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RESEARCH ARTICLE

A psychometric study of the Flourishing Scale for people living with dementia

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Abstract

INTRODUCTION: There are few validated strengths-based outcome measures for evaluations of psychosocial interventions in dementia and measurement of the concept of flourishing has not been directly explored. This study therefore examined the psychometric properties of the Flourishing Scale (FS)—an eight-item generic self-report measure of social-psychological well-being—and how it might be adapted for people with dementia.

METHOD: A secondary data analysis of baseline data from the *Journeying Through Dementia* study, a randomized controlled trial of a self-management intervention for older adults with dementia living in the community in the United Kingdom ($n = 480$). Confirmatory Factor Analysis (CFA), Item Response Theory (IRT) analyses, and convergent/discriminatory analyses were undertaken.

RESULTS: Moderate negative skew in total FS scores was noted and adjusted for. A good level of internal consistency reliability was evident ($\alpha = 0.83$). Both CFA and IRT analyses verified the unidimensionality of the scale and there was evidence of item discrimination. Measurement precision appeared greater for lower to moderate levels of well-being, with some item-level variation. Total FS scores were significantly associated with quality of life, self-efficacy, and mood, supporting convergent validity. FS total scores were not associated with cognitive ability or time since diagnosis in this sample but were associated with living alone / with others.

DISCUSSION: These findings offer new avenues for strengths-based research and practice of psychosocial interventions for people with dementia in relation to the measurement social-psychological well-being. The FS shows promise as a valid and reliable self-report instrument for people with early-stage dementia but further validation research is needed to confirm optimum item content and responsiveness. The measurement of well-being of people living with moderate to severe cognitive impairments requires further research.

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KEYWORDS

dementia, flourishing, measurement, well-being

Highlights

- Previous work suggests that well-being in dementia could align with the concept of flourishing—optimized social-psychological well-being—but valid and reliable measurement of flourishing in dementia has not yet been directly explored.
- The aim of this study was to investigate the psychometric properties of the Flourishing Scale, a brief measure of social-psychological well-being previously validated with older people and cross-culturally, for people living with dementia.
- We carried out a secondary analysis of baseline data ($n = 480$) from a previous randomized controlled trial of a self-management psycho-social intervention in dementia (the Journeying Through Dementia trial). Participants were living with early-stage dementia, were predominantly White/British, and 57.8% were male. We utilized Classical Test Theory and Item Response Theory methods to examine the reliability, uni-dimensionality, and validity of the Flourishing Scale as well as item characteristics.
- Findings indicate the Flourishing Scale is uni-dimensional and has adequate internal consistency and validity for measuring social-psychological well-being in dementia. The scale can discriminate between different levels of well-being in dementia, particularly at lower to moderate levels. Items concerned with active engagement appear most sensitive to measured levels of flourishing overall. People with dementia living alone may be most at risk of lower levels of social-psychological well-being. Levels of flourishing were not correlated with cognitive impairment.
- The Flourishing Scale measures eudaimonic dimensions of well-being and may be of value in future dementia studies focused on these. The measurement precision of the Flourishing Scale for people with dementia may be best at low-moderate levels and items may vary somewhat in terms of ability to discriminate levels of well-being. Further research should explore optimum item content and response format and investigate how reliable and valid the instrument is longitudinally and for people living with a range of cognitive impairments at different stages of dementia.

1 | INTRODUCTION

Supporting people with dementia to maximize their well-being is an international healthcare and research priority, aligned to policies that embed the notion of “living well” with dementia in some countries.¹ Application of the positive psychology (PP) paradigm, emphasizing mobilization of psychosocial strengths,² is one way to advance this policy agenda to enable people with dementia to “live well.” This paradigm complements Kitwood’s (1992) seminal theory of personhood and well-being in dementia; Clarke and colleagues (2016) note how “relative well-being” and some of its indicators relate to key PP concepts such as “the ability to experience and display positive emotion, humor, creativity, and compassion for others” (p. 46²).

