EMPOWERCARE

EMPOWERing individuals & communities to manage their own CARE

EVALUATION REPORT

Canterbury
Christ Church
University

Interreg
2 Seas Mers Zeeën
EMPOWERCARE
European Regional Development Fund

Professor Eleni Hatzidimitriadou
Dr Toni Wright
Michelle England
Thomas Thompson
Faculty of Medicine, Health and Social Care
Canterbury Christ Church University

Professor Mary Lynch
School of Health and Life Sciences
University of the West of Scotland

ACKNOWLEDGEMENTS

CONTENTS

LIST OF TABLES & FIGURES

EXECUTIVE SUMMARY

EMPOWERing individuals and communities to manage their own CARE (EMPOWERCARE) was a 3-year social innovation project involving 13 cross border European partners. EMPOWERCARE developed a holistic community asset approach to respond to current gaps in the care of people in the target group (those aged 65+ and those aged 50+ with at least one chronic condition). It aimed to address challenges facing our societies concerning the care of our ageing populations and when older people are not being involved in decisions concerning their own health and wellbeing. The project ensured that older people are at the forefront of improved technology and better care from within their communities. This sought to improve their situation but also tackle the financial issues of an ageing population and improve social cohesion.

The EMPOWERCARE evaluation was constructed as a Realist Evaluation (Pawson & Tilley, 2004) using a case study site design (Yin, 203). Realist evaluation was useful for the EMPOWERCRAE evaluation because it can deal with complex initiatives by drawing on multiple perspectives and data sources, allowing patterns to be identified for an explanatory evaluation. The complexity for EMPOWERCARE was the 7 different case study sites across 4 countries and the fact that they had initiatives that were individual and different from each other, although all were underpinned by the EMPOWERCARE Strategy and to a greater or lesser degree the use of caring technologies.

The evaluation was designed to assess change and draw lessons across the 7 case study sites by generating the case studies and stories of change. To do this we identified common patterns or differences across sites, analysing multiple data sets to tell us:

- What were the outcomes (quantitative data)

- How, why and for whom the outcomes worked (qualitative data)

Before primary data collection a scoping exercise of asset-based approaches to older people's care was undertaken. Primary data collection took place at 3 time points (also see Figure 1):

- **Baseline (T0):** Current health status data were collected pre EMPOWERCARE initiative (quantitative data) using an online survey tool that was an amalgamation of validated health research scales.

- **Mid-point (T1):** Descriptive and conceptual data (qualitative) were collected to inform how, why, for whom and under what circumstances the EMPOWERCARE initiatives worked (qualitative data) using focus group discussions (FGD) and a Photovoice method of inquiry.
- **End-point (T2):** Both quantitative and qualitative data were collected post the EMPOWERCARE initiative. The T0 and T2 current health status data sets were compared to see what changes had occurred over the duration of the initiatives. The T1 & T2 descriptive and conceptual data consolidated and developed further what was learnt from the quantitative data.

Data taken from both quantitative and qualitative data collection informed the Cost Benefit Analysis part of the evaluation. This aspect of the evaluation applied Stated Preference techniques of Contingent Valuation (CV) and estimation of Willingness to Pay.

The evaluation data were collected during a time frame when all participating countries were working within the

restriction of government instructed social measures to prevent the spread of COVID-19.

The main key messages from the evaluation of the project initiatives were:

- **Self-efficacy** – Across all sites, 'inactive' participants at baseline showed a statistically significant increase in self-efficacy at the end of the initiatives. Qualitative data confirmed end-users' increased levels of self-confidence and self-efficacy around taking action in relation to their own health.

- **Emotional and social wellbeing** - When considering all project sites, there was no significant decrease of the level of reported loneliness, overall and by type (emotional and social), for participants who reported feeling lonely at the start of the initiative. For participants from philosophically focused initiatives, who reported being lonely at the start of the initiative, there was a slight decrease in emotional loneliness from baseline, although this change was not statistically significant. Overall, there was no decrease, but for initiatives that were philosophically focused there was a negative trend. Qualitative data evidenced the positive impact initiatives had in tackling end-users' loneliness.

- **Digital literacy** - When analysing survey responses from all sites, end-users reported internet health-seeking behaviour did change at the end of initiatives. Nonetheless, for the sites focusing more on technology, internet health-seeking behaviour increased from baseline to end of initiative, although the positive change was not statistically significant. Qualitative data from end-users confirms the survey results that those participating in the initiatives felt more digitally literate and confident in using technology for their physical and mental health needs and to keep connected with their social networks.

- **Internet health-seeking behaviour** – There was no significant change in this area for end-users. This could be explained by them receiving help in-person and therefore they felt less need to go online for help with their health. For technology focused initiatives there was still no significant change, but there was a positive trend for technology enthusiasm. Anxiety around technology use remained and the qualitative data relating to this indicated there was room to build on technology skills.

- **Person centred care** - Across all sites, for those that had a baseline of below average person-centredness or lower, mean scores increased from baseline to end of initiatives, and this improvement was statistically significant, indicating that the project initiatives significantly increased workforce person-centeredness. There were also similar significant improvements in the specific areas of this scale of Climate of Safety, Climate of Everydayness, Climate of community and Climate of Comprehensibility, indicating that the project initiatives significantly increased workforce feelings of whether the workplace is a place where the patients are in safe hands, staff use language that the patients can understand, it is easy for patients to talk to the staff and where the patients have someone to talk to if they so wish. Qualitative data reflected these results, talking about the transformation in people's lives that was possible through being focused on the needs of the individuals and what matters to them.

- **Workforce technology uptake** - Across all sites, survey results from workforce attitudes towards technology did not show any change from baseline to end of initiatives. Similarly, there was no difference between workforce participants in technology-focused and philosophical initiatives. Qualitative data from the workforce showed an understanding of the need to embrace technology in their work and that some of the drive for that need came from the implementation of COVID-19 restrictions.

- **Job satisfaction and workforce training embeddedness** – for job satisfaction there was no significant change, although there was a positive trend for those who started below the top 15%. The context of working through COVID-19 may have had a negative impact on job satisfaction. Across all sites, there were higher average scores on certain areas of efficacy in relation to workforce training in implementing, embedding, and integrating a complex healthcare initiative, such as reflective monitoring and collective action compared to coherence, and cognitive participation findings suggest that overall workforce members showed they are willing to engage in reflexive monitoring and collective action across all sites – so they were willing to self-monitor and take time to think about their behaviour and work together to take action. The qualitative data indicated that embedding training has enabled the workforce to understand the value of taking time, reflecting and connecting, which are some of the key person-centred competencies and attributes you would want to see in a transformed workforce.

The Cost Benefit Analysis showed:

- Contingent Valuation Method (CVM) evaluation indicate that individuals are willing to pay (WTP) on average €10.31 per month from their own out of pocket expenses to use and obtain the health benefits and wellbeing effects of participating in the EMPOWERCARE initiatives.
- WTP is positively influenced by the value individuals place on the technically focused initiatives, willingness to participate in an alternative initiative along with improvements gained in emotional and social loneliness because of the EMPOWERCARE initiatives.
- The WTP estimates defined in this evaluation provide significant insights for decision makers and healthcare commissioners on the value that previous participants place on the services provided through the EMPOWERCARE initiatives in local communities.
- Insights from the 'Good Ancestor' principles in FGD promotes the deliberation of long-term thinking which can lead to the power of change, reshaping decisions to take account of future generations, while promoting and encouraging sustainability in respect for future generations.

The evaluation results provide some positive results on the success of the EMPOWERCARE initiatives across the 4 countries. More analysis has been done per site to understand the different aspects of the EMPOWERCARE Strategy, Workforce Transformation Package and Technology Blueprint that made a positive difference to end-users and members of the workforce. This further analysis will provide a more comprehensive picture of the impact of the EMPOWERCARE initiatives, as well as inform the next stages of work.

1. INTRODUCTION

1.1 The EMPOWERCARE project

The EMPOWERCARE partnership is a European Union funded social innovation project involving 13 partners across 4 countries: Belgium, France, the Netherlands and the United Kingdom (UK). A range of project initiatives were introduced by project partners, which were piloted and evaluated, with the aim to develop a new approach, having an emphasis on person-centred approaches and caring technologies to empower and support independent living of an increasing ageing population (World Health Organisation [WHO], 2017). A number of the project partners were already engaged in providing services aimed at empowering older people and their communities. The existing philosophies and models of care already in use by partners were further developed by the EMPOWERCARE Strategy, resulting in enhanced initiatives with greater strength and effectiveness. The project initiatives got to the heart of 'what matters most' to communities through the skills and expertise of local people aged 65+ and those aged 50+ with at least one chronic condition to make a difference to health and wellbeing and respond to current gaps in the care of older people.

The evaluation of the project initiatives explored the ways these initiatives were effective for end-users and workforce. A Realist approach was applied that enabled the evaluation to establish 'what works, for whom, in what context and why' (Pawson & Tilley, 2004). Due to the range of initiatives introduced during the project, a descriptive case study design (Yin, 2003) was adopted which enabled the use of multiple methods for evaluation data collection; namely, a survey comprising a range of quantitative measures of pre/post outcomes, combined with qualitative data generated from a visual method, Photovoice (Wang & Burris, 1997), and Focus Group Discussions (FGD) to aid process evaluation and Cost Benefit Analysis (CBA). Seven case study sites across 4 countries participated in the evaluation: 1 each from the UK, France and the Netherlands and 4 from Belgium.

The project initiatives ran from January 2020 to March 2023, with the vast majority of them taking place remotely due to COVID-19 travel and in-person contact restrictions.

2. EVALUATION APPROACH

2.1.Evaluation aim and questions

The aim of the evaluation was to explore the impact of the EMPOWERCARE initiatives across 7 pilot sites in the 4 participating countries. The evaluation questions were as follows:

1. What were the experiences of participants, their communities and workforce involved in the initiatives?
2. What was the impact of the initiatives on participants, their communities and workforce in relation to person-centeredness, isolation, loneliness and solidarity?
3. 'What worked, for whom, why and in what circumstances' for each pilot site?

2.2. Evaluation methodology

Realist evaluation was selected to guide the evaluation within a descriptive case study design (Yin, 2003) as it would identify and link with specific outcomes the strategies that were most influential within and across the different case study sites. 'Realism utilises contextual thinking to address the issues of 'for whom' and 'in what circumstances' a programme will work' (Pawson & Tilley, 2004:7). A Cost Benefit Analysis (CBA) was also used to develop an initiative-level theory of change to establish how inputs (e.g., costs, staffing) are converted into outputs (e.g., numbers of participants), and subsequently into outcomes that matter to participants of the EMPOWERCARE initiatives (e.g., improved mental wellbeing, decreased social isolation, improved ability to manage own care).

Each site initiative was analysed as an independent case study and, at the end of the project, similarities and differences between initiatives were distilled and linked to the different contexts of organisations and countries. This approach enabled the recognition that different site organisations have a varied purpose and characteristics, and operate within different contexts, therefore, what works in one may not work in another, while alternatively strategies that do work in some contexts may be transferrable to other contexts.

Ethics approval for the evaluation was granted by the Health Research Authority (HRA) for the UK site and a combination of Canterbury Christ Church University's Faculty of Medicine, Health and Social Care Research Ethics Committee and organisational management approvals for non-UK sites.

The evaluation study design involved 3 time points at which data were collected by the 2 participant groups, end-users and workforce.
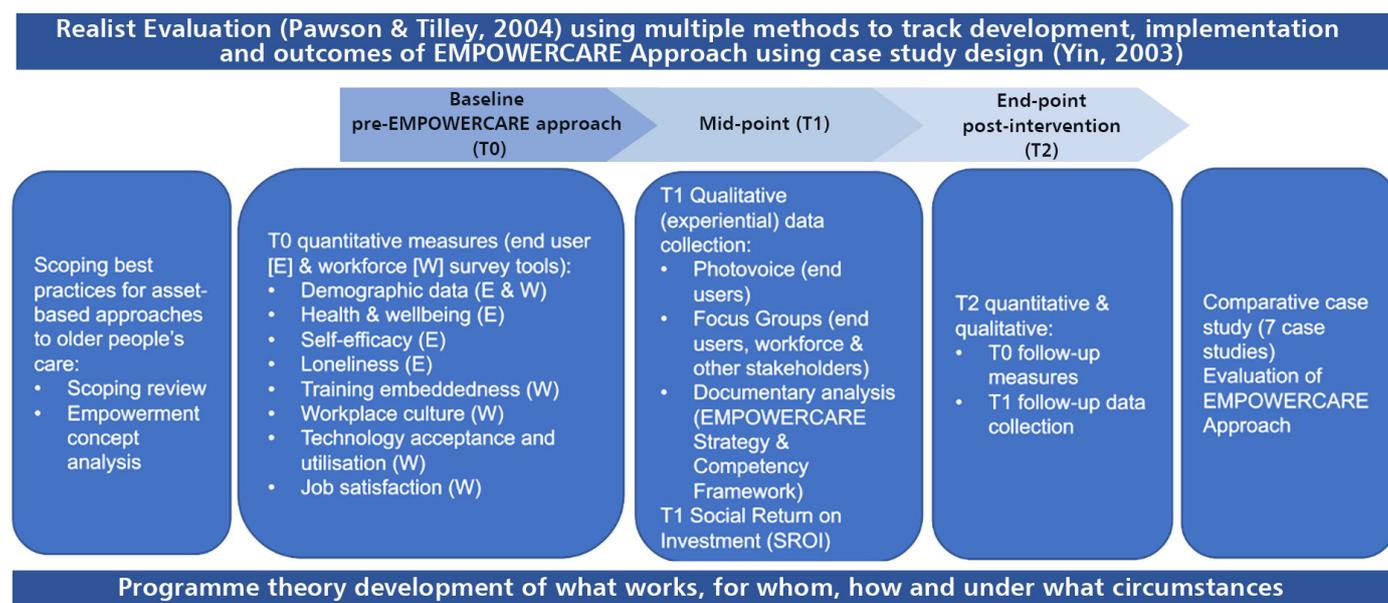
Figure 1 The evaluation study design

For the survey tool, the total number of end-users recruited at T0 was 187, however the number of end-user respondents in total who completed the EMPOWERCARE tool at both time points was 105. Workforce participants consisted of 174 at T0, however the number of workforce respondents in total who completed the EMPOWERCARE tool at both time points was 98.

The evaluation team recommended that partners recruit 30+ evaluation participants at each site to complete the survey tool, although this only represented a proportion of those who took part in the overall EMPOWERCARE site initiatives. The number of evaluation participants was a recommendation to facilitate meaningful quantitative data sets and account for attrition. A number of partners struggled to recruit this number.

Table 1 shows the number of survey tool participants at each site and time point.

Table 1 Participant recruitment

Partner	Country	Participant group	Pre-initiative evaluation recruitment	End-initiative evaluation recruitment
Kent County Council	UK	End-user	29	21
		Workforce	35	18
Du Nord Department Council	FR	End-user	33	25
		Workforce	20	17
Holy Hart	BE	End-user	20	13
		Workforce	30	23
Province of Antwerp	BE	End-user	29	24
		Workforce	5	6
Not for profit Wieltjesgracht	BE	End-user	35	0
		Workforce	36	16
Boone International & Family Help NPO	BE	End-user	20	13
		Workforce	18	5
SWVO	NL	End-user	28	9
		Workforce	33	15

Overall, 18 end-user participants took part in the Photovoice qualitative data collection: 16 women and 2 men.

FDGs involved approximately 74 participants across the 2 time points of the evaluation, mostly with a mix of men and women, although generally there were more women participants. Specifically, at mid-point, 61 participants were involved in FGD (32 end-users, 19 workforce members, 7 volunteers and 3 community stakeholders). Where gender was reported, there were 33 women and 13 men. At the end of the initiatives, 68 participants were involved in FGD (33 end-users, 25 workforce members, 5 volunteers and 2 community stakeholders). Where reported, the gender breakdown was 26 women and 18 men. The mix of end-users and workforce was fairly balanced, but there were very low numbers of community stakeholders. Some of the same participants took part at both T1 and T2 FGD.

