SINCERELY,
VICTORIA JACKMAN



Appendix L: Consent form

24th February 2022, version 3.

CONSENT FORM

UNIVERSITY
OF HULL

Title of study: The co-development of a positive psychology intervention to support individuals living with dementia

Name of Researcher: Victoria Jackman

Please tick box

I confirm that I have read and understand the information sheet (v.3 dated 03/03/2022) for the above study and have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. I understand that my data will not be able to be withdrawn at any point. ☐

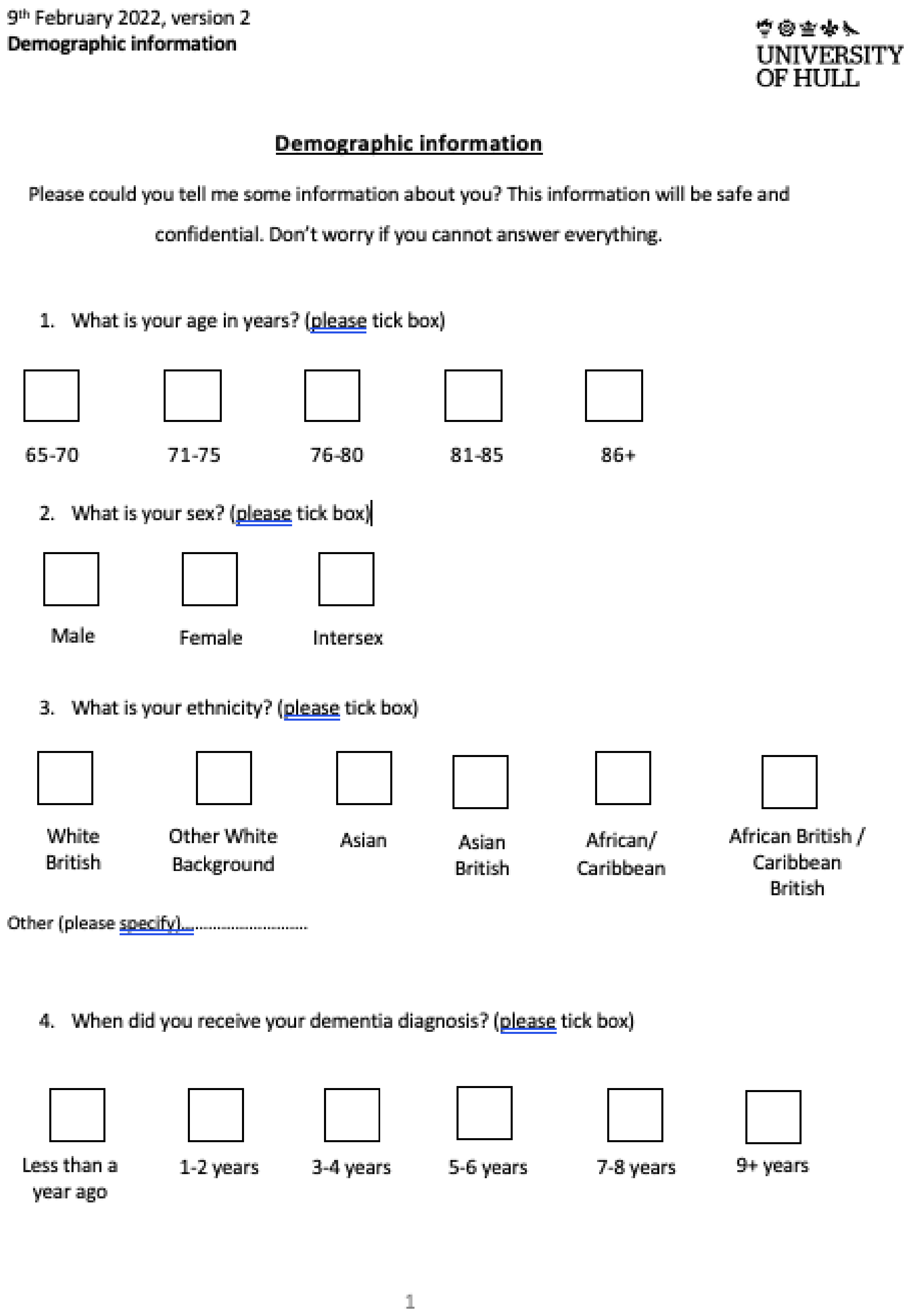
I understand that the research discussions will be audio recorded and that anonymised direct quotes may be used in research reports and conference presentations. ☐