The definition and measurement of well-being is complicated by multiple approaches and application of concepts that are used interchangeably.^{3,4} For example, a recent review of well-being constructs found that, despite two decades of research, most studies purporting to measure overall well-being in health-related conditions were focused on patients’ quality-of-life (QoL).⁵ A systematic review combined the constructs of QoL, life satisfaction, and well-being to examine predictors of “living well” in dementia, also finding that QoL studies dominated the literature with minimal attention to well-being or life satisfaction.⁶ In questioning the use of QoL as a measure of effectiveness in dementia trials, the authors suggest broadening dementia research to include subjective well-being outcomes.

RESEARCH IN CONTEXT

- Systematic review:** The authors reviewed the literature using PsychINFO, MEDLINE, and CINAHL to identify strengths-based self-report measures of well-being, used in studies of people with dementia. Thirty-five instruments were identified and mapped into a framework of psychosocial well-being in dementia. No instruments were found relating directly to “flourishing” and well-being. Diener and colleagues’ (2010) short eight-item Flourishing Scale (FS) was subsequently used in the Journeying through Dementia (JtD) trial to evaluate a self-management intervention for people with early-stage dementia in the community. Baseline data (480 participants) was used to examine reliability and validity of the FS in dementia, utilizing both Confirmatory Factor Analysis and Item Response Theory analyses.
- Interpretation:** The FS appeared to discriminate levels of well-being for people with dementia, particularly at lower to moderate levels, and was unidimensional. Items covering active engagement and reciprocity appeared most sensitive to measured levels of flourishing. Internal consistency was acceptable and validity was supported; FS scores were significantly associated with quality-of-life, self-efficacy, and mood. Flourishing was not associated with cognitive ability or time since diagnosis, but higher flourishing was associated with living with others. Since 26% of the sample were living alone, and could be vulnerable to loneliness, the FS may assist in assessment of strengths to harness social opportunities associated with “living well” with dementia.
- Future directions:** Future work could explore optimum item content, response format, stability, longitudinal validity (responsiveness), and use of the FS with people in moderate and later stages of dementia.

Subjective well-being is a favorable balance between positive and negative emotions, whereas eudaimonic (psychological) well-being encompasses personal growth, positive relationships, self-acceptance/self-esteem, mastery, purpose, and autonomy.⁴ Seligman,⁷ proposed that the “gold standard” for measuring well-being was flourishing. Hone and colleagues⁸ describe flourishing as representing high levels of well-being across social-psychological domains. They drew together key conceptualizations of flourishing and its measurement, highlighting among others the model proposed by Diener et al.,⁹ which combined humanistic psychology and well-being theories, incorporating components of flourishing that include positive relationships, engagement, purpose and meaning, self-acceptance, self-esteem, competence, optimism, and social contribution. The Diener et al. model is

advantageous in encapsulating a wide range of constructs of flourishing as an intermediary of well-being, compared with other models of flourishing (Hone et al.⁸), and it has shown application in later life for cross-cultural groups.^{10,11}

Qualitative studies demonstrate that people with dementia can have positive experiences aligned to aspects of flourishing, including hope, humor, gratitude, and spirituality.^{12–15} A study involving people with dementia noted that love, kindness, and humor are important strengths for “living well,” providing social contexts that enable expression of these, along with opportunities for enjoyment and building positive relationships, were seen as high value meaningful psychosocial interventions.¹⁶ Clarke and colleagues (2020)¹⁷ proposed conceptual domains for well-being in people with dementia that incorporate potential components of flourishing under: subjective/hedonic well-being (positive affect, affect balance, life satisfaction); aspects of psychological/eudaimonic well-being (positive sense of self, meaning/transcendence, agency/purpose); and social well-being (connection, belonging, relational resilience). Relevant to these domains, 35 instruments (of varying psychometric quality) that have been used with people with dementia were identified, but none of these included a validated overall measure of flourishing in dementia. Similarly, to advance knowledge on strengths-based person-centered assessment for people with dementia, Mast et al.¹⁸ identified 11 self-report measures of varying lengths with acceptable psychometric properties where specific constructs including hope, gratitude, meaning in life, and resilience were evident. Although psychological factors (e.g., optimism and self-esteem) have been shown to underpin perceived ability to live well in dementia,¹⁹ the measurement of flourishing has yet to be directly explored.