The qualitative element of the CBA evaluation (the T2 legacy group FGD) involved 32 people. This broke down as 19 end-users, 9 members for the workforce and 4 volunteer members of the workforce. Where gender was reported it broke down as 10 women and 10 men.

2.3. Evaluation methods

The evaluation study drew on multiple perspectives and data sources, both quantitative and qualitative. Due to COVID-19 travel and in-person restrictions, all evaluation data were collected locally by members of staff working at the case study sites. The staff received guidelines and online training in data collection techniques from the evaluation team. Quantitative data were collected using a survey tool designed by the evaluation team, containing a range of pre-validated psychometric scales, and qualitative data was collected through Photovoice (Wang & Burris, 1997) and FGD. Photovoice is a community-based participatory visual method that utilises photo images taken and selected by participants to reflect upon their experiences (Wang & Burris, 1997). Drawing on multiple perspectives and data sources allows patterns to be identified for an explanatory evaluation.

2.3.1 Quantitative measures

Evaluation Survey Tool

An evaluation survey tool was designed by the team to capture the pre/post outcomes for partner initiatives. For this approach data was collected at 2 time points, baseline (T0) or pre-initiative and end-point (T2) or end of initiative. These time points were the main independent (or predictor) variable and were the first level basis for comparative analysis measuring levels of association within each of the 2 time points and the size/direction of the association. Additional exposure variables included the country (UK, France, the Netherlands, or Belgium), type of service (local authority or small organisation), type of initiative (group or individual), and model of delivery (in-person or digital).

Partners were asked to recruit end-user and workforce participants to be involved in a range of evaluation elements. The end-user tool was completed by older people engaging with the EMPOWERCARE initiatives and the workforce tool was completed by salaried or volunteer staff managing or delivering the EMPOWERCARE initiatives. Table 2 shows the participant groups for the evaluation and the element of the evaluation they took part in.

Table 2 Inclusion/exclusion criteria for participation and involvement in evaluation by participant group

	Were involved because they were...	Their involvement with Evaluation was...
End Users	Aged 65+ and those aged 50+ with at least one or more chronic condition*	End-user survey tool Photovoice exercise Mixed participant focus group discussions
Workforce	Staff delivering EMPOWERCARE initiatives	Workforce survey tool Mixed participant focus group discussions
Community Stakeholders	Members of local communities involved with and/or impacted by EMPOWERCARE (including informal carers)**	Focus group discussions

* No people considered vulnerable i.e., people living with severe mental illnesses, dementia or without capacity to consent were included.

** The definition of who were the community stakeholders was varied per site.

End-user T0 data were collected between 30/7/21 and the 16/02/22 and T2 data collected between 10/6/22 and 26/10/22. Workforce T0 data were collected between 31/08/21 and 20/06/22 and T2 data were collected between 06/06/22 and 11/1/23.

End-users

Impact of health status on everyday life

The impact of health status on everyday life was measured via the SF-12 Health Survey (Ware, Kosinski, & Keller, 1996). This is a health-related quality-of-life questionnaire which contains 12 questions organised over 8 health domains

relating to physical and mental health. The physical health domains consist of general health, physical functioning, role physical and body pain. The mental health-related domains include vitality, social functioning, emotional and mental health.

The SF-12 generates 2 sub-scale scores, a mental component summary (MCS) and a physical component summary (PCS).

Research into the use of the SF-12 as a measure of depressive disorders in the general population suggests that a MCS score of below 45.6 is indicative of a depressive disorder (Vilagut et al., 2013). It has also been reported that the average physical component summary differs according to age in the general population (45-54 M= 50, 55-64 M = 47, 65-74 M = 44, >75 M= 39) (Mols et al., 2009). These cut off points were used in the analysis of the evaluation results for MCS and PCS to assess how the initiatives could have impacted on participants' self-reported health status.

Mental wellbeing

Wellbeing was measured through the shortened 7-item version of the Warwick Edinburgh Mental Wellbeing Scale (SWEMWBS) (Stewart-Brown et al, 2009). The WEMWBS was developed to enable the monitoring of mental wellbeing in the general population and the evaluation of projects, programmes and policies which aim to improve mental wellbeing. This self-reported scale has been translated and used widely in cross-national studies and it has been validated for use with diverse populations (Fat et al., 2017). SWEMWBS has 7 statements which relate more to functioning than feelings of mental wellbeing. Participants are asked to answer the statements relating to a period of assessment spanning the previous 2 weeks, up to the completion of the scale.

SWEMWBS is scored on a metric scale, these scores are either compared to national norms or high (15%), average and low (15%) mental wellbeing cut points. For example, with participants achieving a score of 28 and above being found to have high mental wellbeing, a score of >18-20 is indicative of possible mild depression and a score of 18 or less is indicative of probable clinical depression. For the purpose of this evaluation, analysis was conducted for participants who scored >18-20 or lower at baseline, indicating signs of mild or clinical depression, to assess how project initiatives might have impacted on those with lower mental wellbeing at baseline.

Self-efficacy

Self-efficacy was measured through the 13-item Patient Activation Measure (PAM-13) (Hibbard et al., 2005), which assesses patients' active behaviour in their self-management of chronic illness. This 13-item scale has a 5-point Likert response (disagree strongly, disagree, agree, agree strongly, N/A). PAM-13 produces raw scores to a scale of 1-100, where 100 is the highest measure of activation.

PAM-13 contains cut off levels ranging from 1–4. Level 1 (47 or less) indicates a person may not yet believe that their role is important and does not feel in charge of their own health and care, lacking confidence in their ability to manage their health. Level 2 (47.1 – 55.1) indicates a person lacks confidence and knowledge to take action and has little experience or success with behaviour change. Level 3 (55.2 – 67.0) indicates a person has some confidence in handling limited aspects of their health and indicates the person is beginning to take action. Level 4 (67.1 or above) indicates a person has made most of the necessary behaviour changes but may have difficulty maintaining those behaviours over time or during times of stress.

For the purpose of the evaluation analysis, we investigated change over time for participants with lower levels (combined Level 1 & Level 2) at baseline.

Loneliness

Participants' emotional and social loneliness was measured through the shortened version of the De Jong Gierveld Loneliness Scale (De Jong Gierveld & Kamphuis 1985). The 6-item scale has been found to measure emotional and social loneliness well in multiple European countries (De Jong Gierveld & Van Tilburg, 2010).

The scale has an overall loneliness score as well as emotional and social sub-scores. Responses are on a 5-point Likert scale ('none of the time' to 'all of the time'). The emotional loneliness score has a range from 0 (not emotionally lonely) to 3 (intensely emotionally lonely), while the social loneliness score range is from 0 to 3 (intensely socially lonely). Overall loneliness score has a range from not lonely (0-1) to lonely (2-6).

Internet health-seeking behaviour

Internet health-seeking behaviour was measured via the self-reported e-HEALS scale (Norman & Skinner, 2006). This 8-item scale of health literacy measures respondent's perceived knowledge, comfort, and skills at finding, evaluating and applying electronic health information in response to health problems. The total scores for the eHEALS have a range 8-40, where higher scores indicate greater perceived health literacy.

Technophilia

Older people's attitudes and enthusiasm towards technology were measured using the 8-item Technophilia or TechPH scale (Anderberg et al., 2019). Technophilia refers to a person's enthusiasm for and positive feelings toward their technology use and absence of the fears and doubts some older people could have about their ability to manage using new technology. This scale comprises 2 subscales relating to tech-enthusiasm and tech-anxiety. The TechPH index is a score derived from the 8 items. Each item was weighted with its loading before sum scores were created, averaged and standardized back to a 1 to 5 scale. Standardized scores were interpreted on a 5-point response scale, ranging from 1 (fully disagree) to 5 (fully agree), where the higher the index indicates a higher level of tech-enthusiasm compared to tech-anxiety or technophilia.

Factor loadings for the TechPH scale were derived from the results of a principal component analysis with varimax rotation and eigenvalues greater than 1 as extortion criteria. The loadings were then used as weights when computing subscales scores, each answer value was therefore multiplied by its corresponding item wight and then the 3 products for each TechPH Subscale were added to obtain the tech-enthusiasm score and tech-anxiety score.

Frequency of use of technology

An expected output for the project evaluation was an empowerment strategy to deliver what matters to individuals and communities in order to manage their own care. One of the expected specific results for this output was a 15% increase in take up and frequency of use of technology compared to a set of baseline data. Partners were asked to collect data to evaluate this expected result through an eHealth meter. This meter was a form designed to collect a participant's ID code, the type of technology the participant was using, the date the technology was used and minutes of use. These forms were to be completed at baseline, mid-point and end-point of initiative. Most project sites were unable to collect these data, therefore there was not sufficient data to report on.

Workforce

Person-centred quality of environment

The extent to which staff perceive different care settings as person-centred was measured using the Person-Centred Climate Questionnaire Scale (PCQS) (Edvardsson et al., 2008). The scale has 14 items on person-centredness and environment and contains 4 subscales. The Climate of Safety refers to a person's feelings of being welcome, acknowledged and accepted for being oneself. The Climate of Everydayness refers to how homely, aesthetically pleasing, quiet and peaceful and neat and clean a workplace feels. The Climate of Community refers to whether a workplace is relaxing, is a place in which it is easy for the patients to keep in contact with their loved ones and easy for patients to receive visitors. Finally, the Climate of Comprehensibility refers to whether the participant feels the workplace is a place where the patients are in safe hands, staff use language that the patients can understand, it is easy for patients to talk to the staff and where the patients have someone to talk to if they so wish.

Cut-off scores for person-centredness were: ≤49 ('well below average'), 50-56 ('below average'), 57-62 ('above average') and ≥63 ('well above average') (Edvardsson et al., 2015). These cut off scores are reported in studies with separate samples into groups that had varied perceived work satisfaction, social support and stress of conscience. For the purpose of this evaluation, the focus of the analysis was on participants who reported lower levels in person-centeredness to explore how the EMPOWERCARE initiatives had impacted on these workforce members.

Technology acceptance

Technology acceptance within the workforce was measured through the 32-item Unified Theory of Technology Acceptance (UTAUT) scale (Venkatesh et al., 2003). This psychometric scale requires that the respondent will consider a particular technology/system they are using, and it measures performance expectancy, effort expectancy, attitude, social Influence, facilitating conditions, self-efficacy, anxiety and behavioural Intent. Performance Expectancy reflects

the degree to which an individual believes that using the technology/system will help them attain gains in job performance. Effort Expectancy reflects the degree of ease associated with the use of the technology/system. Social Influence relates to the degree to which an individual perceives that it is important others believe that he or she should use the new technology/system. Facilitating Conditions refers to the degree to which an individual believes that an organisational and technical infrastructures exist to support use of the technology/system. Attitude Toward using Technology is about an individual's overall affective reaction to using a technology/system. Self-efficacy is about the individual's belief in their capacity to execute behaviours necessary to do with the technology/system. Anxiety refers to a participant's feelings of anxiety in relation to using the technology/system. Finally, Behavioural Intent is about an individual's intention to use the technology/system.

For this scale, participants were instructed to respond in relation to the technology/systems they were introduced to during the initiative. However, this varied across initiatives, hence the completion of this scale could be affected by this diversity of experiences.

Job satisfaction

Job satisfaction was measured with the 5-item Andrews and Withey Job Satisfaction Questionnaire (Andrews & Withey, 1976). This scale has been reported to be significantly correlated with job performance, organisational commitment, and turnover intentions (Rentsch & Steel, 1992). Items are scored on a 7-point Likert scale ranging 1-7, with 1 'delighted' and 7 'terrible'.

Embeddedness of workforce training

To measure the efficacy of workforce training in implementing, embedding, and integrating a complex healthcare initiative, the Normalization Measurement Development questionnaire (NoMAD) (Finch et al., 2018) was adopted. This 23-item instrument assesses the implementation processes from the perspective of staff involved in implementation work. It is based on Normalization Process Theory (NPT) which measures coherence, cognitive participation, collective action and reflexive monitoring. NPT is an Action Theory, which means that it is concerned with explaining what people do rather than their attitudes or beliefs.

2.3.2 Qualitative methods

Photovoice

Three case study sites undertook the Photovoice data collection at Mid-point (T1). End-users were asked to take up to 3 photographs and provide a narrative/caption about each photograph. The images and captions, created by end-user participants, were used to create a photo-exhibition at each site at mid-point (T1) of the initiative. The photo-exhibition was the foundation for FGD that focused on the impact of EMPOWERCARE for those involved with the initiative. Photovoice data were analysed using summative content analysis which identified the occurrence of certain words, themes and concepts and then the contents were interpreted for underlying meaning (Hsieh & Shannon, 2005).

Focus group discussions

Five project sites undertook FGD data collection at mid-point (T1) and end-point (T2). Two FGD were run at all sites except 2 of them, where only 1 was conducted. The FGD data analysis was conducted in 2 stages. Initially, project partners summarised the data in response to each FGD question, supplying direct quotations to support the summation. Once completed, summative content analysis (Hsieh & Shannon, 2005) was carried out. Not all sites provided supportive quotations for all their summary data.

Long-term thinking and sustainability

It is important to understand what value citizens of the world today place on the value of accessing and using current available resources but asking also what value they would place on ensuring that these resources are available for future generations and long-term sustainability. Known as non-use value it is the concept of taking a prospective to ensure justice toward future generations places intergenerational responsibilities on present people to conduct 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (World Commission on Environment and Development & Brundtland, 1987).

In this evaluation, to build towards the sustainable development of healthy, resilient communities and long-term sustainability of the EMPOWERCARE initiatives, a co-produced sustainable approach was used to identify long-term wellbeing needs and strategies (Spencer et al., 2021).

Short term thinking is about dealing with health and wellbeing services now and not about sustainability for the future. Future altruism (Inoue et al., 2023) and taking a long-term thinking approach is realising that current citizens need to be thinking towards future generations and ensuring that resources are allocated among generations so that global issues can be tackled.

The FGD questions used at end-point (T2) integrated the 'Good Ancestor' (Krznaric, 2020) principles, meaning that the approach was designed to adopt a long-term thinking approach to reflect on wellbeing of future people and sustainability. Understanding that actions taken today affect the quality of life of future generations, Kzarnic (2020) promotes collective long-term thinking and planning. The philosophy of the 6 'Good Ancestor' principles shapes deliberation to facilitate long-term thinking and generate ideas on how to leave a prosperous legacy for the benefit of future generations. Evidence suggests that utilising a long-term thinking approach to deliberation design proposes opinions for the interests of future generations, providing intergenerational equity (Spencer et al., 2023). The purpose of applying the 'good ancestor approach' was to evaluate the impact of the EMPOWERCARE initiatives across 6 pilot sites in the 4 participating countries. The 'Good Ancestor' approach applying the 6 principles takes account of Intergenerational Justice, taking Legacy Mindset and inheritance for future generations, Deep Time Humility and sustaining resources for the future, along with Cathedral Thinking, Holistic Forecasting, the Transcendent Goal and the ultimate goal of the health and wellbeing EMPOWERCARE initiatives for future generations.

2.3.3 Economic evaluation and Cost Benefit Analysis

Cost Benefit Analysis (CBA) has gained momentum in valuing public health initiatives and is used to evaluate changes/improvements and benefits of change for goods or services not traded in open markets with the aim of attributing monetary valuations in the provision of public goods (Mitchell and Carson, 1989). In this evaluation study the stated preference economic evaluation technique of Contingent Valuation Method (CVM) was chosen as the approach as this technique can be used to understand the value individuals place on the services and their willingness to pay in order to gain use of the EMPOWERCARE initiatives. The value and benefits associated with change and use of the EMPOWERCARE initiatives can be defined as use value and non-use value. Use value is the benefit an individual attributes to their actual or potential use of a good or service.