I understand that the information collected about me and the audio recordings may be used to support other research conducted by the research team. ☐

I agree to take part in the above study. ☐

________________	________________	________________
Name of Participant	Date	Signature
________________	________________	________________
Name of Person taking consent	Date	Signature

Appendix M: Demographic Information Sheet



9th February 2022, version 2
Demographic information

UNIVERSITY
OF HULL

Demographic information

Please could you tell me some information about you? This information will be safe and confidential. Don't worry if you cannot answer everything.

1. What is your age in years? (please tick box)

☐ 65-70 ☐ 71-75 ☐ 76-80 ☐ 81-85 ☐ 86+

2. What is your sex? (please tick box)

☐ Male ☐ Female ☐ Intersex

3. What is your ethnicity? (please tick box)

☐ White British ☐ Other White Background ☐ Asian ☐ Asian British ☐ African/ Caribbean ☐ African British / Caribbean British

Other (please specify)……………………………

4. When did you receive your dementia diagnosis? (please tick box)

☐ Less than a year ago ☐ 1-2 years ☐ 3-4 years ☐ 5-6 years ☐ 7-8 years ☐ 9+ years

1

Appendix N: Stage 2 research plan and discussion guide

Research plan for stage 2

Timings

Break off into 3 groups:

10:45-11:00

1. Provide information sheets, Consent forms & Demographic information
    a. I provided with everyone at the last group with an information sheet, so hopefully should be aware

11:00-11:30

2. Read each character strength and definition → place each card in important or not important pile (important for them to use)
3. Go through the important pile and choose the top 4
4. Put ranking stickers on grid

Break – Look at the rankings, get a cup of tea (10mins)

11:40-12:15

All come together around one table for consensus discussion

1. Recorded discussions with laptop.

In smaller groups:

1. **Provide information sheets, Consent forms & Demographic information**
    a. **I provided with everyone at the last group with an information sheet, so hopefully should be aware**

    - Intro: Go through the information sheet – provide overview and space for questions
    - Fill out consent forms
    - Complete demographic information form
    - ***Record discussions***

2. **Read each character strength and definition → place each card in important or not important pile (important for them to use!)**

    - **Importance →** Which strengths are most important for you to use to help you live with dementia – quality of life.
    - (In the packs there will be cut outs of each character strength with the definition and also an A4 sheet of paper split into two with important / not important. Support participants to make two piles of the character strengths).
    - When thinking about the character strengths, make clear it is what is most important for them to rely upon – not what they want other people to be.

3. **Go through the important pile and choose the top 4**

    - Support participants to go through the important pile (they can discard the not important pile) and allow them to try and choose their top 4 from this. In the pack there should be another A4 piece of paper with the number 1-4 listed down it.

- Support participants to place the top 4 character strengths next to each number, with 1 being the most important.

4. **Place ranking stickers on the grid on your table**

    - Each table will have a grid with the character strengths on – write the participants name on this and then put the 1st-4th stickers on the corresponding column.
    - Once complete blue tac on walls (to combine with the other tables)

Break – Get a cup of tea while other groups finish. Encourage participants to look at the rankings other people have done.

<u>Big group – record discussion using laptop.</u>

Aim: Come to a consensus about the 3-5 most important character strengths.

1. Introduce consensus discussion → explain the aim and what is going to happen

Discussion guide:

- Ask specific people questions appropriate to their rankings
- The "I want to speak" cards will be there to help people join in conversation
- for agreement – looking for at least 50% agreement

Themes	Focus points
Initial thoughts on rankings	Any surprises?