Diener and colleagues’ eight-item Flourishing Scale (FS)⁹ is of potential value since it is noted as a prominent yet brief self-report measure of social-psychological well-being,²⁰ validated for clinical groups,²¹ and older people cross-culturally.^{10,11,22} We therefore sought to investigate its psychometric scale- and item-level properties among older people living with early-stage dementia.

Research questions were:

1. Does the FS possess adequate reliability as a self-report measure of well-being for people with dementia?
2. Is flourishing, as measured by the FS, associated with levels of cognitive impairment in dementia?
3. Does the FS applied to dementia measure one overall concept and therefore have a unidimensional factor structure or does it measure components separately? On the basis of the previous validation studies,^{9,21} a single factor structure was hypothesized.
4. Do individual items of the FS demonstrate measurement precision and sensitivity to different levels of well-being in dementia?
5. Is flourishing among people with dementia positively associated with quality of life and psychological well-being measures (indicating convergent validity) and negatively associated with measures of anxiety and depression (indicating discriminant validity)?

2 | METHOD

2.1 | Design

This study comprised a secondary analysis of baseline data from *Journeying through Dementia* (JtD),²³ a UK multi-centre randomized controlled trial of a manualized self-management intervention for people with early-stage dementia in the community (ISRCTN67209155), where the FS was used as a secondary outcome measure. Data were collected in-person via structured interviews. In accordance with our aims, this study was a preliminary examination of the instrument's key psychometric properties; since changes in other outcomes were not detected in the original trial,²³ investigating longitudinal validity (i.e., responsiveness²⁴) was out of scope for this study.

2.2 | Sampling and participants

The JtD trial involved a large clinical sample of community-dwelling participants (not living in a formal care setting) drawn from specialist memory clinics in England, who had already received a documented diagnosis of dementia.²⁵ The majority were diagnosed with Alzheimer's dementia (60.4%) or mixed Alzheimer's / vascular dementia (22.9%). A Mini-Mental State Examination (MMSE²⁶) score of ≤ 18 was used to allow for controlled testing of a novel self-management intervention with this defined group. Mean MMSE total score was 24.6 (SD = 3.1), ranging 18 to 30. Most participants were White/British (98%), 57.8% were male and mean age was 77.1. Mean length of time since diagnosis was 1.3 years this but was up to 13 years. Trial participants ($n = 491$) gave consent for anonymized data to be used in relevant secondary analyses.²⁵

2.3 | Measures

Flourishing Scale⁹ (FS): Eight items are rated on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree) according to respondents' perceptions of their current well-being and functioning. The range of possible scores is 8 (lowest level of well-being) to 56 (highest level of well-being).

Data from the following measures (used in the JtD trial at baseline) were utilized to enable investigation of convergent and discriminant validity.

Dementia Quality of Life Instrument (DEMQOL)²⁷: A 28-item measure of self-reported quality of life specific to dementia, covering five domains; daily activities, looking after oneself, health and well-being, cognitive functioning, social relationships, and self-concept. Higher total scores (ranging from 28–112) denote higher quality of life. Items are rated on 4-point scale (six are reverse-coded). The DEMQOL has adequate reliability and validity among people with dementia.²⁷

Patient Health Questionnaire²⁸ (PHQ-9): A nine-item self-report measure of depressive symptom severity. Items correspond to diagnos-

tic criteria for major depressive disorder, according to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-4).²⁹ Items assess perceived recent frequency of depression symptoms on 3-point scales. Total scores range from 0 to 27; higher scores indicate more severe symptoms of depression.

Generalized Anxiety Disorder (GAD-7)³⁰: A seven-item self-report measure of generalized anxiety symptom severity. Items correspond to symptoms of GAD, according to DSM-4 criteria. Responses range from 0 to 3 ("not at all" to "nearly every day"). Total scores range from 0 to 21; higher scores denote more severe generalized anxiety.

General Self-Efficacy Scale³¹ (GSE): A self-report measure of perceived ability to cope with challenges and control personal outcomes, comprising 10 statements (e.g., "Thanks to my resourcefulness, I can handle unforeseen situations") rated on a 1-4 Likert scale. Total scores range from 10 (least self-efficacy) to 40.