Contingent Valuation Method (CVM)

Contingent Valuation Method (CVM) is a simple, flexible non-market valuation method that is widely used in CBA. The application of CVM in healthcare has gained momentum over the years as an intuitive method of quantifying CBA for the demand for healthcare and the allocation of scarce resources. CVM as an approach is increasingly used in health economics for the valuation of preferences for publicly funded health care initiatives. CVM is a technique of attributing a monetary value to health outcomes (Drummond et al.,1987) and a popular approach for estimating money values for health care programmes by means of Willingness-to-Pay (WTP) questions in surveys (O'Brien & Gafni, 1996). When examining health and economics CVM questions can focus on users of a health programme with questions framed to ask individuals how much they would be willing to pay in order to gain a positive change in health status as a result of some change. CVM can assess both technical and allocative efficiency and the method allows for the aggregation of benefits as a straightforward task. In this evaluation, questions were integrated into the survey tool to ask respondents about the value they assign to the health benefits and the value they assign to the EMPOWERCARE initiatives. The reason for including this methodological approach is because it is possible to evaluate the degree of willingness on a monetary scale and the results may be more logical and recognisable for decision-makers.

Economics assumes that individuals make rational choices when making decisions and economic valuation techniques reflect the true value that respondents allocate for particular goods. In this evaluation CVM survey-based questions were integrated into the post EMPOWERCARE initiatives' survey tool at T2. The questions were to understand participants choices and preferences for the EMPOWERCARE initiatives as well as eliciting respondents' WTP in monetary terms for the initiatives. The value elicited through CVM is reliant on the hypothetical market that is conveyed to respondents.

CVM normally consists of 3 main parts; (1) a description of the scenario of the policy or intiative and the means by which the good or service is going to be provided (2) the value elicitation method, and (3) the socio-economic and demographic characteristics of individuals and their environments that would have the potential to influence the value they would place on the good or service (Mitchell and Carson, 1989).

In the survey respondents are required to answer CVM questions which asked respondents to consider a hypothetical scenario. Respondents are required to consider that if the current EMPOWERCARE initiatives finished and were no longer available but there were new and similar initiatives available in their local area and was available free of charge would they be willing to participate in the alternative initiatives. Respondents were asked to indicate yes, or no.

Subsequently, respondents were asked to consider that suppose this new initiative could no longer be offered free of charge and suppose it was not available through the NHS/ Health insurance or partner organisations. What is the maximum amount that they would be willing to pay at their own expense on a monthly basis. Respondents were asked to think about what they could realistically afford to pay given their current financial situation.

Following the depiction of this hypothetical scenario respondents were presented with an exponential payment ladder, which contained 13 bid amounts ranging from €0.10 to €50 per month and asked to indicate their maximum Willingness to Pay (WTP) as well as the option of paying nothing. This allows for the estimation of their Willingness to Pay for alternative initiatives which simulate the health benefits of participating in the EMPOWERCARE initiatives as well as estimation of the health benefits associated with participating in the EMPOWERCARE initiatives.

When the valuation task was completed, respondents were asked to complete a debriefing question in which respondents were asked to consider statements which best explain the choices they had previously made. These questions were included in the survey tool design to gather information that could explain respondents' motivation associated with their preferred choice in order to ascertain respondents' value for initiatives to improve health and wellbeing effects associated with the EMPOWERCARE initiatives.

3. THE CASE STUDY SITES

3.1 Technology Vs philosophical initiatives

Each project site took a different approach to implementing EMPOWERCARE in their initiatives. These initiatives are described in more detail in the Strategy and Technology Blueprint project reports (O2.1 EMPOWERCARE Competency Framework, O1.1 EMPOWERCARE Strategy and O3.1 Technology Blueprint on initiatives and technology that support enablement at individual and community level). The various approaches can be summarised into 2 distinct categories: Philosophical and Technology. These categories arose from the analysis of background context organisational data gathered about the case study sites' initiatives at the start of the EMPOWERCARE project and indicate the area of focus each case study site had for their initiative. In the UK, for example, the partner site introduced a technology-based initiative, involving borrowing devices and end-user tablet training, whereas the REPRISE model developed by the French partner site was more focused on the improved wellbeing and autonomy of older people. Table 3 below shows the grouping of sites into initiative type and size of initiatives per country.

		Philosophical	Technology/Tool Training
One Site	🏠	Le Nord (France)	Wieltjesgracht (Belgium) Kent County Council (UK) H.Hart (Belgium)
Multiple Sites	🏠🏠	Boone International & Family Help NPO (Belgium) Province of Antwerp (Belgium)	SWVO (Netherlands)

Table 3 Grouping of project initiatives by type and size per country

It was important to consider the initiative type during the analysis to reflect the area of focus each case study site had for their own interpretation of the EMPOWERCARE initiative as sites showed improvement in different areas depending on their area of focus.

3.2 United Kingdom

In the UK, Kent County Council (KCC) ran 2 as part of their local EMPOWERCARE initiatives, the Digital Ambassador Volunteer Scheme and the Technology for Independent Living Facilitator Programme (TILF).

The Digital Ambassadors scheme offered volunteers the opportunity to train end-users in digital skills via group and one-to-one sessions. The scheme ran between June 2021-June 2022. It was designed so that as well as receiving digital skills training to use email, Zoom etc., end-users could also make use of a technology loan scheme if they wished. They could loan a variety of digital devices to test and try out including, Samsung Tab, KARA Carephone and Alexa enabled devices for a 3-month period. In total 20 tablets and 10 Alexa devices were available through the loan scheme. The duration of loaning lasted between June 2021-September 2022. Digital Ambassador volunteers were taught how to deliver digital skills via a video training package.

The TILF Programme ran between September 2021-Spetember 2022. There were 2 facilitators in place whose role was to provide training to KCC Adult Social Care teams about the facilitator role and to give them an overview of available assistive technologies that they in turn could recommend for supporting the needs of people who draw on care and support; helping them to stay independent and in their own homes for longer. The programme aimed to reach 200+ workforce members.

3.3 France

The initiative introduced by the French partner (Le Nord) was called the REPRISE model (a French acronym). Specifically developed for older people, it was an adapted version of Family Group Conferencing. The model was a method that aimed to:

- Understand the needs of older people who were potentially losing their autonomy as a way to promote their wellbeing.
- Mobilise older people's social networks to support fulfilling their needs.

The targeted impact of REPRISE was to:

- Develop innovative and supportive responses to meet the challenges of ageing in our society.
- To support reduction in loss of autonomy for older people.
- Engage older people in the initiative, understand their needs and what matters to them, promote and facilitate a better sense of wellbeing and combat isolation and loneliness.
- Facilitate support for local carers to relieve them from some of their heavy mental and emotional burden.

REPRISE was co-produced by Le Nord professionals, local partners, citizens and researchers using a collaborative and participatory action research approach. The action research process took part between Summer 2020 and Autumn 2022. The REPRISE initiative was implemented with end-users between October 2021 and August 2022. It focused on human and technical support for improved emotional and psychological wellbeing for older people. The model covered the following domains: networking, mutual aid, proximity, realisation, innovation, support, needs and desires. The main principle of the model was to put older people at the heart of the initiative and to mobilise individual assets. Le Nord professionals, partners, carers, researchers and technology providers were all engaged in the action research process to help older people age well. The use of the digital tool aimed to promote empowerment and synergy between end-users and the wider community. The action research approach facilitated the development of the first version of the digital application that was built by the Wello technology company. The process involved discussions with various stakeholders and the identification of the needs of older people. Workforce received training and the technology was tested by older people, supported by carers and professionals. Drawing upon the outcomes of the testing, the technology application was refined. The action research process led to the creation of a social action reference framework and new training materials on the method were created for the workforce and members of the general public.

3.4 The Netherlands

Digital Active Zeeland (DAZ), Digital at Home in Zeeland (DTiZ) and Tuus in Smerdiek were the 3 EMPOWERCARE initiatives run by SWVO (Samenwerkingsverband Oosterscheideregio). DAZ ran for 1.5 years, from May 2021. This was a newly introduced online platform that offered digital day care for older people and disabled people. Through the online platform, several healthcare organisations offered digital activities for end-users living at home. The workforce, volunteers and carers were each appropriately trained in using the digital platform. The initiative was particularly useful as a response to the COVID-19 pandemic restrictions as during that period many older people and disabled people were unable to access physical day care facilities. It aimed to reach around 40 end-users of different healthcare providers. In Digital at Home, elderly could benefit from technological aids; 64 people experimented with several aids at home during half a year. Remote coaching was available for end-users through a wellbeing or lifestyle coach. I-pads/smartphones provided video calling functions for end-users and could be configured to a personal level. Technology for monitoring and smart alarms included care watch Vivago, GPS watches, medical wearable SiDLY wristband, Apple Watch, Fitbit, Whitings and Sensara. Tuus in Smerdiek was a community initiative focused on the village community of Smerdiek. The initiative aimed to work together with residents and local organisations on solutions that enabled ageing comfortably in the village. A number of virtual and in-person meetings and interviews were organised with the residents and as a result of the initiative generated the production of a community magazine called *Tuus in Smerdiek.*

3. 5 Belgium

H.Hart

One of the project partners in Belgium, H.Hart, offered 'oriented' short stay care for older people in 2 of their facilities, Woon and Zorg. The 'room with care' package involved short stays oriented around delivery of care underpinned by the EMPOWERCARE Approach. The 'room with care' was offered as a one-off cost. In addition to this package, a technology toolboxes initiative was also introduced, with boxes of manual and digital assistive tools made available to end-users for a trial period. The technology toolboxes contained items such as cup fillers and mobile phones.

H.Hart set up the initiative "orientation towards self-reliance". Care staff received an immersive experience in what it felt like to be an older person and how digital and mechanical aids could support this. Volunteers, students, residents and their network were also immersed in these methodologies from a skills lab that provided a 'homely and cosy' atmosphere. On the other hand, the method of multidisciplinary consultation was rolled out in more depth. The aim through the application of this multidisciplinary consultation structure and awareness training was that the total care of the recipient would be organised differently, namely the end-user was to be more involved in their care planning and their self-esteem and sense of self-reliance would be increased as healthcare staff organised their care more efficiently. The intention of the project partner site was for the initiative to remain embedded in the organisation's main service provision. The awareness training given to healthcare personnel was also extended to all 3 H.Hart locations and the skills lab introduced during the project remained in use while the toolboxes would be supplemented with additional innovative tools.

Province of Antwerp

Two initiatives were implemented by another Belgian project partner in the province of Antwerp. The project partner linked the EMPOWERCARE Strategy with their approach and trajectory of a newly introduced approach called 'Caring Villages', according to which, the Province of Antwerp guided and supported municipalities, villages, communities and care organisations in developing sustainable Caring Villages, aiming at integrated community care. During EMPOWERCARE, the Caring Villages initiative was implemented in the villages of Gierle and Morkhoven. The villages were areas of deprivation with some recent gentrification. There was a general lack of community infrastructure, such as youth services, local shops etc. Many people living in these areas had care needs, and loneliness was an issue, especially for older residents because houses were widely dispersed from each other. The villages had lots of green spaces and were diverse in terms of age, ethnicity and disability. The initiative focused on the neighbourhood community to enhance the quality of life for residents and build stronger and more resilient communities. Its emphasis was in particular to increase the empowerment of older and vulnerable people in the communities. Having established priority goals, the initiative expanded the Village House with the aim of combating loneliness and providing home services information. A mini market was also developed, selling basic provisions such as fruit, vegetables, meat and fish combined with a local café to support cohesion. Caring Villages aimed to reach 12-15 end-users in each of the villages and 8-10 other community stakeholders such as community workers, volunteers, GPs and staff from local organisations.

The second initiative developed a training programme aimed at multidisciplinary care and welfare professionals, as well as local organisations active in the villages, to encourage neighbourhood-oriented empowerment and thus empowerment of vulnerable people, such as older adults. The training included an online module and 2 collective workshops and was organised in 4 different neighbourhoods. Aspects of the module and workshops covered definitions of empowerment, how professionals could empower others and understanding the role of the neighbourhood in community empowerment. The training ran from March-May 2022. After the initial pilot, the Province of Antwerp planned a second series of training courses in Dec 2022-Jan 2023. The call for this attracted more than 40 interested responses from different neighbourhoods.

Boone International & Family Help NPO

Boone International, in collaboration with Family Help NPO, run the PRoF experience centre at the organisation's site in Poperinge where the third initiative in Belgium, Caring is Sharing, was implemented. The initiative was focused on technology trials of smartphones and tablets, as well as demonstrations of technology solutions for end-users. Integral to Caring is Sharing, Family Help NPO conducted their project, Hybrid Family Care, which supported end-users remotely and in-person to engage with and use different technological solutions and increase social contact, reduce loneliness and increase digital literacy. The Hybrid Family Care project used the eMEN multidisciplinary European collaborative platform that focused on advancing the practical application of digital technology to improve prevention, diagnosis and treatment in mental health. It was a solution to keeping mental health care accessible and affordable as demand for services and costs increased.

Wieltjesgracht

The Wieltjesgracht (WZC) initiative targeted support to older people leaving hospital in order to reduce admissions, so that as many as possible would be able to return to their own homes. This took the form of short stay supported accommodation with a focus on assessment of the patients' ability to return to independent life. WZC also rolled out a video communication tool, very similar to Skype, in its service flats to improve support for residents. The intention was for this technology to be rolled out to the larger neighbourhood after the end of the EMPOWERCARE initiative. Training was developed for the use of the system, as well as other technology such as computers, laptops and tablets and it was provided to both end-users as well as volunteer and non-paid carers. The training came as part of the activity and communication centre initiative. The initiative targeted younger and older people and friends and family of end-users. The aim was for the centre to be a site of intergenerational knowledge exchange. There were activities to combat loneliness and educational sessions that offered financial advice and practical training. Regional service providers such as social services facilitated the training and activities, but other specialised providers such as GPs, nurses, physiotherapists, meals on wheels, mobility centre and home carers were also involved in facilitating professional round table sessions. Local government facilitated advice on social and financial benefits available.

4. FINDINGS

4.1 Demographic characteristics of evaluation participants

4.1.1 End-users

Demographic data of the end-user survey participants included gender, age, ethnicity[1], sexual orientation[2], living status, educational level, and work status. The end-user demographic distribution per country can be seen in Tables 4a & 4b.

Table 4a End-user demographic characteristics per country

		Country								Total	
		Belgium		France		Netherlands		United Kingdom		Total	
		N=104		N= 33		N= 28		N= 30		195	
Age (Bands)	50-59	6	6%	-	-	7	25%	-	-	13	
	60-69	18	17%	10	30%	6	21%	14	47%	48	
	70-79	30	29%	11	33%	10	36%	11	37%	62	
	80-89	35	34%	8	24%	5	18%	2	7%	50	
	90-100	15	14%	4	12%	-	-	2	7%	21	
	Prefer not to say	-	-	-	-	-	-	1	3%	1	
Gender	Woman	72	69%	20	61%	17	61%	21	70%	130	
	Man	32	31%	12	36%	11	39%	8	27%	63	
	Trans	-	-	1	3%	-	-	-	-	1	
	Prefer not to say	-	-	-	-	-	-	1	3%	1	
Ethnicity*	White European	55	53%	-	-	27	96%	28	93%	110	
	Other	1	1%	-	-	1	4%	1	3%	3	
	Prefer not to say	48	46%	33	100%	-	-	1	3%	82	
Sexual Orientation*	Heterosexual/ straight	47	45%	-	-	24	86%	29	97%	100	
	Prefer not to say	8	8%	-	-	3	11%	1	3%	12	
	Did not answer	49	47%	33	100%	1	4%	-	-	83	
Living Arrangements	Partner	36	35%	8	24%	11	39%	10	33%	65	
	Children	5	5%	1	3%	-	-	1	3%	7	
	Alone	58	56%	20	61%	15	54%	19	63%	112	
	Other	5	5%	4	12%	2	7%	-	-	11	

---

1   This demographic characteristic was not included in the survey for French participants following local research ethics requirements.

