Conclusions: In a large UK based sample, we found that living with more people was associated with slower decline in white matter volumes and integrity, and hippocampal volumes. Living with others may promote brain reserve and memory function. Loneliness was associated with slower decline in the left amygdala volume, which is associated with processing of aversive and fearful stimuli. This echoes previous findings indicating that people with depression and anxiety may experience less shrinkage in the amygdala. Our results highlight the importance of encouraging people to live with others, such as in intergenerational households. We also need to address loneliness at a population level to promote healthy brain ageing.

FC57: Implementation and feasibility testing of a co-designed palliative dementia intervention: Empowering Better End of life Dementia Care Framework (EMBED-Care Framework)

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Objectives: People with dementia live with unmet needs due to dementia and other conditions. The EMBED-Care Framework is a co-designed app-delivered intervention involving holistic assessment, evidence-based decision-support tools and resources to support its use. Its intention is to empower people with dementia, family and practitioners to assess, monitor and manage needs. We aimed to explore the feasibility and acceptability of the EMBED-Care Framework and develop its underpinning programme theory.

Methods: A six-month single arm mixed-Methods feasibility and process evaluation, underpinned by an initial programme theory which was iteratively developed from previous studies. The settings were two community teams and two long term care facilities (LTCFs). People with dementia and family were recruited to receive the intervention for 12 weeks. Practitioners were recruited to deliver the intervention for six months. Quantitative data included candidate process and outcome measures. Qualitative data comprised interviews, focus groups and observations with people with dementia, family and practitioners. Qualitative and quantitative data were analysed separately and triangulated at the interpretation phase.

Results: Twenty-six people with dementia, 25 family members and 40 practitioners were recruited. Practitioners in both settings recognized the potential benefit for improving care and outcomes for people with dementia, and to themselves in supporting care provision. Family in both settings perceived a role in informing assessment and decisions about care. Family was integral to the intervention in community teams but had limited involvement in LTCFs. In both settings, embedding the intervention into routine care processes was essential to support its use. In community teams, this required aligning app functionality with care processes, establishing processes to monitor alerts, and clarifying team responsibilities. In LTCFs, duplication of care processes and limited time to integrate the intervention into routine care processes, affected its acceptability.

Conclusions: A theoretically informed co-designed digital intervention has potential to improve care processes and outcomes for people with dementia and family, and is acceptable to practitioners in community teams. Further work is required to strengthen the intervention in LTCFs to support integration into care processes and support family involvement. The programme theory detailing key mechanisms and likely outcomes of the EMBED-Care Framework is presented.

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