Agreement to remove character strengths with no stickers (vote with raising hands)	**to remove - with black marker pen cross out that column** Why is x not important to help you live with dementia? Anyone disagree to remove them?
Now that you have seen other people's rankings would anyone change theirs?	Why would you change it?
Focus attention on highest ranking strengths	Why is x the most important to help you live well with dementia? Do we all agree this is important to include in an intervention?
Middle ranked strengths	Why are these important to help you live well with dementia? Do you think these should be included in an intervention or not?

Appendix O: Participant resource booklet (stage 3) / discussion guide

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Love, Kindness & Humour

Are strengths people living with dementia said are important to them.

Aim: to create support focusing on these strengths to increase wellbeing

Love

"Caring deeply for others before yourself"
" A genuine care for a person"

- Do you agree that love is important for living with dementia?
- What helps you to keep close relationships with other people?
- If you have been invited to a group and they were going to focus on love, what would you want it to involve or look like?
- How could services support you to promote relationships with others?

Group art sessions e.g. singing, dance & visual art

Family focused support

Social groups in the community

Couple life story work

Kindness

"Generous nature – thinking of others"
"Observing people and helping when needed without being asked"

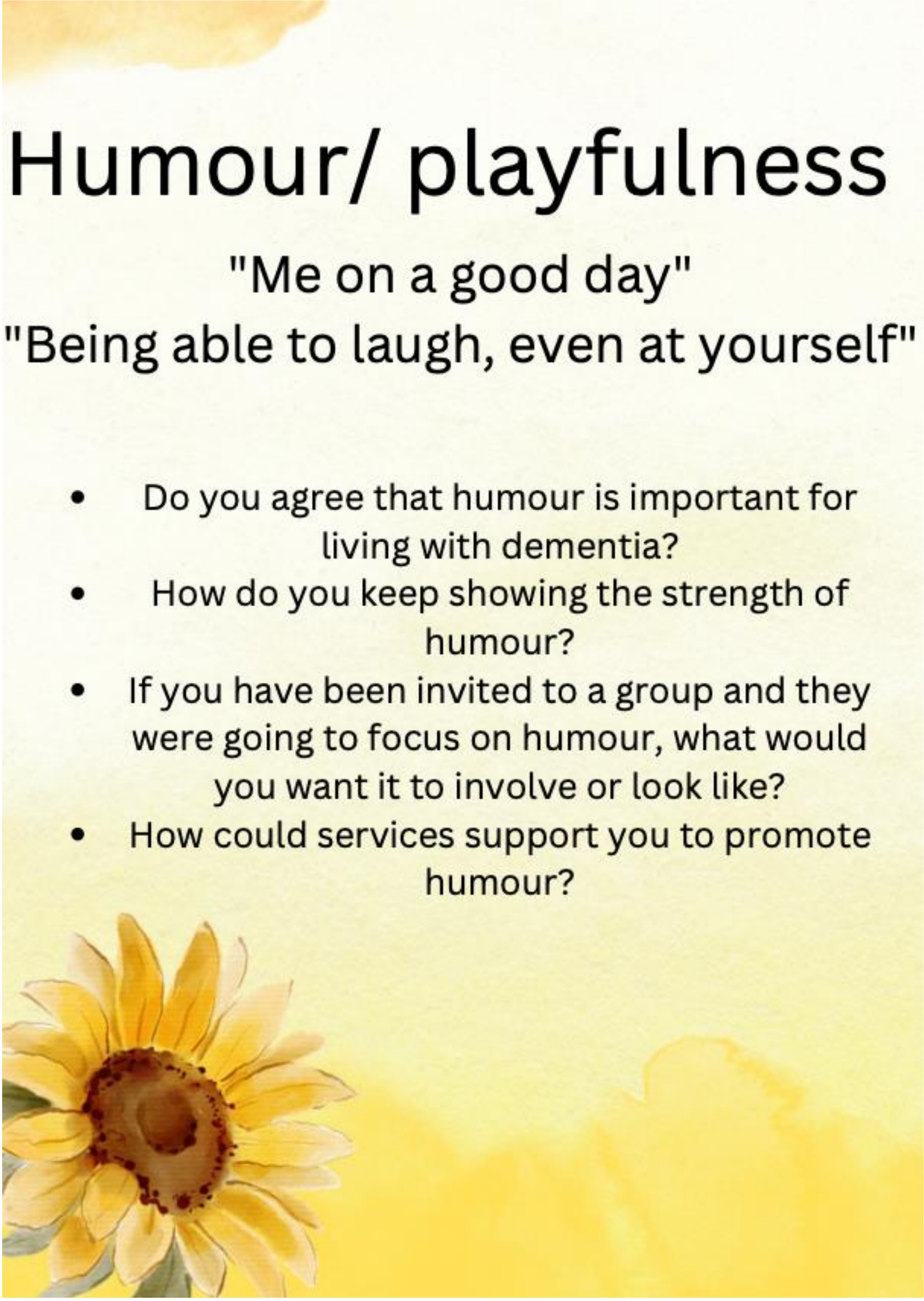
- Do you agree that kindness is important for living with dementia?
- How do you keep showing the strength of kindness?
- If you have been invited to a group and they were going to focus on kindness, what would you want it to involve or look like?
- How could services support you to promote kindness?