2   Ibid

Table 4b End-user demographic characteristics per country

		Country								
		Belgium		France		Netherlands		United Kingdom		Total
		N=104		N=33		N=28		N=30		N =195
Highest Level of Education	Did Not Attend High School	4	4%	1	3%	5	18%	11	37%	21
	Completed High School	68	65%	24	73%	16	57%	15	50%	123
	Completed College	17	16%	6	18%	5	18%	-	-	28
	Completed University	15	14%	2	6%	2	7%	3	10%	22
	Prefer Not to Say	-	-	-	-	-	-	1	3%	1
Have You Ever Done Paid Work?	Yes	89	86%	31	94%	21	75%	29	97%	170
	No	15	14%	2	6%	7	25%	-	-	24
	Prefer Not to Say	-	-	-	-	-	-	1	3%	1
What Is/Was Your Main Job?	Manager (E.G., Chief Executive, Administrative Manager)	7	7%	4	12%	-	-	2	7%	13
	Professional (E.G., Science and Engineering, Health, Teaching Professional)	14	13%	1	3%	5	18%	6	20%	26
	Technician/ Associate Professional (E.G., Science and Engineering Associate Professional)	5	5%	1	3%	1	4%	1	3%	8
	Clerical Support Worker (E.G., General and Keyboard Clerk, Customer Service Clerk)	10	10%	9	27%	1	4%	11	37%	31
	Service And Sales Worker (E.G., Personal Care Worker, Sales Worker)	11	11%	5	15%	6	21%	4	13%	26
	Skilled Agricultural, Forestry and Fishery Worker	4	4%	2	6%	-	-	-	-	6
	Craft And Related Trades Worker	8	8%	3	9%	2	7%	3	10%	16
	Plant And Machine Operator And Assembler	5	5%	4	12%	2	7%	1	3%	12
	Occupation With Lesser Level Of Skills And Qualifications Required	15	14%	3	9%	5	18%	-	-	23
	Housewife/ House Husband	19	18%	1	3%	5	18%	-	-	25
	Armed Forces Occupation	2	2%	-	-	-	-	-	-	2
	Other	-	-	-	-	1	4%	1	3%	2
	Prefer Not To Say	4	4%	-	-	-	-	1	3%	5

4.1.2 Workforce

Demographic data of the workforce survey participants included gender, age, ethnicity[3], sexual orientation[4], living status, educational level, and work status. The workforce demographic distribution per country can be seen in Tables 5a & 5b.

Table 5a Workforce demographic characteristics per country

		Country								
		Belgium		France		Netherlands		United Kingdom		Total
Total		N=98		N=21		N=35		N=35		189
Age (Band)	Under 20	1	1%	-	-	1	3%	-	-	2
	20-29	18	18%	4	19%	4	11%	2	6%	28
	30-39	34	35%	4	19%	4	11%	8	23%	50
	40-49	24	24%	5	24%	6	17%	4	11%	39
	50-59	14	14%	4	19%	10	29%	6	17%	34
	60-69	7	7%	3	14%	6	17%	-	-	16
	Over 70	-	-	1	5%	4	11%	1	3%	6
	Prefer Not to Say	-	-	-	-	-	-	14	40%	14
Gender	Woman	84	86%	19	90%	19	54%	12	34%	134
	Man	13	13%	2	10%	14	40%	9	26%	38
	Prefer Not to Say	1	1%	-	-	2	6%	14	40%	17
Ethnicity*	White European	97	99%	-	-	32	91%	-	-	129
	Mixed/Multiple White and Black African	1	1%	-	-	-	-	-	-	1
	Middle Eastern Arab	-	-	-	-	1	3%	-	-	1
	Other	-	-	-	-	2	6%	1	3%	3
	Prefer Not to Say	-	-	21	100%	-	-	34	97%	55
Sexual Orientation*	Heterosexual/Straight	91	93%	-	-	29	83%	-	-	120
	Bisexual	1	1%	-	-	-	-	-	-	1
	Gay/Lesbian	2	2%	-	-	3	9%	-	-	5
	Prefer Not to Say	4	4%	-	-	2	6%	1	3%	7
	Other	-	-	-	-	1	3%	1	3%	2
	Did Not Answer	-	-	21	100%	-	-	33	94%	54

---

3   ibid
4   ibid

Table 5b Workforce demographic characteristics per country

		Country								Total
		Belgium		France		Netherlands		United Kingdom		
Total		N=98		N=21		N=35		N=35		189
Highest Level of Education	Did Not Attend School	2	2%	-	-	-	-	-	-	2
	Completed High School	21	21%	2	10%	6	17%	2	6%	31
	Completed College	64	65%	9	43%	15	43%	5	14%	93
	Completed University	8	8%	10	48%	8	23%	13	37%	39
	Other	3	3%	-	-	6	17%	14	40%	23
Staff Type	Salaried Staff Member	94	96%	18	86%	23	66%	35	100%	170
	Volunteer Staff Member	4	4%	3	14%	12	34%	-	-	19
Role	Managing Or Overseeing the EMPOWERCARE Approach	12	12%	15	71%	7	20%	14	40%	48
	Delivering The EMPOWERCARE Approach	86	88%	6	29%	28	80%	20	57%	140
Years at Organisation	Less Than One Year	5	5%	2	10%	2	6%	2	6%	11
	1-2 Years	5	5%	3	14%	3	9%	2	6%	13
	3-5 Years	2	2%	5	24%	2	6%	1	3%	10
	6-10 Years	8	8%	2	10%	1	3%	6	17%	17
	11-15 Years	2	2%	-	-	4	11%	4	11%	10
	More Than 15 Years	9	9%	-	-	2	6%	2	6%	13
	Did Not Answer	-	-	5	24%	-	-	-	-	5

4.2 Efficacy of initiatives

Efficacy of project site initiatives is presented by participant group and by the theme that was evaluated during the project.

4.2.1 End-users' self-efficacy

For the analysis of self-efficacy as measured by PAM-13, we employed the recommended approach to combine Level 1 and 2 scores (indicating inactivity) and Level 3 and 4 scores (indicating activation), to assess changes from baseline to end of initiatives phase. Across all sites, 'inactive' participants at baseline (M = 48.30, SD = 4.44)[5], showed statistically significant increase in self-efficacy at the end of the initiatives (M = 51.10, SD = 10.72); (t = -1.909, df = 44, p <.05).
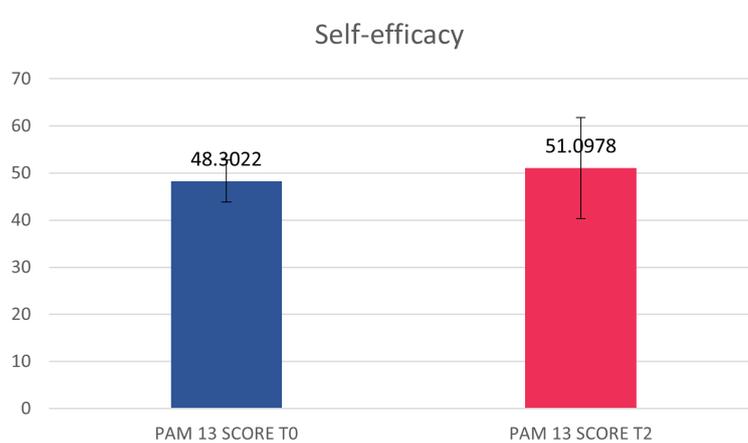
Self-efficacy

48.3022	51.0978

PAM 13 SCORE T0 — PAM 13 SCORE T2

Figure 2 Self efficacy mean scores pre and end of initiatives

Improved self-efficacy, expressed as increased confidence and capacity, was also evident from the qualitative feedback mid-point and at the end of initiatives and the following data are illustrative of this.

Image 1 (French end-user, Photovoice image of blue square)

An illustrative example can be seen in Image 1, a photo Figure from a French end-user. The end-user explains the image, *'This blue symbolizes the sea evocative of envy to take back fishing and reconnect with my past pleasure.'* This statement indicates that the end-user was able to imagine and reconnect to their past and this enabled them to reconnect with their previous hobby of fishing, thus illustrating a belief in the potential capacity to act, to get back to former activity.
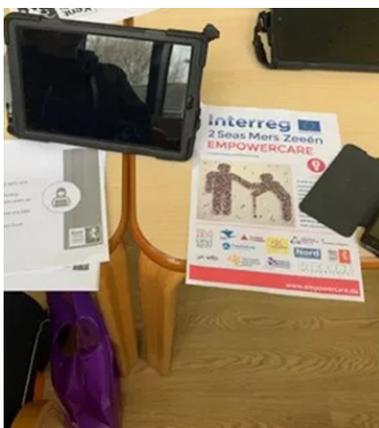

Image 2 (UK end-user, Photovoice image of tablet)

In Image 2, a UK end-user talked about their experience of the Digital Ambassador Programme:

> *'I found the sessions really helpful. They have given me more confidence to try out new apps on my phone. I enjoy using the tablet that has been loaned to me. I have also learnt about how to recognise a scam and what to do if I receive a scam email or message on Facebook.'* (UK end-user)

This is a more concrete example of how an end-user had been enabled to feel confident in their technological abilities.

---

5   Cases were adjusted for inclusion/exclusion criteria, leaving a total sample of n=45

4.2.2 End-users' emotional and social wellbeing

Impact of health status on everyday life

Across all sites[6], for the end-user participants whose mental health scores were indicative of a depressive disorder at the baseline (M = 21.93, SD = 3.05), there was a statistically significant improvement at the end of the initiatives (M = 36.86, SD = 5.82) (t = -5.271, df = 49, two-tailed p < .001). Similarly, for those end-user participants who reported a below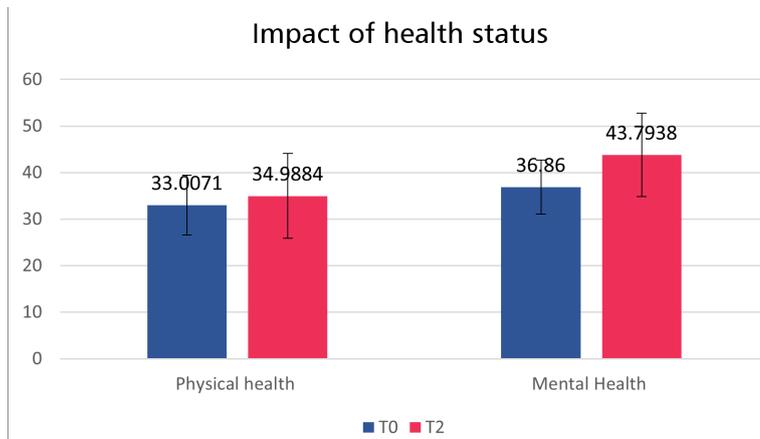 average physical health score for their age, mean scores increased from the baseline (T0) (M = 33.01, SD = 6.43) to end of initiatives (M = 34.99, SD = 9.11) however the improvement was not statistically significant (t = -1.961, df = 62, p > .05). Therefore, as shown in Figure 3, end-users reported statistically significant improvement in mental health and positive improvement trend in physical health at the end of the initiatives.

Figure 3 Physical and mental health mean scores pre and end of initiatives

Improved mental health is reported in particular by participants in philosophical initiatives (n= 31). For those whose score was low and indicative of a depressive disorder at baseline (T0) (M = 35.74, SD = 6.05), there was a statistically significant improvement at the end of initiatives (T2) (M = 45.24, SD = 9.55) (t = -5.569, df = 30, p < .001). Participants of technology-based initiatives also showed an improvement of mental health scores at the end of the initiatives, however this is not statistically significant (see Figure 4 for mean scores of physical and mental health at baseline and end of initiatives for end-users who took part in philosophical initiatives).
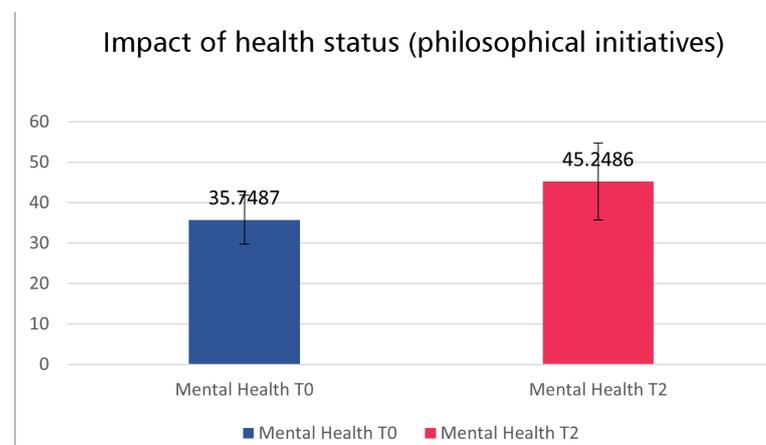

Figure 4 Physical and mental health mean scores baseline and end of initiatives (philosophical initiatives only)
*Note: Error bars represent Standard Deviation.

Feedback from FGD confirmed the improvements in this area. Below is an illustration of positive change towards improved physical health, as reported by end-users:

> *'I find it hard to take time and I realised that I needed to take. This was a time for me to find out what we could do. Doing sport is good for you. I don't do sport anymore because I don't feel like it but (anonymised name's) activities have rekindled the spark and I've taken up swimming again in the same time slot as (anonymised). If he smiles, I smile.'* (French end-user)

Mental wellbeing

Across all sites[7], for participants who reported either average or low mental wellbeing, mean score for wellbeing increased from baseline (T0) (M = 21.93, SD = 3.05) to end of initiatives (T2) (M = 22.02, SD = 3.37) although this positive trend was not statistically significant (t = -0.261, df = 82, p=.795) (see Figure 5 for mean scores of mental wellbeing at baseline and end of initiatives).