Mini-Mental State Examination²⁶ (MMSE): Used as a cognitive screening instrument in the JtD trial to ensure equivalence of cognitive ability across participants at baseline. A score of $< 24/30$ is a commonly accepted cutoff score for clinically significant cognitive impairments with scores of 18–24 indicating mild levels of impairment.³²

2.4 | Data analyses

All data were pre-anonymized. Analyses were undertaken using STATA (version 17) and comprised:

1. Exploration of descriptive and distributional characteristics of baseline FS total scores, including skewness and kurtosis.
2. Calculation of Pearson correlation coefficients and regression modelling between FS total scores and key demographic and clinical characteristics of the sample including MMSE score.
3. Calculation of internal consistency for the FS scores using Cronbach's alpha.
4. Evaluation of the hypothesized unidimensionality of the scale using maximum likelihood Confirmatory Factor Analysis (CFA).
5. Analyses based on a two-parameter Item Response Theory (IRT) model to further evaluate unidimensionality of the scale, determine item functioning with respect to discrimination parameters and explore test/item information functions.
6. Investigation of convergent and discriminant validity by calculating and examining Pearson correlation coefficients between FS total scores and total scores on the DEMQOL and GSE (convergent validity) and the GAD7 and PHQ9 (discriminant validity).

3 | RESULTS

Full baseline datasets were available for 480 JtD trial participants. Mean total score on the FS for these participants was 45.5 (SD = 6.9), ranging from 18 to 56. Mean scores on individual items ranged from 5.2 to 6.0, on a scale of 1 to 7 (see Supplementary Material, Table A). No floor or ceiling effects were apparent; no participants scored 8,

TABLE 1 Cronbach's alpha, item-test correlations, and Item Response Theory discrimination parameters for Flourishing Scale items.

Item	Cronbach's alpha (0.8363)	Item-test correlation	Discrimination
1. I lead a purposeful and meaningful life	0.8142	0.5922	1.61
2. My social relationships are supportive and rewarding	0.8278	0.4800	1.45
3. I am engaged and interested in my daily activities	0.8041	0.6616	2.13
4. I actively contribute to the happiness and well-being of others	0.8059	0.6628	2.44
5. I am competent and capable in the activities that are important to me	0.8195	0.5514	1.76
6. I am a good person and live a good life	0.8190	0.5628	1.90
7. I am optimistic about my future	0.8204	0.5621	1.61
8. People respect me	0.8254	0.4978	1.55

and only 20 (4.2%) participants with a valid FS total score at baseline scored 56.

A Shapiro-Wilks normality test indicated that total FS scores were not normally distributed (see Figure A – Supplementary Material). There was a skewness value of -0.88 and a kurtosis value of 4.05 (leptokurtic distribution with slight negative skewness). Following best practices,³³ we adjusted primary analyses (CFA) to account for non-normality.

For each key clinical / demographic variable a linear regression model was fitted, with FS total score (at baseline) as the outcome and each variable in turn as a predictor. FS total scores were not associated with age (coefficient = -0.03, *p* value = 0.495), gender (coefficient = -0.92, *p* value = 0.15), or time since diagnosis (coefficient = -0.22, *p* value = 0.244) in these analyses. However, living status was found to be a significant predictor of total FS scores; people with dementia living with others had significantly higher FS scores on average compared to those living alone (mean difference = 2.63, *p* = 0.0002). There was no significant correlation between FS total scores and MMSE total scores (*r* = 0.02, *p* = 0.59).

Cronbach's alpha for the FS with the current sample was 0.83, indicating strong internal consistency. There was no single item that, if removed, would increase the value of Cronbach's alpha. Item-test correlations ranged from 0.48 (item 2; "my social relationships are supportive and rewarding") to 0.66 (item 4; "I actively contribute to the happiness and well-being of others") and all were statistically significant (*p* < 0.001; see Table 1).