Acts of Kindness to others

Acts of Kindness to self

Counting Kindness

Loving Kindness Meditation



Humour/ playfulness

"Me on a good day"

"Being able to laugh, even at yourself"

- Do you agree that humour is important for living with dementia?
- How do you keep showing the strength of humour?
- If you have been invited to a group and they were going to focus on humour, what would you want it to involve or look like?
- How could services support you to promote humour?

Comedy / Improvisation sessions

Laughter Yoga

Telling funny stories and anecdotes

Clown humour sessions

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Any final thoughts or reflections?

Thank you for participating in my research!

Appendix P: Sources of support

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24/03/2022
Version 3

Sources of support and information regarding living with dementia

Should you have any specific issues that taking part in this study has raised then you can contact the **Researcher** on:

Mobile Number: 07976071643

E-mail: v.thomas-2020@hull.ac.uk

The **Alzheimer's Society** offers information and support regarding living with dementia on its website:

https://www.alzheimers.org.uk/

Dementia Connect Support Line: 0333 150 3456

The **Dementia UK** offers advice and information about dementia on its website:

https://www.dementiauk.org/

Dementia Helpline: 0800 888 6678

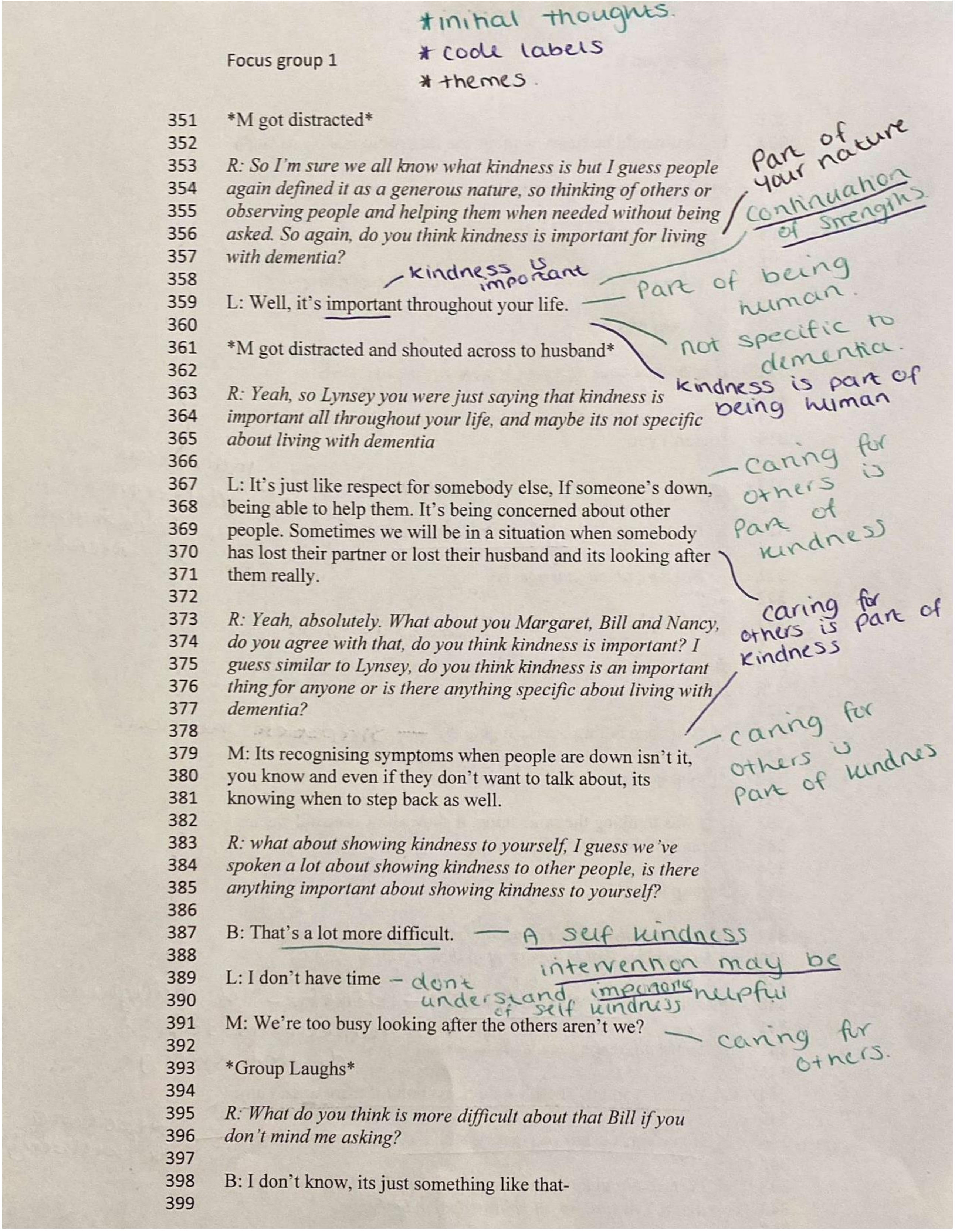
The **charity leads** at the organisations you were recruited from would also be available to speak to you and discuss any concerns you may have.

Appendix Q: Character strengths as defined by the PPI group

Character strengths as defined by people living with dementia and their care partners.

Character strength	Definition
Creativity	Identifying and resolving problems.
Openness to experience	Taking an interest.