---

6   Cases were adjusted for inclusion/exclusion criteria, with a total sample of 50 for the MCS and 63 for the PCS.

7   Cases were adjusted for inclusion/exclusion criteria, leaving a total sample of (n=83).
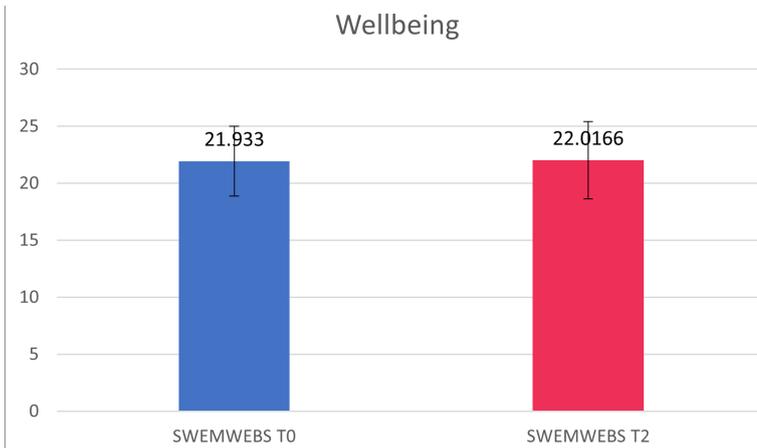
Figure 5 Mean scores of mental wellbeing at baseline and end of initiatives

Figure 6 Mean scores of mental wellbeing at baseline and end of initiatives for participants in philosophical initiatives

Across all sites that had a philosophical initiative (n=48), for participants who reported either average or low mental wellbeing, mean scores for wellbeing increased from baseline (T0) (M = 21.62, SD = 3.58) to end of initiatives (T2) (M = 22.35, SD = 3.87), although this positive trend was statistically significant (t = -1.559, df = 47, p > .05) (see Figure 6 for mean scores of mental wellbeing at baseline and end of initiatives for participants in philosophical initiatives).
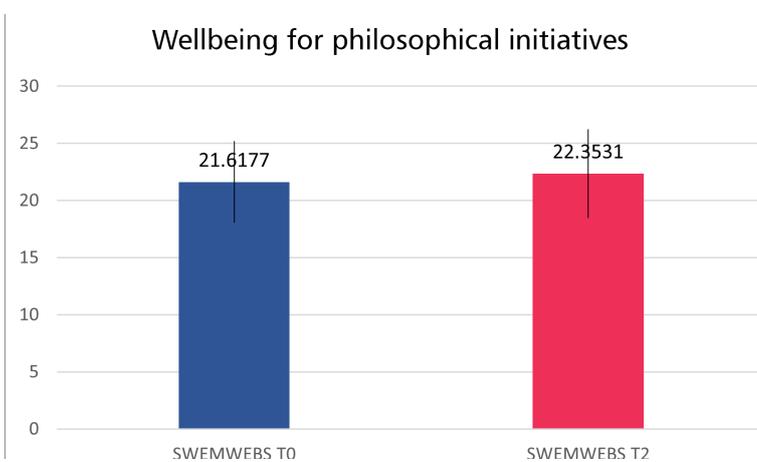
The FGD in Belgium provided insight into end-users' mental wellbeing. One end-user reflecting on the Photovoice exhibition noted that a photo was unclear and dark, and it evoked negative thoughts affecting their wellbeing:

'I like to have a lot of natural light/lux light in the living room of my floor, it has a great influence on my mood. I find that there is little light in the living room on floor 2. Often dark in my living room, I need a lot of daylight. In the winter period this gives a dark impression which affects my mood.' (Belgian end-user)

For those who participated in group activities (Images 3a & 3b) however:

'The combination between social contact and moving and getting to know fellow residents in a different way exercise in a group gives me energy and perseverance.' (Belgian end-user)

Image 3a & 3b (Belgian end-user, Photovoice image of group movement games)

Another end-user said of the initiative in Belgium *'I feel happier and can do more independently'.*

The qualitative data for the most part demonstrated positive outcomes for end-users' mental wellbeing when they were enabled to greater autonomy and freedom, although this was not always the case as some end-users felt there were times when more could be done to support it.

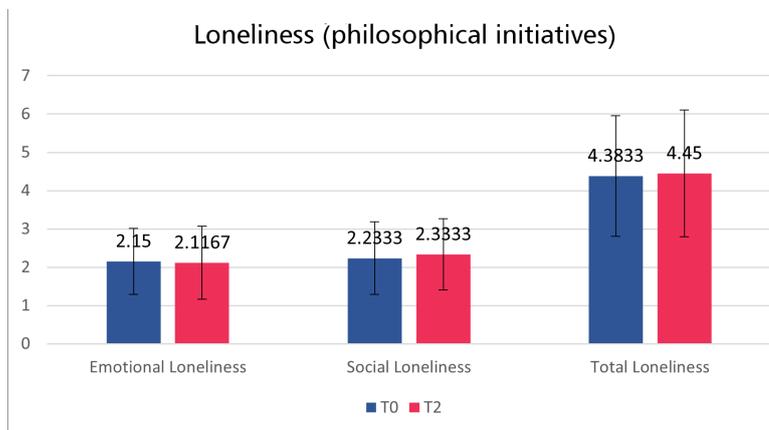*Figure 7 Mean loneliness scores at baseline and end of initiatives*

Figure 8 Mean loneliness scores baseline and end of initiatives for end-users in philosophical initiatives

Image 4 (Dutch end-user, Photovoice image of happy emoji)

Loneliness

When considering all project sites[8], there was no significant decrease of the level of reported loneliness, overall and by type (emotional and social), for participants who reported feeling lonely at the start of the initiatives (see Figure 7 for mean loneliness scores at baseline and end of initiatives).

For participants from philosophical initiatives (n=60), who reported being lonely at the start of the initiatives, there was a slight decrease in emotional loneliness from baseline (T0) (M = 2.15, SD = .86) to end of initiatives (T2) (M = 2.11, SD = .96) although this change was not statistically significant (t = -.314, df = 59, p >.05) (see Figure 8 for mean scores of loneliness at baseline and end of initiatives for end-users in philosophical initiatives).

Findings from qualitative data analysis provided a different insight to the participants' experiences of loneliness during the initiatives. In fact, analysis demonstrated how initiatives impacted positively in reducing loneliness levels of end-users. For example, a Dutch end-user chose an emoji image (Image 4) with wording that translates as 'I like this', stating alongside their selection:

> *'I don't really have a personal goal. Taking part in the digital activities is recreating for me. I am enjoying meeting other people, I need it. Sometimes it is very quiet at home'.*
> (Dutch end-user)

8   Cases were adjusted for inclusion/exclusion criteria, leaving a total sample of 95.

27

Also, a French end-user offered profound insight into this area during a FGD, stating:

'It helped me to get out of my loneliness. My doctor told me 'You mustn't stay like that', but he didn't tell me what to do. I even went so far as to think about suicide. Maybe I would have done that. I wouldn't be here today. Now I know I can count on someone; it breaks my isolation. I can call my nurse, the young people from Unicity, my housekeeper. I can count on these people. I have a little list in my notebook.' (French end-user)

The French quotation is very arresting and illustrates a real depth of loneliness that participants experienced. Both testaments are about the sense of loneliness end-users felt pre-initiative and the positive affect the initiative had in tackling it.

Overall, qualitative data on social and emotional wellbeing confirmed that project initiatives had a positive impact on end-users. The following quotations encapsulate that and come from FGD:

'I've set many things in motion. I built a life for myself, relationships with the outside world, people who helped me to open up, to meet people.' (French end-user)

'I take care together with sister. Since she has been here, the care is better and she is flourishing again, daring to do things herself that she was no longer doing at home.' (Belgian community stakeholder)
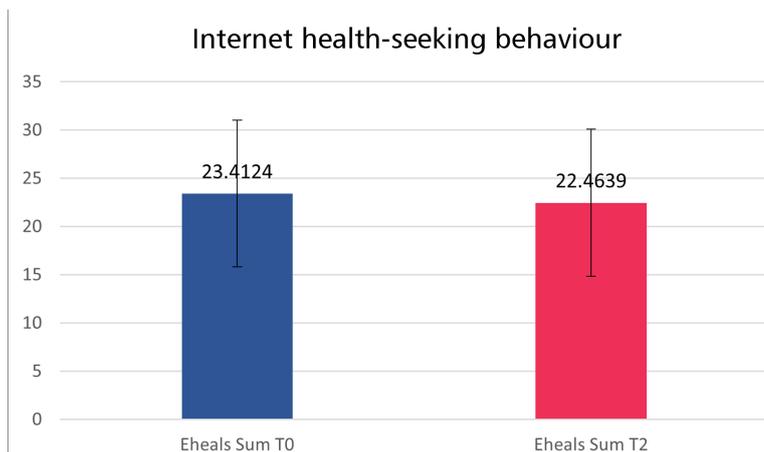
4.2.3 End-users' digital literacy
Internet health-seeking behaviour

When analysing survey responses from all sites[9], end-users' reported internet health-seeking behaviour did change at the end of initiatives (see Figure 9 for mean scores of internet health-seeking behaviour at baseline and end of initiatives).

Nonetheless, for the sites focusing on technology (n = 35), internet health-seeking behaviour increased from baseline (T0) (M =23.00, SD =7.62) to end of initiatives (T2) (M = 24.26, SD = 6.99), although the positive change was not statistically significant (t = -1.223, df = 34, p >.05) (see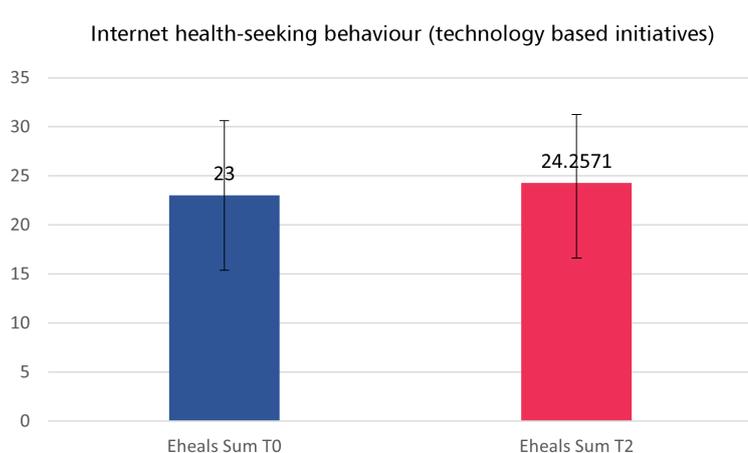 Figure 10 for mean scores of internet seeking behaviour at baseline and end of initiatives for end-users in technology focused initiatives).

Qualitative data from end-users confirmed the survey results in relation to those participating in technology focused initiatives. They reported feeling more digitally literate and confident in using technology for their physical and mental health needs and to keep connected with their social networks.

Figure 9 Mean internet seeking behaviour baseline and end of initiatives

Figure 10 Mean scores of internet health-seeking behaviour at baseline and end of initiatives for end-users in technology focused initiatives

---

9   Cases were adjusted for inclusion/exclusion criteria, leaving a total sample of 97.

A UK end-user chose Image 5 during the Photovoice exercise and asserted in relation to it:

'I feel more confident using the phone and I've learned to do a lot more, for instance use capitals, and the torch. That was really good the night we went to the concert. Confident receiving and sending texts. I didn't realise before that messages waited in the outbox - that I had to scroll down and press send, so I had messages I thought I'd sent, but they hadn't gone, but now I know what to do. I couldn't read what I'd sent but now I can.' (UK end-user)

Image 5 (UK end-user, Photovoice image of mobile phone)

A Belgian end-user chose an image of a reading loop and offered, *'I like to be up to date with current events, independent, reading and action group.'*

A French end-user in a FGD stated, *'People around me were happy to see me getting interested in digital technology and taking pictures and sharing them on the application.*

The qualitative digital literacy data are evidence of improvements in digital literacy for end-users and how that improvement enabled them to share experiences with others, feel independent and autonomous and connect with other people.
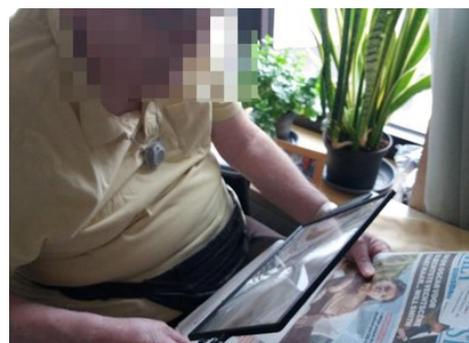

Image 5 (Belgian end-user, Photovoice image of reading loop)
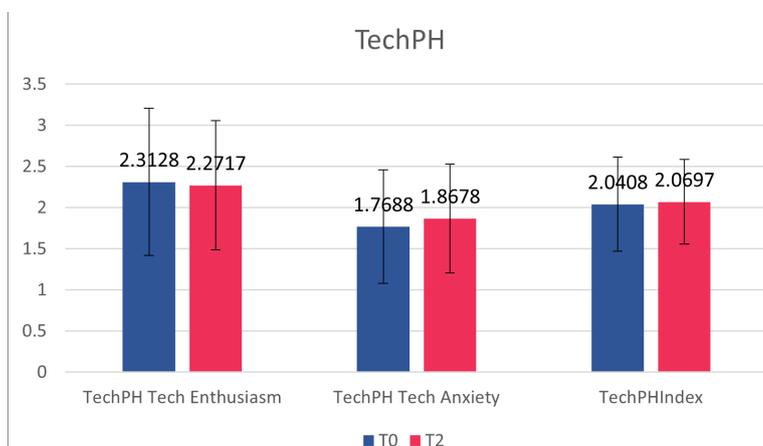
Technophilia

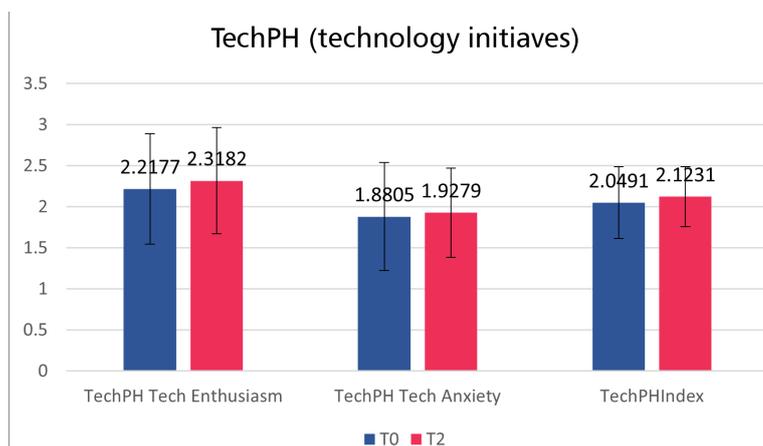*Figure 11 Mean scores of tech-enthusiasm and tech-anxiety at baseline and end of initiatives*

Figure 12 Mean score of tech-enthusiasm and tech-anxiety at baseline and end of initiatives for end-users in technology focused initiatives

When analysing scores across all sites[10], there were no significant changes in reported tech-enthusiasm or tech-anxiety of end-users (see Figure 11 for mean scores of tech-enthusiasm and tech-anxiety at baseline and end of initiatives).

Nonetheless, participants in initiatives focused on technology (n = 35), reported an increase of overall Tech Index Scores from baseline (T0) (M = 2.05, SD = .44) to end of initiatives (T2) (M = 2.12, SD = .37), although the change was not statistically significant (t = -1.009, df = 34, p >.05). Similarly, tech anxiety increased from baseline (T0) (M = 1.88, SD = .66) to end of initiatives (T2) (M = 1.93, SD = .54) but the increase was not statistically significant (t = -.369, df = 34, p >.05). Tech enthusiasm increased from the baseline (T0) measure (M = 2.21, SD = .67) to end of initiatives (T2) (M = 2.31, SD = .65) although the change was not statistically significant (t = -.842, df = 34, p >.05). This means that for end-users who engaged with a technology focused initiative both tech-enthusiasm and tech-anxiety differences were not large enough to be deemed statistically significant, although tech-enthusiasm showed a

10   Cases were adjusted for inclusion/exclusion criteria, leaving a total sample of 97.

positive trend. For end-users on philosophical initiatives tech-enthusiasm and tech-anxiety again did not differ significantly (see Figure 12 for mean scores of tech-enthusiasm and tech-anxiety at baseline and end of initiatives for end-users in technology focused initiatives).

Photovoice data offered an insight into end-users' attitudes towards technology. A UK based end-user chose an image of a laptop (Image 7) and captioned it by saying:

'During my time with you, I have worked on emails with additional pictures and Microsoft Office, creating columns for library work. I feel that the computer work is going to get harder, and I am not going to be able to carry out the tasks set. I still lack so much confidence and it worries me.' (UK end-user)

Image 7 (UK end-user, Photovoice image of laptop)

Most end-users who participated in the Photovoice exercise expressed that they had gained confidence from learning more about how to use technology, but there were others who felt confidence was something that still needed to be built on. The caption for Image 7 is an expression of trepidation that gives interesting insight into the significance of feelings of apprehension around living in a digital/computer age for older people. It is worth noting also that navigating a laptop can be more complex than a non-smart mobile phone or reading loop and so learning how to use it may be a more daunting prospect. A UK member of the workforce hinted in a FGD at the solution, *'It's about upping the confidence for the person and reducing the fear of technology so that people embrace it.'* The expression of apprehension from the end-user is what Realist approaches call golden nuggets (nuggets of wisdom that can be found in limited data sets) (Pawson, 2006). These stories tell us about potentially deeper insights into what is already known from research literature about digital devices and processes of datafication increasingly shaping the social worlds of people in later life.