A one-factor model was fitted using maximum likelihood CFA with Satorra-Bentler (SB) scaled statistics. SB scaled statistics were used as they apply a scaling correction to better approximate χ^2 under non-normality. The goodness-of-fit statistics were: SB χ^2 = 23.98, (*p* = 0.243); root mean squared error of approximation = 0.020; Comparative Fit Index = 0.99 (a value close to 1 represents good fit to the

model); Non Normed Fit Index = 0.99 (a value close to 1 represents good fit to the model); standardised root mean residual = 0.029 (SRMR value of zero would represent perfect fit).

Collectively, these statistics provided strong evidence for a one factor model. Item factor loadings (see Figure 1 and Supplementary Material – Table B) ranged from 0.54 (item 2; "my social relationships are supportive and rewarding") to 0.72 (item 4; "I actively contribute to the happiness and well-being of others") but all loadings were statistically significant (*p* < 0.001) (see Figure 1).

After examining patterns of response for each item on the FS (Supplementary Material – Table A), a graded response IRT model was used to investigate item properties including discrimination and measurement precision, in accordance with the research questions.

A Test Characteristic Curve (TCC) for total FS scores (Figure 2) indicated that the scale performed as expected in relation to the latent construct of social-psychological well-being for people with dementia; across the range of values, the higher the level of well-being the higher the expected total FS score. The TCC also suggests, however, that FS scores tended to plateau at the highest levels of latent well-being.

A Test Information Function (Figure 3) was subsequently constructed to determine the amount of information "received" by the FS overall, for different levels of the latent trait (social and psychological well-being—flourishing). The FS appeared to gather maximum information from those respondents with low to moderate levels of overall social-psychological well-being.

As shown in Figure 4, test information functions for each item varied. Items 3 ("I am engaged and interested in my daily activities") and 4 ("I actively contribute to the happiness and well-being of others"), yielded most information (i.e., relatively higher peaks) compared to other items, particularly at lower to moderate levels of overall well-being. This suggests that these two items yielded most variation in

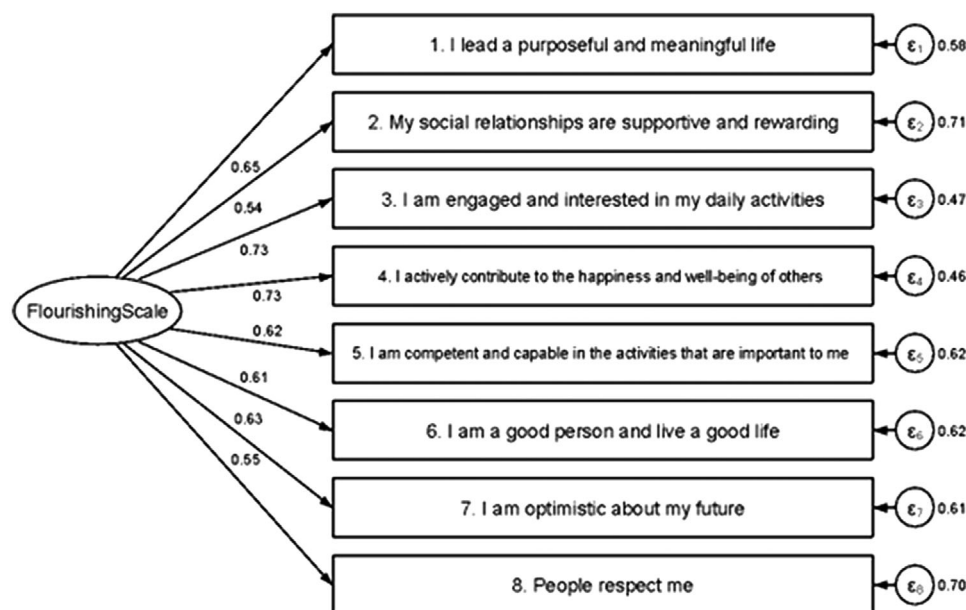


FIGURE 1 Factor loadings for each Flourishing Scale item in confirmatory factor analysis