Critical Thinking	Willingness to learn and act on decisions; thinking things through and examining them from all sides.
Love of Learning	Openness to knowledge.
Wisdom	Someone that has the hope that things will be alright – looking beyond the person; knowledge gained with experience or age.
Honesty	Being real; telling the truth and not making it look better than it is.
Bravery	Not turning your back on what is ahead of you; when the going gets tough, the tough gets going
Perseverance	Never giving in; keep going until you get what you want.
Zest / Vitality	Keeping enthusiasm and interest in what you are wanting to achieve.
Kindness	Generous nature – thinking of others; observing people and helping when needed without being asked.
Love	Caring deeply for others before yourself; genuine care for a person.
Social Intelligence	Thinking of other's needs; observing others needs.
Fairness	Not treating one better than the other; treating people equally.
Leadership	Taking responsibility for looking after others; serving efficiently and thoughtfully.
Teamwork	Working well together; collective experience.
Forgiveness	Being able to realise that not everyone is perfect; forgiving those who have done wrong.
Humility	Letting one's accomplishments speak for themselves; not pushing yourself forward
Prudence	Care of how we use our possessions and opportunities.
Self-control	Holding back and using wisdom before speaking or acting.
Wonder	Childlike appreciation of life and others.
Gratitude	Being thankful; being thankful to other people who have helped you.
Optimism	Hoping the parachute opens; looking forwards and always thinking the best.
Humour / Playfulness	Me on a good day; being able to laugh, even at yourself.
Faith / Purpose	Everything happens for a reason; believing in something.

Appendix R: Qualitative Analysis Extract (anonymized with pseudonyms)



*initial thoughts.
* code labels
* themes.