Overall, the general reporting in qualitative data was of the benefits to wellbeing and independence of increased technological confidence and knowledge for end-users. Two French end-users exemplify this,

'I didn't dare tell my son that I wasn't well. My son sensed that something was wrong. It was difficult for me to ask; I didn't want to disturb him. I finally told him and now he texts me or I hear my great-granddaughter on the phone going 'areuh' and it brightens up my whole week.' (French end-user)

'My tablet is becoming a drug. Every day I send a note to my grandson. My wish was to go to Montreal to see my grandson, which will happen in September with my son.' (French end-user)

4.2.4. Workforce person-centred care
Person-centred quality of environment

Across all sites[11], for those that had a baseline of below average person-centredness or lower, mean scores increased from baseline (T0) (M = 52.56, SD = 4.38) to end of initiatives (T2) (M = 58.16, SD = 8.26), and this improvement was statistically significant (t = -3.529, df = 31, p < .001), indicating that the project initiatives significantly increased work force person-centeredness (see Figure 13 for mean scores of overall person-centred quality of environment at baseline and end of initiatives).
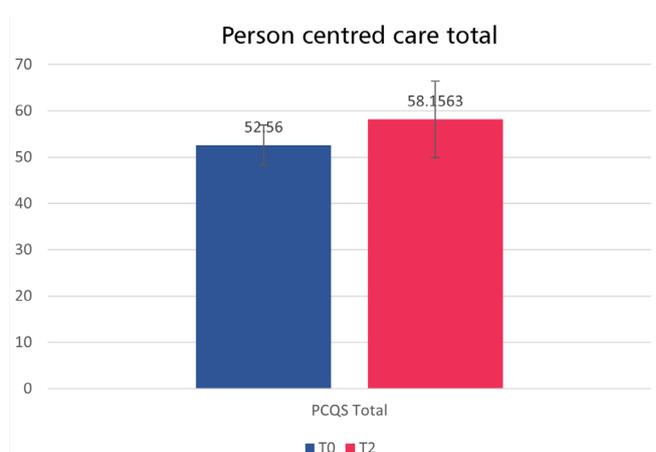

Figure 13 Mean scores of overall Person-centred quality of environment at baseline and end of initiatives

---

11   Cases were adjusted for inclusion/exclusion criteria, leaving a total sample of 32.

There were also similar significant improvements in the specific areas of this scale.

The Climate of Safety scores increased from baseline (T0) (M = 12.16, SD = 1.61) to end of initiatives (T2) (M = 13.66, SD = 1.81), and this improvement was statistically significant (t = -4.349, df = 31, p < .001), indicating that the project initiatives significantly increased workforce feelings of being welcome, acknowledged and accepted for being oneself.

The Climate of Everydayness scores increased from baseline (T0) (M = 14.56, SD = 1.43) to end of initiatives (T2) (M = 15.75, SD = 3.03), which was statistically significant (t = -2.178, df = 31, p < .05), indicating that project initiatives significantly increased workforce feelings of how homely, aesthetically pleasing, quiet and peaceful and neat and clean a workplace feels.

The Climate of Community scores increased from the baseline (T0) (M = 10.81, SD = 1.55) to end of initiatives (T2) (M = 11.72, SD = 2.29), although this change was not statistically significant (t = -1.879, df = 31, p > .05).
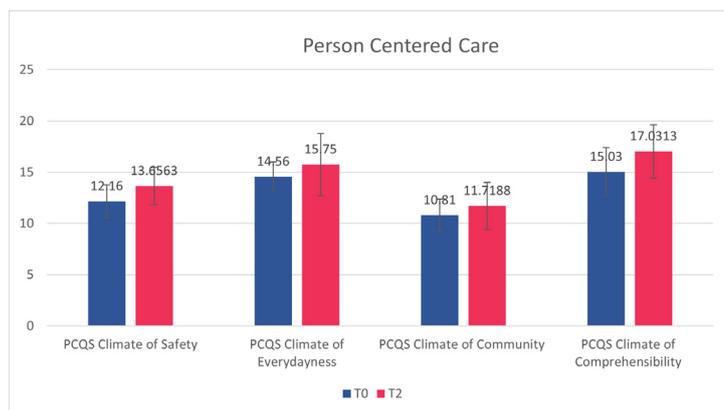
The Climate of comprehensibility scores increased from the baseline (T0) (M = 15.03, SD = 2.36) to end of initiatives (T2) (M = 17.03, SD = 2.61), which was statistically significant (t = -3.134, df = 31, p < .05), indicating that the project initiatives significantly increased workforce feelings of whether the workplace is a place where the patients are in safe hands, staff use language that the patients can understand, it is easy for patients to talk to the staff and where the patients have someone to talk to if they so wish (see Figure 14 for mean scores of subscales on the person-centred quality of environment scale at baseline and end of initiatives).

Figure 14 mean subscales on the Person-centred quality of environment scale baseline and end of initiatives.

Data from the FGD corroborate the increase in person-centredness. One UK volunteer workforce member confirmed:

> *'Having contact with a person who is isolated makes such a difference in lives and wellbeing. Being a Digital Ambassador, you learn about the person you are supporting and build a rapport. Sometimes you end up learning a lot more about the person and their needs. You may not always recognise how much of a difference you have made to someone's life and the impact made.'* (UK member of the volunteer workforce)

A member of the Belgian workforce embodied in their work what it means to be person-centred, they testified:

> *'I love my work here, where I can really take the time to look together with others for the added value of self-reliance. Whatever this may be for that person. Because empowering is different for everyone.'* (Belgian member of the workforce)

The above quotations talk about the transformation in people's lives that is possible through being focused on the needs of the individual.

4.2.5. Workforce technology uptake

eHealth meter

An e-Health meter contact form compared T0 and T2 and measured use of technology by members of the workforce had increased. Two sites were able to provide data for this measure. Although not much can be inferred, it was still possible to identify some emerging themes. There was a large drop in technology use after an initiative was completed. At 1 site there was 86.7% increase in minutes where technology was utilised at T1 during the initiative compared to T0 baseline.

Comparing data collected at T0 and T2, there was a decrease in the uptake and frequency of use of technology by 29.87%. This meant a decrease of 116.7% between when participants were in the initiative and end of initiative. Similarly, although there was no baseline data comparing T0 and T1, after the initiative at one site there was a 47.37% decrease in the uptake and frequency of occasions technology was borrowed at T1 compared to T2.
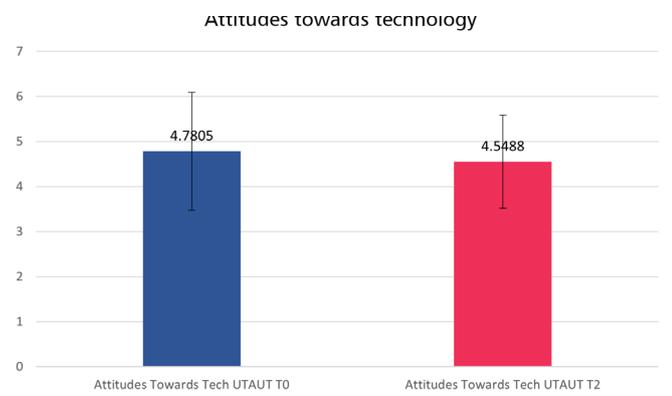
Technology acceptance

Figure 15 mean scores on work force attitude towards technology baseline and end of initiatives
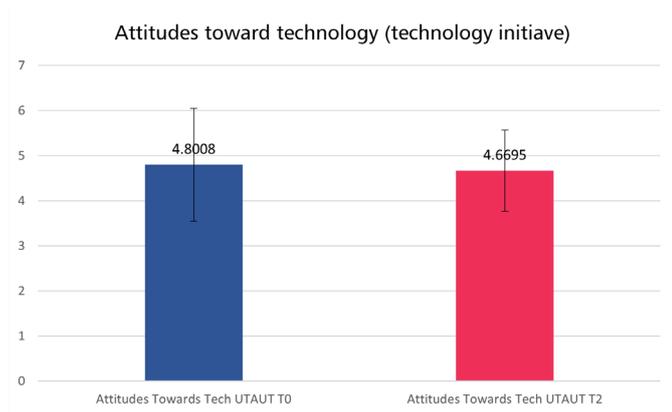

Figure 16 mean scores on work force attitude towards technology baseline and end of initiatives for end-users who took part in technology focused initiatives.

Across all sites[12], survey results from workforce attitudes towards technology did not show any change from baseline to end of initiatives (t =1.597, df = 81, p > .05). (See Figure 15 for mean scores on workforce attitudes towards technology at baseline and end of initiatives).

Similarly, there was no difference between workforce participants in technology-focused and philosophically focused initiatives.

When discussing about technology uptake in FGD, members of the workforce spoke about the need to embrace technology in their work. In addition, some spoke about how some of the drive for that need came from the implementation of COVID-19 restrictions.

A Dutch member of the workforce told how, *'COVID forced us to work online. We wanted to take our clients along with us in this development'*.
A member for the workforce in the UK noted:

> *'Since lockdown we are reliant on everything digital - so imagine how our clients would benefit from it, for example devices to remind to take medication. Our team must be aware and not be scared of it, tech must be a part of the culture of the team, it is up to BDU* (an organisational department) *to know about new technology and get the team to embrace it - it is an injustice that clients do not always know what is available.'* (UK member of the workforce)

Also, a member of the volunteer workforce in the UK observed that:

> *'The Samsung Tablet was new to me. I was used to using an I-pad which meant I had to retrain myself to use Samsung devices. The people I supported become very good at using the tablets but also became more confident with using their mobile phones.'* (UK member of the volunteer workforce)

Overall, workforce reporting from the qualitative data illustrated that the workforce understood and acknowledged

---

12   Cases were adjusted for inclusion/exclusion criteria, leaving a total sample of 82.

the benefits of technology uptake for end-users, whilst also recognising that they needed support too around their confidence and acceptance. Members of the workforce in the UK demonstrated this well because there had been a specific initiative to technologically enable them at their site. They conveyed:

> *'Technology is an empowering experience.'* (UK member of the workforce)

> *'We're starting to see the workforce think tech first, since introducing EMPOWERCARE.'* (UK member of workforce)

> *'Having someone there that you can rely on, and contact reach out to provide support enables you to build your own confidence and willingness to try new things which you can share with the people you are supporting.'* (UK member of the workforce)

> '[The] *'value of the TILF is amazing, fundamental in rolling out culture change'* (UK member of the workforce)
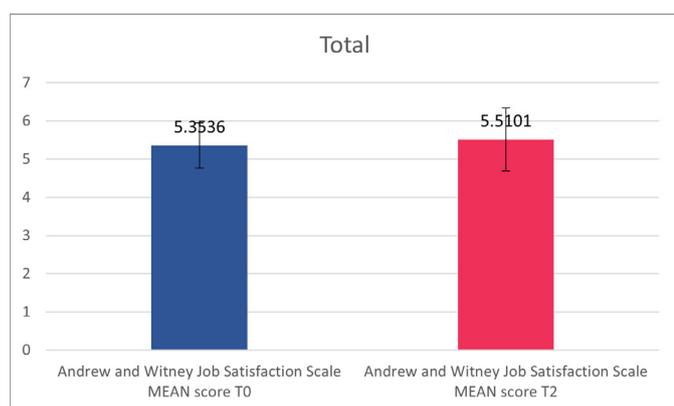
4.2.6 Workforce training and satisfaction

Job satisfaction

Across all sites[13], there was no statistically significant change in reported job satisfaction by the initiatives' workforce.

Similarly, there was little reference to job satisfaction in the Photovoice and FGD. Nonetheless, the photo exhibition in the UK elicited some feedback on this topic. A volunteer member of the workforce articulated:

Figure 17 Mean scores on workforce job satisfaction at baseline and end of initiatives

> *'It's been very challenging with COVID to find the time. The scheme is a good idea and I feel I have helped the person I've supported. You only need to share what you want to on Facebook. COVID has created a real challenge, however it has been a rewarding experience.'* (UK member of the volunteer workforce)

Impact of workforce training

Impact of workforce training was measured with the use of the NoMAD scale only at the end of the initiatives. Across all sites (n = 105), there were higher average scores on certain NoMAD subscales such as reflective monitoring (M = 2.67, SD = 1.02) and collective action (M = 2.67, SD = .70) compared to coherence (M = 2.55, SD = 1.02), and cognitive participation (M = 2.23, SD = .95) (see Figure 18 for mean scores on each NoMAD Subscale).

A number of Belgian workforce members brought up the positive impact workforce training had on their practice. The following quotations illustrate how reflexive monitoring and working collectively in particular was a part of their practice. One member of the Belgian workforce said they were:

> *'Listening, having time and taking time to think about my behaviour.'* (Belgian member of the workforce)

Another remarked that:

> *'We are very busy, yet we notice how important it is to make time to invest in this and thus increase self-mastery.'* (Belgian member of the workforce)

And a third commented:

13   Cases were adjusted for inclusion/exclusion criteria, leaving a total sample of 69.

'It is not difficult to take time to set up conversations, to set up new things together with the resident and family. This project makes room for this, and the added value is felt.' (Belgian member of the workforce)

These data signify that embedding training has enabled staff to understand the value of taking time, reflecting and connecting, which are some key person-centred competencies and attributes required as evidence of a transformed workforce.
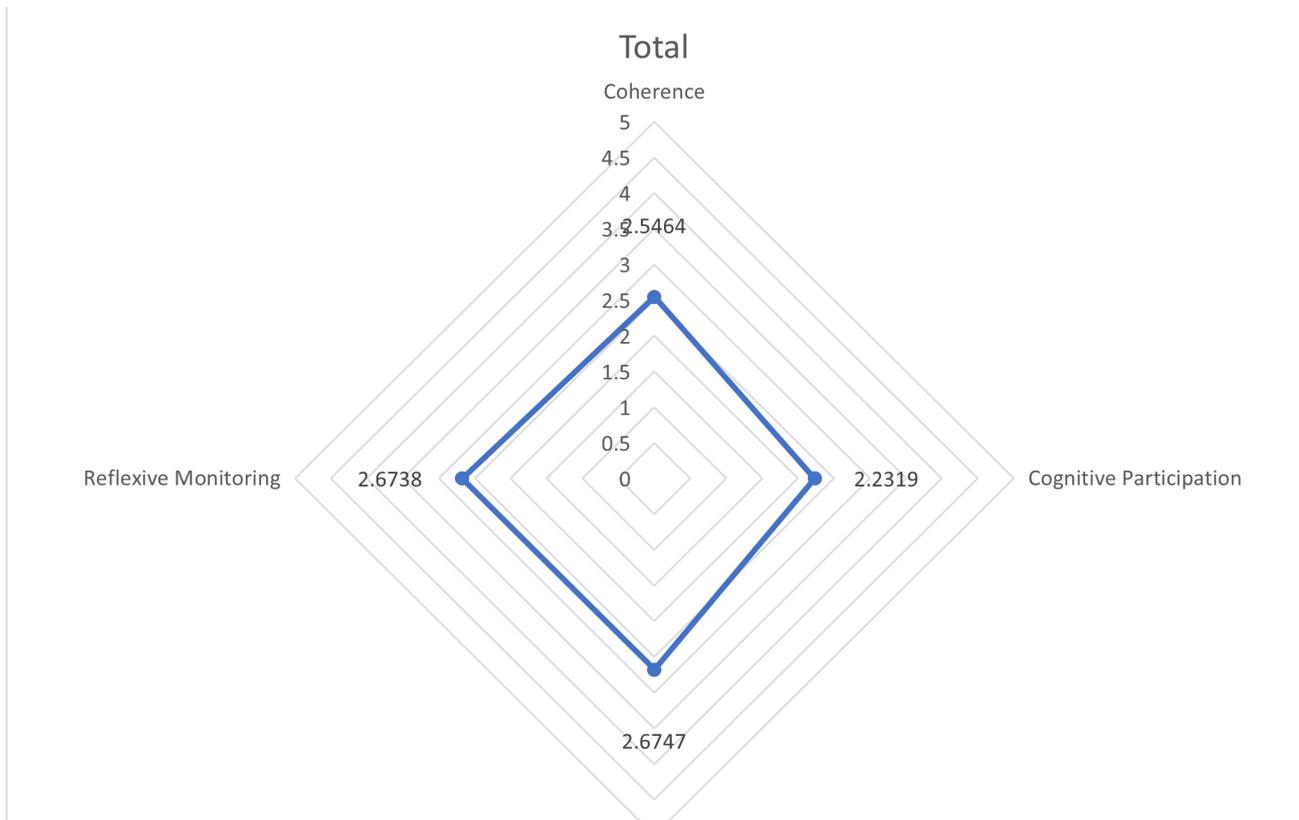

Figure 18 Mean scores on each NoMAD Subscale

4.2.7 Long-term thinking and sustainability

Thematic analysis of 'Good Ancestor Principles'

The evaluation process included FGD and at T2 FGD data collection of a novel approach applying the 'Good Ancestor' (Krznaric, 2020) principles were integrated into the post initiatives evaluation to promote and encourage participants to take a long-term thinking perspective to their choices and preferences for the decisions they make. The rationale for this was respondents had participated in the EMPOWERCARE initiatives and based on their experiences this approach would capture their insights and visions taking an extended lens view to take account of future generations' needs. Guided by the 6 principles the 'Good Ancestor' thematic narrative analysis was conducted and presented under the following themes: Intergenerational Justice; Legacy Mindset, Deep Time Humility; Cathedral Thinking; Holistic Forecasting and Transcendent Goal.