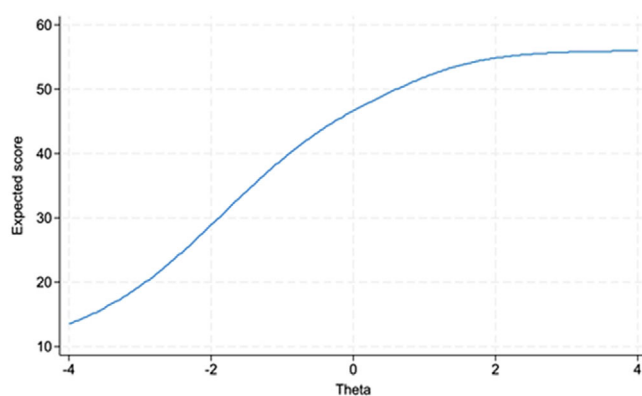


FIGURE 2 Test characteristic curve for the Flourishing Scale.

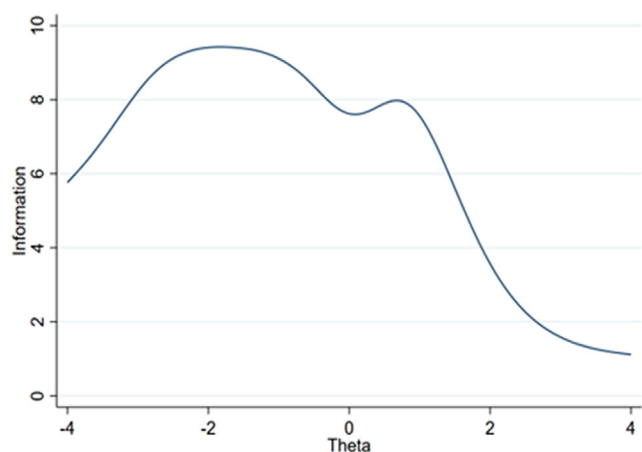


FIGURE 3 Test information function curve for the Flourishing Scale (total scores)

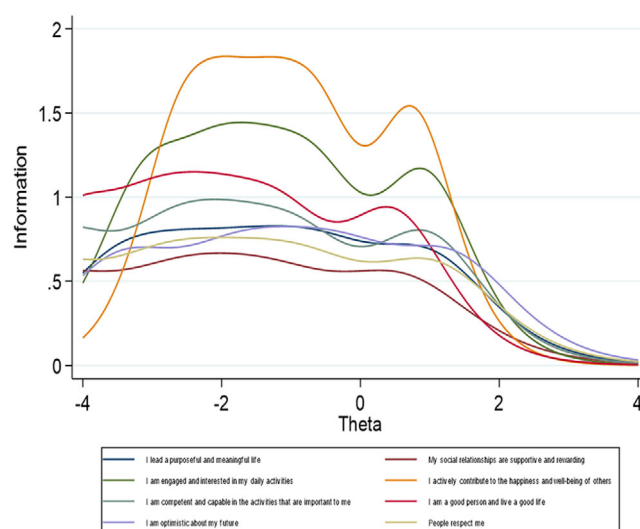


FIGURE 4 Test information functions for each of the Flourishing Scale items

responses and were therefore contributing most information relative to other items, in particular item 2 ("My social relationships are supportive and rewarding"), which appeared to have lowest variability in response (people tending to respond either "agree" or "strongly agree") and, therefore, contributed less information overall.

Item discrimination parameters, analogous to item-total score correlations, typically range from -0.5 to 2 and higher values indicate items can effectively discriminate between individuals with respect to a latent construct.³⁴ FS item discrimination parameters broadly indicated good levels of discrimination between participants with respect to the latent construct of social-psychological well-being (see Table 1). This was evident across items, but particularly salient for items 3 and

TABLE 2 Pearson *r* correlations between FS scores and reference measures (including summary data; mean and standard deviations).

Parameter	DEMQOL Quality of Life M = 90.6 SD = 13.0	GSE Self-efficacy M = 30.6 SD = 5.49	PHQ-9 Depression M = 4.09 SD = 4.4	GAD-7 Anxiety M = 2.76 SD = 3.49
FS total	0.559	0.508	−0.486	−0.433
<i>p</i> -Value	<0.001	<0.001	<0.001	<0.001

Abbreviations: DEMQOL, Dementia Quality of Life Instrument; FS, Flourishing Scale; GAD-7, Generalized Anxiety Disorder; GSE, General Self-Efficacy Scale; PHQ-9, Patient Health Questionnaire; SD, standard deviation.