Focus group 1

M got distracted

R: So I'm sure we all know what kindness is but I guess people again defined it as a generous nature, so thinking of others or observing people and helping them when needed without being asked. So again, do you think kindness is important for living with dementia?

Part of your nature

continuation of strengths.

L: Well, it's important throughout your life.

kindness is important

Part of being human.

not specific to dementia.

kindness is part of being human

M got distracted and shouted across to husband

R: Yeah, so Lynsey you were just saying that kindness is important all throughout your life, and maybe its not specific about living with dementia

L: It's just like respect for somebody else, If someone's down, being able to help them. It's being concerned about other people. Sometimes we will be in a situation when somebody has lost their partner or lost their husband and its looking after them really.

caring for others is part of kindness

caring for others is part of kindness

R: Yeah, absolutely. What about you Margaret, Bill and Nancy, do you agree with that, do you think kindness is important? I guess similar to Lynsey, do you think kindness is an important thing for anyone or is there anything specific about living with dementia?

M: Its recognising symptoms when people are down isn't it, you know and even if they don't want to talk about, its knowing when to step back as well.

caring for others is part of kindnes

R: what about showing kindness to yourself, I guess we've spoken a lot about showing kindness to other people, is there anything important about showing kindness to yourself?

B: That's a lot more difficult.

A self kindness intervention may be helpful

L: I don't have time

dont understand importance of self kindness

M: We're too busy looking after the others aren't we?

caring for others.

Group Laughs

R: What do you think is more difficult about that Bill if you don't mind me asking?

B: I don't know, its just something like that-

M: Its like when you my husband goes fishing and so being kind to yourself

L: having some time on your own… he goes bloody golfing, and I'm left on my own

M: well, my husband goes fishing. I don't mind its good for him to go. Except for the time, Saturday he was fishing, and I was walking over the lake. I asked him did he catch anything, and he let go of the rod as the fish had gotten it. So he lost his rod.

group laughs

R: Do you guys agree, I don't know if you Margaret and Nancy, find it hard to show kindness to yourself than to other people?

kindness involves caring for others.

N: Oh yes, oh I've always looked after the elderly or someone's got a broken leg.

— caring for others

R: yeah, so you have always been that caring person to other people. What sort of things at the moment help you to show kindness to other people? What helps you to be kind.

B: Well I suppose its part of your nature

— Part of being human

part of your nature / part of your nature

R: yeah, so its part of you and part of your nature. Nancy can you think of anything that helps you to be kind to other people? Or do you agree with Bill that its part of your nature, part of who you are?

N: It is isn't it, its good to be kind to each other

— kindness is seen as a desired strength.

Kindness is important. strengths are relational

R: Yeah, yeah definitely. So again, similar to before, [redacted] was like next week we are going to focus on kindness, what would you be thinking of what that would look like? If kindness was going to be the focus of your next group session?

L: I would be thinking who are you?

group laughs

— humour part of group process

L: I think people mostly are kind, not many people are horrible are they? Not really. Most people have a general sense of being kind.