Intergenerational Justice

Discussions focused on powerful reasons for caring about the future generations that will be living in the local community beyond participants' lifetime. The most compelling motivation discussed was the need for caring about future generations beyond the lifetime of participants. This focused on continued intergenerational contact and links and the negative impact on wellbeing if future generations are without support and concerns raised regarding potential impact.

'Some support will need to be there; we can't remove it…..we're only at the beginning of the digital journey. If people are left unsupported with digital, safeguarding concerns will increase.' (UK Member of the workforce)

In addition, discussions highlighted the importance of maintaining intergenerational links to maintain community social cohesion.

> *'The link between the two generations which was created thanks to the technology allows to create a social link.'* (French End-user)

Legacy Mindset

Through the lens of how participants would like the future generations to remember this generation, discussions focused on what kind of community participants would want future generations to inherit. Conversation provided insights around imagining self as in need of care in the future, the requirement to end digital poverty and to ensure that the **next older generation** are much more digitally aware and technologically capable.

> *'In 20 years' time I will be on the receiving end and I hope there's new blood coming through to teach me! EMPOWERCARE will never end, the need will always be there.'* (UK member of the volunteer workforce)

> *'We need to ensure we don't have digital poverty going forward and that it is affordable for people to use technology for things like opening their curtains.'* (UK member of the workforce)

> *'The current older generation find technology difficult, but this will change as the current under 65's grow older, they, not all, but many, will be more confident using technology.'* (UK member of the volunteer workforce)

Deep Time Humility

The discussions focused on what was considered worth fighting for to secure the future generation's health and wellbeing were extremely abundant as this allowed for discussion in confronting barriers and challenges in society and draining time and focus on existence. The key determinants considered essential to battle for for future generations were the prevalence of social isolation and loneliness in society, as well as the benefits of maintaining social and community cohesion.

A Belgian end-user said of the potential loss of the initiative '*I would really miss it. I love to sing and coming together.'* With a UK participant expressing concern about the wellbeing impact in the future if key lessons are not learned and taken forward.

> *'I'm concerned about social isolation and that we use technology for social interaction, as we have learned from the pandemic.'* (UK member of the workforce)

Conversations discussed possibilities of continued investment in the EMPOWERCARE initiatives,

> *'This project [EMPOWERCARE initiative] has added another arm to what we can provide in social care. The value of interaction between people is endless.'* (UK member of the workforce)

Discussion was had on exactly how to sustain the resources and ensure that they are passed on to future generations, continuation of the initiatives with a focus on community-based decision-making and digital inclusion.

> *'Certainly, continue some initiatives and leave room for new e.g., computer lessons. With the underlying goal that people take more care of their loved ones* [and] *helping and getting to know each other in today's busy society, continuing the neighbourhood budget.'* (Belgian participant)

> *'Digital service connection, with an eye for the most vulnerable. Elderly people sometimes do not have a safety net……so have a point in every village centre….a mobile point that can attract neighbourhoods to bring people into contact with digital in an accessible way.'* (Belgian participant)

Cathedral Thinking

Deliberation on what long term initiatives could be pursued with others to extend beyond their lifetime to secure the wellbeing of future generations, yielded perceptive insights. Participants thought around how to reach the most vulnerable communities, ideas about intergenerational interactions and improving connections in existing conditions and enhancing growth of local infrastructure.

'We are not reaching most vulnerable people yet; the challenge is how are we going to reach them. We certainly need to think about that. I don't think we're reaching that right now.' (Belgian participant)

'On the one hand aging population, but also a lot of new neighbourhoods in recent years with many young families. We need to see that we can get the benefits out of that mix and facilitate the connection between them a little more. I can't say if there's a need for the intergenerational, but I do think there are opportunities. [name of village] *also lends itself perfectly to it because everyone knows each other, and everyone easily speaks to each other.'* (Belgian participant)

'I see many possibilities through the second service centre in [name of village]*. A challenge will be to make our services known there. When we are there, it is something that can come spontaneously, but we should certainly also focus on it.'* (Belgian participant)

Holistic Forecasting

Debate centred on anticipation of a different pathway for holistic health and wellbeing initiatives or services in local communities. The principle of holistic forecasting is essential for long term discussions were philosophical in nature and less concentrated on concrete ideas and solutions. Discussions concentrated on cooperation between services, participatory approaches in delivery of services and being attentive to vulnerable groups in local communities.

'We want to approach this in a very participatory way. What do the inhabitants themselves want in terms of supply?' (Belgian participant)

'Still some room for improvement on cooperation between sectors. The interaction would be good.' (Belgian participant)

'I also think of a vulnerable group of single people, people who have lost their partner. That we can do something about that, to bring those people together.' (Belgian participant)

Transcendent Goal

Conversations concentrated on what should be considered as the ultimate goal of the health and wellbeing EMPOWERCARE initiatives for future generations. Discussions focused on the importance of services that provide original intergenerational benefits.

'Within the welfare department.....that you touch there, connect with each other, but also with other services. Not only bench and trees [referring to a park-based initiative]*, but also something extra to link e.g., psychological well-being of children, then you have two in one. Make bridges!'* (Belgian participant)

'Pay very close attention that we are very visible and accessible, that we reach all the different groups within [name of village] *and think very carefully about which services. That we're not going to be a copy of* [name of another initiative] *here. How do we best reach people? How do we work most connecting?'* (Belgian participant)

'All villages can be involved in the project and people can be together in networks. People must have [that] *and are given the opportunity to do so. In concrete terms: bringing people closer together through technology. Connecting young and old in this way.'* (Belgian participant)

5. COST BENEFIT ANALYSIS RESULTS

5.1 Contingent Valuation Method results for Willingness to Pay for EMPOWERCARE initiative

The following disseminates the responses to the Contingent Valuation Method (CVM) questionnaire, completed by (n=105) participants.

Suppose that the EMPOWERCARE initiatives finished and was no longer available but there was a new and similar initiatives available in your local community and was available free of charge. Would you be willing to participate in this alternative initiative?

This question was to understand if participants who engaged with the EMPOWERCARE initiatives placed a benefit on accessing them. Results indicate that (n=81) participants or 73% would be willing to access a similar initiative and gain the resulting health and wellbeing effects. The results also indicate that (n=24) participants or 27% indicated that if EMPOWERCARE initiatives finished that they would not be willing to participate in a similar initiative.

To understand the value that participants placed on accessing and participating in the EMPOWERCARE initiatives, participants who indicated that they would be willing to participate in an alternative initiative were asked to complete a valuation question.

Now suppose this new initiative could no longer be offered free of charge and suppose it was not available through the NHS/Health insurance or partner organisation. What is the maximum amount that you would be willing to pay at your own expense monthly?

Results indicate that the (n=81) participants or 73% of respondents who were willing to participate in a similar alternative initiative would be Willing to Pay (WTP) between **€0.10 and €40 per month** from *their own out of pocket expenses*. On average participants were WTP **€10.31 per month** (SD = 9.83) from *their own out of pocket expenses* to gain the health benefits associated with taking part in the EMPOWERCARE initiatives. When participants were asked to indicate the rationale for selecting their WTP estimates, participants indicated that the value estimates selected reflected the value that participants placed on the health and wellbeing impacts that they noticed because of the initiatives as shown in Table 6. Results indicate that respondents WTP ranged from minimum WTP of **€0.10** to maximum of **€40 per month** with a median of **€10** and **average WTP €10.31** in respondents *own out of pocket expenses* to participate in the EMPOWERCARE initiatives as shown in Figure 19 for Willingness to Pay in Euros.

Table 6 Descriptive statistics on amount willing to pay in Euros

Willingness To Pay	Euros
Minimum	€0.10
Maximum	€40.00
Median	€10.00
Mean	€10.31

Figure 19 Willingness to Pay (in Euros).

These WTP estimates are a reflection of participants' experience of engaging with the EMPOWERCARE initiatives. In addition, to understand the rationale for selecting the value estimates participants were asked to indicate the reasons that best reflect their WTP estimates for the health and wellbeing outcomes delivered through the EMPOWERCARE initiatives.

5.2 Understanding choices and preferences

Reflecting on participants WTP estimates participants were asked to indicate one or more answer that best showed the reason/s for their WTP to access the EMPOWERCARE initiatives.

All participants selected had the opportunity to choose one or more answer that would best reflect their previous answers and WTP estimates. Majority of participants (n=49) or 47% of respondents indicating that the value estimates selected were reflective of 'The value they placed on the initiative'. A further (n = 26) of participants or 25% indicating that they were not willing to pay for a similar initiative because they could not afford any additional tax.

In keeping with the National Oceanic and Atmospheric Administration (NOAA) guidelines for best practice in the administration of CVM studies (Arrow et al., 1993), all respondents were asked a follow up question. This question asked respondents about their WTP for the hypothetical initiatives and respondents were invited to select responses that best explain their answers. This debriefing question is used to investigate protest answers and identify the reasons why respondents are unwilling to pay for the hypothetical initiatives with results (N=105) presented in Table 7. Respondents who did not engage with the hypothetical scenario are known as protestors. Protestors are respondents who indicated that they were not interested in pretend initiatives, do not believe in pretend initiatives and believe that the government should provide. Results indicate that (n=42) or 40% respondents were protest bidders to the hypothetical scenario presented. Respondents indicated that their answers revealed they were, not interested in pretend initiatives (n=12) or 11%; do not believe in pretend initiatives (n=4) or 4% and (n=28) or 27% of participants reported they were not willing to pay for a similar initiative because the government should provide the benefits described by the initiatives without any additional costs for taxpayers.

Table 7 Choice and preferences results

	n	%
Value on inititatives	49	47%
Can't afford additional Tax	26	25%
Not interested in pretend inititatives	12	11%
Do not believe in pretend inititatives	4	4%
Government should provide	28	27%
Protesters (Respondents who were not interested in pretend inititatives; do not believe in pretend inititatives and the government should provide)	42	40%

The responses and value estimates to the CVM questions reflect the value participants attribute to the EMPOWERCARE initiatives.

5.3 Cost of living

Respondents (N=105) were asked to reflect on the cost of living and its effect on them and their household and consider 4 statements and asked to take into consideration which statement best described their situation at that present time. Results shown in Table 8 indicates that (n=2) or 2% of respondents find it a strain to get from week to week with (n= 69) or 66% of respondents indicating that they have to be careful with money. A further (n=23) or 22% of respondents indicating that they can manage without much difficulty and (n=11) or 11% of respondents indicating that they are quite comfortably off.

Table 8 Cost of living numbers and Percentages.

	n	%
I find it a strain to get from week to week	2	2%
I have to be careful about money	69	66%
I am able to manage without much difficulty	23	22%
I am quite comfortably off	11	11%

5.4 Binary regression model to predict effects on Willingness to Pay

A binary logistic regression was performed to ascertain the effects of the value participants place on the initiatives, willingness to participate in an alternative initiative, participating in the technical initiatives, being comfortably off, total loneliness (combined emotional and social loneliness), how useful they find the internet is in helping to make decisions about health and how important is it to be able to access health resources on the internet on the likelihood that participants were WTP for a similar alternative initiative.

In logistic regression analysis the *Wald test* determines the statistical significance for each of the independent variables as shown in Table 9. Results indicate that the following variables are statistically significant; value participants place on the initiatives (p = .000), willingness to participate in an alternative initiative (p = .000) being comfortably off (p=.041), participating in the technically focused initiatives (p = .027), and total loneliness (p = .002), all added significantly to the model/prediction. However, the variables, how useful is the internet is in helping making health decisions (p = .169) and how important is it to be able to access health resources on the internet (p = .052), did not add significantly to the model.
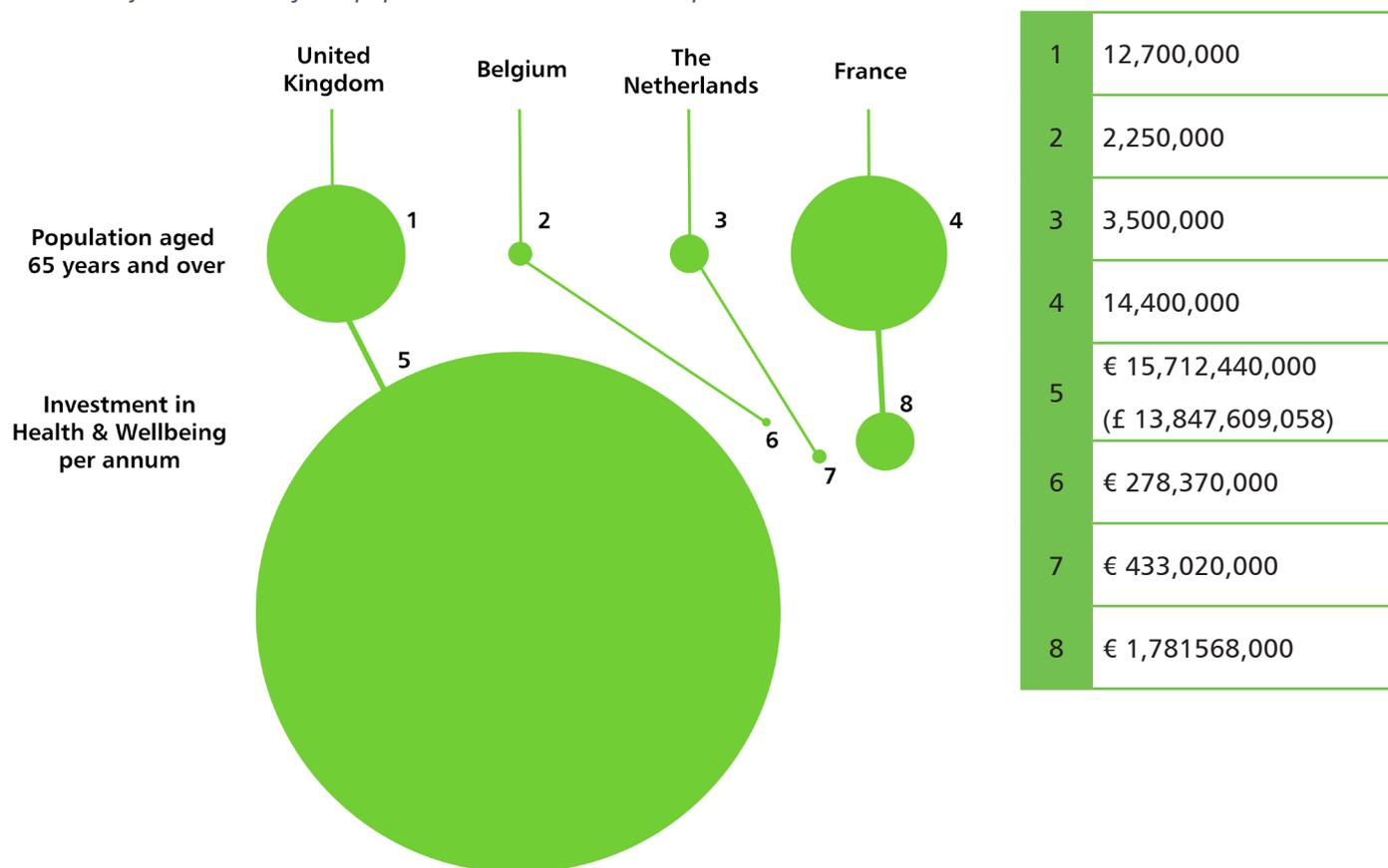
Table 9 Logistic regression predicting Willingness to Pay