4. Items 2 and 8 showed lowest discrimination parameters relative to other items.

Regarding convergent and discriminant validity, FS scores correlated significantly and in the expected directions for all included reference measures (see Table 2). As flourishing increased so did levels of reported quality of life and general sense of self-efficacy. Conversely, higher levels of flourishing were associated with lower levels of anxiety and depression symptoms.

4 | DISCUSSION

This study demonstrates that the FS has good convergent and discriminant validity for the measurement of social-psychological well-being in dementia and, aligned to previous work,^{9,21} internal consistency of the scale was also confirmed. As with non-clinical and clinical groups,^{21,35,36} our hypothesis of a single factor structure was confirmed in this sample of people with dementia; we found positive, significant factor loadings across items, indicating unidimensionality in terms of measurement of flourishing. Of note, FS scores were significantly but moderately positively correlated with DEMQOL scores, indicating that the FS measures a distinct construct of well-being, related but different to quality of life.

4.1 | Conceptual and methodological considerations

Conceptually, our findings align both with existing conceptual accounts of well-being in dementia¹⁷ and empirical findings regarding psychological factors associated with “living well.” Self-efficacy, in particular, is noteworthy as our findings indicate it is significantly associated with flourishing and previous work has shown it is predictive of perceived ability to live well¹⁹ and also a modifiable psychological strength in dementia.³⁷

Findings from IRT analyses further confirm unidimensionality of the scale, showing that the probability of a person with dementia obtaining a high score on the FS increased as their level of overall well-being increased. However, at a scale level, measurement precision of the FS could vary for people with dementia, with least precision (i.e., less sensitivity) at higher levels of well-being. A similar finding has emerged from validation studies of culturally adapted versions of the FS uti-

lizing IRT (e.g., the Spanish version of the FS appeared less sensitive at differentiating higher levels of well-being³⁸). Similarly, Schotanus-Dijkstra et al.²¹ found that measurement precision of the Dutch version of the FS declined above a score of 43/56, in a study of adults with “sub-optimal” well-being (*n* = 275). Notwithstanding the potential impact of translation on scale performance, such findings, combined with our own, suggest the precision and sensitivity of the FS could decline toward higher levels of well-being and future research might therefore investigate whether item “difficulty” can be improved to address this while retaining reliability and validity.

Our findings highlight some variation in the information yielded by FS items at low to moderate levels of well-being, and this has conceptual implications. Information in IRT refers to how accurately an item can estimate levels of an underlying latent construct.³⁹ Although discrimination parameters were all within moderate–high levels⁴⁰, items 2 (“my social relationships are supportive and rewarding”) and 8 (“people respect me”) appeared less able to differentiate overall well-being (i.e., although statistically significant, these items also had lowest factor loadings in CFA). This could suggest perceived social support or status are relatively less relevant to differentiating overall levels of well-being for people with dementia. In contrast, items 3 (“I am engaged and interested in my daily activities”) and 4 (“I actively contribute to the happiness and well-being of others”) appeared more effective in differentiating well-being levels.

Conceptually, it is noteworthy that items 3 and 4 relate to active engagement and reciprocity respectively; both have been shown to be meaningful for people with dementia in their lived experiences.^{41,42} These are also salient components of well-being in dementia as conceptualized by Clarke and colleagues,¹⁷ with engagement relating to agency (psychological well-being) and reciprocity relating to connections and belonging (social well-being), suggesting the FS taps into these aspects particularly. However, Clarke and colleagues’ framework also includes components of well-being not covered by the FS, specifically positive emotions/affect balance (previously shown to be an important aspect of well-being among nursing home residents with dementia⁴³), gratitude, sense of belonging, and life-satisfaction. Valid and reliable measurement of emotional well-being in dementia remains a challenge even for established measures.⁴⁴ Rule et al.,²⁰ found that, in line with the multidimensional nature of flourishing, most instruments apart from the FS measure both eudaimonic and hedonic dimensions. Therefore, the self-report FS on its own may only be relevant for studies concerned with measurement of

eudaimonic constructs in dementia such as meaning/purpose and positive relationships.