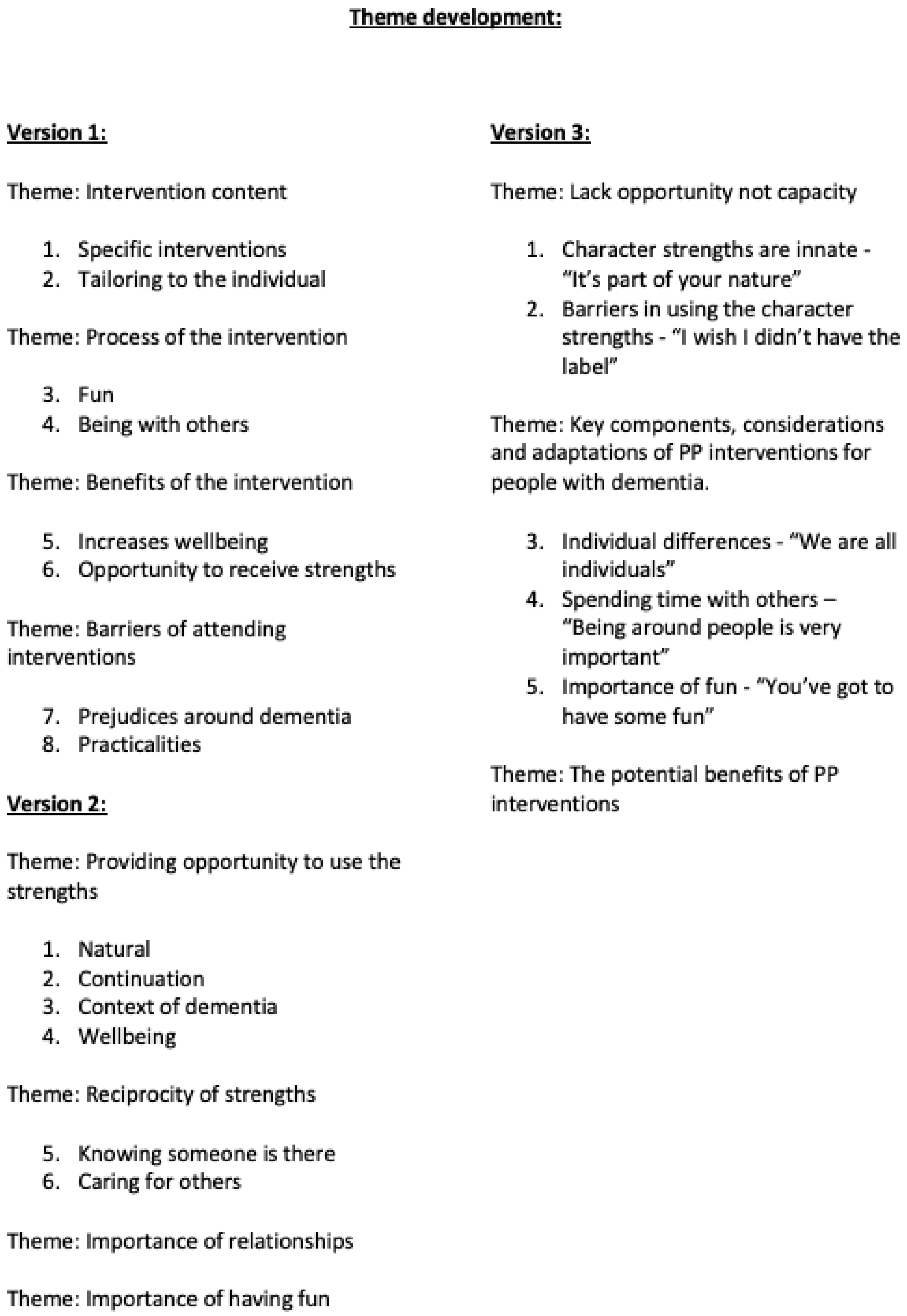
— Don't feel the need for a kindness intervention / its part of your nature

B: When you come to a group like this, you have to sort of be kind, and expect people to be kind back. It moves in two directions

kindness is relational. / strengths are relational

being around people / is important

Appendix S: Theme development



Theme development:

Version 1:

Theme: Intervention content

1. Specific interventions
2. Tailoring to the individual

Theme: Process of the intervention

3. Fun
4. Being with others

Theme: Benefits of the intervention

5. Increases wellbeing
6. Opportunity to receive strengths

Theme: Barriers of attending interventions

7. Prejudices around dementia
8. Practicalities

Version 2:

Theme: Providing opportunity to use the strengths

1. Natural
2. Continuation
3. Context of dementia
4. Wellbeing

Theme: Reciprocity of strengths

5. Knowing someone is there
6. Caring for others

Theme: Importance of relationships

Theme: Importance of having fun

Version 3:

Theme: Lack opportunity not capacity

1. Character strengths are innate - "It's part of your nature"
2. Barriers in using the character strengths - "I wish I didn't have the label"

Theme: Key components, considerations and adaptations of PP interventions for people with dementia.

3. Individual differences - "We are all individuals"
4. Spending time with others – "Being around people is very important"
5. Importance of fun - "You've got to have some fun"

Theme: The potential benefits of PP interventions