We found no evidence that age, gender, time since diagnosis or cognitive status predicted well-being in this group of people with dementia, adding to the case for developing interventions that mobilize personal strengths in dementia to enhance well-being.¹⁶ Although life satisfaction is not the same as well-being,¹⁷ our finding that people with dementia living with others were more likely to have higher well-being echoes those of Clare et al.,⁴⁵ where living alone with dementia was linked to lowered levels of life satisfaction. Twenty-six percent of JtD participants were living alone.²³ People living alone with dementia are vulnerable to varied unmet needs and loneliness,⁴⁶ which may specifically undermine psychosocial well-being. Our findings highlight the potential value of assessing well-being using the FS to evaluate how, for people living alone, psychological strengths may be best harnessed to improve access to social contexts that boost flourishing.¹⁶

4.2 | Limitations

Since secondary analyses of existing data have recognized methodological drawbacks,⁴⁷ certain limitations of this study deserve highlighting. In line with our research questions, we took a cross-sectional approach, analyzing only baseline data. This enabled optimization of the available data set for CFA and IRT analyses but precluded fuller assessment of how well the FS can assess outcomes longitudinally in dementia (although a small treatment effect was detected by the FS in the original JtD trial,²³ suggesting some sensitivity to change).

Participant inclusion criteria of the JtD trial involved people diagnosed with dementia but at a mild or early stage. Previous similar research has demonstrated the value of developing and testing self-report measures of aspects of well-being with people who have earlier-stage dementia.^{48,49} However we cannot assume that the FS is acceptable, valid, and reliable as a self-report measure in moderate dementia.

Although ceiling / floor effects were not apparent, FS total scores were skewed and mean FS scores for the present sample were slightly higher relative to previous research with clinical samples.²¹ Low item difficulty (i.e., tendency of items to yield high scores notwithstanding overall levels of well-being) could have contributed here or JtD trial participants might have responded to FS items in a different way to other groups. Alternatively, participants might have had higher flourishing than might be generally expected in dementia (e.g., being able and willing to participate in a research trial), although DEMQOL total scores were equivalent to those reported by Smith et al.,²⁷ indicating representativeness.

5 | CONCLUSIONS

We offer preliminary evidence that the FS has acceptable internal consistency, construct validity, and adequate precision and discrimination

across different levels of well-being in early-stage dementia. However, there is a need for further investigation of: (1) stability of FS scores over time; (2) responsiveness of the FS, for example, in a longitudinal cohort study; (3) measurement precision, for example, by adjusting items (and response formats) to improve sensitivity at higher levels of well-being, while also examining if the scale can still retain reliability and validity; (4) the use and psychometric properties of the FS, or an adapted version, as a measure of well-being for people living with increased cognitive impairments in later stages of dementia.

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C.C. was lead investigator on this study and lead author for this paper with key activities covering conceptualization, design, data management, planning analyses, integration and drafting of manuscripts. K.P. led on planning and carrying out planned statistical analyses data, reporting these (manuscript preparation) and data management. E.M.C. co-led in the planning and conceptualization of the study as well as manuscript preparation; they were also a co-investigator on the *Journeying Through Dementia* trial. G.M. co-led on planning this study, advising on conceptualization of research aims and design and was also Chief Investigator for the *Journeying Through Dementia* trial from which baseline data for the present study was derived for secondary analysis. E.W. co-led on conceptualization (relating to positive psychology approaches) and also manuscript preparation. E.L. and C.H. oversaw data management and advised on planning and conduct of statistical analyses. E.L. was involved in the original *Journeying Through Dementia* trial as lead statistician. Data sets and analytics cannot be shared at this time due to ongoing and planned analyses relevant to a future intended publication.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest. Author disclosures are available in [supporting information](#).

CONSENT STATEMENT

The study reported on in this paper comprised a secondary data analysis of baseline data from a previous trial of a psycho-social intervention for people with dementia (*Journeying Through Dementia*). Participants in that trial gave consent for their anonymized data to be used in relevant secondary analyses.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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