Variable	B	Wald χ2	p	Odds Ratio
Value participants place on the inititative	-5.217	12.389	.000	.005
Willingness to participate in an alternative inititative	4.010	12.131	.000	55.12
Comfortably off	3.3.08	4.163	.041	27.3
Participating in the technical inititative	1.979	4.861	.027	7.24
Loneliness	1.191	9.677	.002	3.29
How useful is the internet is in helping making health decisions	-.773	1.895	.169	.46
How important is it for you to be able to access health resources on the internet	1.303	3.782	.052	3.7
Constant (WTP)	-13.489	12.821	.000	.000

The overall model is statistically significant, χ2(7) = 63.362, p < .05 and explains the 69% (Nagelkerke R2) variance among participants and differences in their WTP for an alternative initiative and the model is correctly classified indicating that there is a 91.4% chance of this occurring. In addition, WTP is 55 times more likely if respondents are willing to participate in an alternative initiative and 27 times greater if respondents are comfortably off. In addition, the predictive model for WTP for an alternative initiative was significant if respondents' emotional and social loneliness was improved by participating in the technically focused initiatives and influenced by the -value that the respondents placed on participating in the EMPOWERCARE initiatives.

The results from this Contingent Valuation Method (CVM) questionnaire indicate that participants who have experienced the EMPOWERCARE initiatives value accessing and engaging with the initiatives. The value estimates suggest that participants were WTP between **€0.10** and **€40** per month *from their own out of pocket expenses*. Logistic regression results indicate that respondents are 55% more likely to be willing to pay towards the health and wellbeing effects of an alternative initiative and this is 27% more likely to occur if respondents are comfortably off. In addition, participants were on average WTP **€10.31** per month *from their own out of pocket expenses* to use and avail of the EMPOWERCARE initiatives to gain the health benefits and wellbeing effects. In extrapolating this average WTP estimate forward for each participant suggests, that each participant who expressed that they WTP per month would therefore be WTP **€123.72** per person per annum from *from their own out of pocket expenses* to benefit from the EMPOWERCARE initiatives. Applying this estimate to all participants WTP on average **€10.31** per month (n=81) the participants collectively were WTP **€10,021.32** *from their own out of pocket expenses* towards the associated health and wellbeing benefits of the EMPOWERCARE initiatives. These valuation estimates are representative of a small population (n=81) in this evaluation and not representative of the entire over 65 years old and above populations of the 4 countries sampled: UK, Belgium, Netherlands, and France. In forecasting for the needs of this proportion of the population within each of the 4 countries and examining current population data from The World Bank (2021) would indicate that this segment of the population, aged 65 years and above, are steadily increasing as shown in

Table 10. Investing in preventative health measures such as the EMPOWERCARE initiatives could improve health and wellbeing outcomes as well as social and emotional loneliness health among this proportion of the population who often are vulnerable and experience isolation within communities. Based on the WTP estimates of **€123.72** per person per annum (based on respondents WTP) and extrapolated forward for each of the 4 countries in this evaluation,conservative investment in initiatives such as the EMPOWERCARE initiatives for each of the countries is outlined in Table 10. This preventative health investment based on the cautious estimates within this evaluation should shed some light for governments on investment in local community assets focused on keeping individuals aged 65 years and above within their local communities and provision of care close to home.

Table 10 Projected over 65 years populations and investment in preventative health initiatives

1	12,700,000
2	2,250,000
3	3,500,000
4	14,400,000
5	€ 15,712,440,000 (£ 13,847,609,058)
6	€ 278,370,000
7	€ 433,020,000
8	€ 1,781568,000

These value estimates are reflective of the importance participants placed on the EMPOWERCARE initiatives and are willing to contribute to accessing and engaging with these initiatives. Participants did reflect that this was the value associated with the health and wellbeing initiatives available through EMPOWERCARE. However, participants did indicate that they could not afford to pay additional taxes to support such health and wellbeing initiatives and that delivery through the EMPOWERCARE initiatives should be supported by governments.

It is acknowledged in this evaluation that respondents did indicate that they were willing to pay out of their own out of pocket expenses for the EMPOWERCARE initiatives, but when answering the debriefing questions indicated that these initiatives should be provided thought government services. These WTP estimates provide important insights for policy makers and healthcare commissioners on the value that previous participants place on the services provided through the EMPOWERCARE initiatives in local communities. These valuation estimates infer that the allocation of similar level of funding per person could be beneficial use of local community assets to improve health and wellbeing outcomes.

6. CONCLUSIONS

The evaluation highlighted the successful delivery of the EMPOWERCARE initiatives across all case study sites, although there were some challenges encountered.

- The evaluation data were collected during a time frame when all participating countries were working within the restriction of government instructed social measures to prevent the spread of COVID-19.
- The EMPOWERCARE initiatives were not standardised and were interpreted and implemented differently at each case study site.
- Collecting demographic data from end-users and workforce was challenging. With case study sites in multiple countries, there were some local concerns raised about the role of GDPR in the collection of personal data.
- Having the delivery sites collect the data themselves under the evaluations team's instruction also led to some difficulties in assuring the data was collected according to the data collection plan. Working remotely and managing international delivery sites who were not experienced researchers meant there had to be a lot of clarifications and language barriers prevented efficient data collection at points.

Despite the challenges, the use of the Realist approach meant the complexities of having data from different initiatives from across 7 case study sites did not limit the findings. Instead, the multiple perspectives and data sources enriched understanding and the explanatory evaluation of the EMPOWERCARE initiatives.

The quantitative and qualitative data results complemented each other and provided key areas where the EMPOWERCARE initiatives had positive impact.

For end-users the key areas were:

- Increased self-efficacy, including a sense of enablement around their capacity to take action in relation to their own health and wellbeing and confidence in their technological abilities.
- Decreased loneliness, with strong testaments about the positive affect initiatives had in tackling isolation and solitude.
- Increased internet health-seeking behaviour, digital literacy and confidence in using technology for their physical and mental health needs and in keeping connected with their social networks.

For the workforce the key areas were:

- Increase in person-centredness, along with expressions of recognition around positive changes to workplace practice.
- Embeddedness of workforce training, particularly around willingness to engage in reflexive monitoring and collective action, with testaments of taking time to reflect on behaviour and actions in practice.

Incorporated into the evaluation design was the Contingent Valuation Method (CVM) along with the principles of the 'Good Ancestor' to examine long-term thinking and sustainability. These combined approaches were used to examine the health and wellbeing benefits as well as estimate the willingness to pay for the health and wellbeing effects of participating in the EMPOWERCARE initiatives. Results suggest that participants are willing to pay. The economic results infer that funding per person could be a beneficial use of local community assets to improve health and wellbeing outcomes among older populations. Thematic analysis of the FGD identified that community social cohesion and sustained intergenerational contact are essential and the potential adverse influence on wellbeing if future generations are not supported. Findings indicated care is needed in the future to end digital poverty and to ensure that the next older generations are much more digitally aware and technologically capable. In addition, results suggest it is essential that social isolation and loneliness in society are tackled and to ensure that the benefits of maintaining social and community cohesion are inherent in communities now and for future generations. Findings also indicate that cooperation between services, participatory approaches in delivery of services with an emphasis on vulnerable groups are imperative for holistic forecasting for future generations, as well as the importance of services that provide original intergenerational benefits.

There have been calls in respect of older populations health needs for further and increased levels of relevant and good quality research for informing health policy, improved integrated care across sectors and financial models to provide care for this and future generations of older people. On a community level, mobilisation aimed at tackling increased longevity and growing numbers of older people's care that increases autonomy, independence and enablement for older people is considered key to ensuring older peoples' health needs are not overlooked and underserved (WHO, 2017). This is a global challenge and something that requires greater collaboration across organisations, countries, regions and communities.

In asset-based approaches, such as the EMPOWERCARE initiatives, assets are considered to be: social capital, self-esteem and strong communities. Care professionals are a resource that can support individuals and communities to recognise and take action in harnessing assets, along with skills and capacities to decrease preventable illness, deaths and risky health behaviours towards better health and wellbeing and stronger more connected and empowered communities (Foot & Hopkins, 2010). For a relatively long period of time there has been a significant lack of strong evidence that they are effective (Daly & Westwood, 2017).

Combining the asset-based work of a number of existing and tested partner initiatives from across Belgium, France, the Netherlands and the UK, the EMPOWERCARE evaluation has demonstrated that the workforce can better care for older people from within their communities through person-centredness, the right training and the incorporation of caring technologies into practice. Providing for what matters to older people enables them to better health and wellbeing, empowers them to take more responsibility for their care through use of technologies and local services that keep them motivated to have control over decisions that affect their health and wellbeing, improves social and community cohesion and offers solution to the financial implications of increasing care costs for older populations.

The evaluation results provide some positive results on the success of the EMPOWERCARE initiatives across the 4 countries. More analysis has been done per site to understand the different aspects of the EMPOWERCARE Strategy, Workforce Transformation Package and Technology Blueprint that made a positive difference to end-users and members of the workforce. These further analyses will provide a more comprehensive picture of the impact of the EMPOWERCARE initiatives, as well as inform the next stages of work.

7. REFERENCES

Anderberg, P., Eivazzadeh, S., & Berglund, J. S. (2019). A novel instrument for measuring older people's attitudes toward technology (TechPH): Development and validation. *Journal of medical Internet research*, 21(5), e13951.

Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: Americans' perceptions of life quality*. Plenum Press.

Arrow, K., Solow,R., Portney, P., Leamer, E., Radner, R. (1993). Report of the NOAA panel on Contingent Valuation. https://edisciplinas.usp.br/pluginfile.php/4473366/mod_folder/intro/Arow_WTP.pdf

Daly, M., & Westwood, S. (2017) Asset based approaches, older people and social care: an analysis and critique. Ageing and Society. 38(6): 1-13. DOI:10.1017/S0144686X17000071

De Jong Gierveld, J., & Van Tilburg, T. (2010). The De Jong Gierveld short scales for emotional and social loneliness: tested on data from 7 countries in the UN generations and gender surveys. *European journal of ageing*, 7, 121-130.

De Jong-Gierveld, J., & Kamphuls, F. (1985). The development of a Rasch-type loneliness scale. *Applied psychological measurement*, 9(3), 289-299.

Drummond, M.F., Stoddart, G.L., Torrance, G.W. (1987). Methods for the economic evaluation of health care programmes. Oxford: Oxford University Press.

Edvardsson D., Sandman P.O. & Rasmussen B.(2008a) Construction and psychometric evaluation of the Swedish language Person-Centred Climate Questionnaire – staff version. Journal of Nursing Management 17, 790–795.

Fat, L., Scholes, S., Boniface, S., Mindell J., & Stewart-Brown S. (2017) Evaluating and establishing the national norms for mental well-being using the short Warwick-Edinburgh Mental Well-being Scale (SWEMWBS): findings from the Health Survey for England. *Quality of Life Research*, 26(5), 1129-1144.

Finch, T. L., Girling, M., May, C. R., Mair, F. S., Murray, E., Treweek, S., ... & Rapley, T. (2018). Improving the normalization of complex initiatives: part 2-validation of the NoMAD instrument for assessing implementation work based on normalization process theory (NPT). *BMC medical research methodology*, 18(1), 1-13.

Foot, J. & Hopkins, T. (2010) A glass half-full: how an asset approach can improve community health and well-being. [Report] Improvement and Development Agency. http://www.assetbasedconsulting.net/uploads/publications/A%20glass%20half%20full.pdf

Hibbard, J. H., Mahoney, E. R., Stockard, J., & Tusler, M. (2005). Development and testing of a short form of the patient activation measure. *Health services research*, 40(6p1), 1918-1930.

Hsieh, H. F. & Shannon, S. E. (2005) Three Approaches to Qualitative Content Analysis. *Qualitative Health Research*. 2005;15(9):1277-1288. doi:10.1177/1049732305276687

Inoue, Y., Mifune, N., Saijo, T. (2023) Positive reputation for altruism toward future generations regardless of the cost for current others. Front. Psychol. 13:895619. https://doi.org/10.3389/fpsyg.2022.895619

Mitchell, R. C., Carson, R. T. (1989). Using surveys to value public goods. The Contingent Valuation Method. Resources for the Future Press, Washington. https://doi.org/10.4324/9781315060569

Mols, F., Pelle, A. J., & Kupper, N. (2009). Normative data of the SF-12 health survey with validation using postmyocardial infarction patients in the Dutch population. *Quality of life Research*, 18, 403-414.

Norman, C. D., & Skinner, H. A. (2006). eHEALS: the eHealth literacy scale. *Journal of medical Internet research*, 8(4), e507.

O'Brien B, Gafni A.(1996). When Do the "Dollars" Make Sense?: Toward a Conceptual Framework for Contingent Valuation Studies in Health Care. Medical Decision Making;16(3):288-299. doi:10.1177/0272989X9601600314

Pawson, R. & Tilley, N. (2004) Realist Evaluation. Sage. [Online] Available at: http://www.communitymatters.com.au/RE_chapter.pdf Accessed 14/12/20

Pawson, R. (2006) Digging for Nuggets: How 'Bad' Research Can Yield 'Good' Evidence. *International Journal of Social Research Methodology*. 9:2:127-142. DOI: 10.1080/13645570600595314

Reeve, J., Cooper, L., Harrington, S., Rosbottom, P., & Watkins, J. (2016). Developing, delivering and evaluating primary mental health care: the co-production of a new complex initiative. *BMC Health Services Research*, 16(1), 1-13.

Rentsch, J. R., & Steel, R. P. (1992). Construct and concurrent validation of the Andrews and Withey job satisfaction questionnaire. *Educational and psychological measurement*, 52(2), 357-367.

Spencer, L.H., Lynch, M., Thomas, G. (2021). Developing a conversation about identifying community needs to embrace wellbeing through social prescribing interventions: a qualitative study. The Lancet Public Health, 82. https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(21)02625-8.pdf

Spencer, L.H., Lynch, M., Thomas, G.M., Edwards, R. T. (2023). Intergenerational Deliberations for Long Term Sustainability. Challenges 2023, 14(1), 11; https://doi.org/10.3390/challe14010011

Stewart-Brown S, Tennant A, Tennant R, et al. (2009) Internal construct validity of the Warwick-Edinburgh Mental Well-being Scale (WEMWBS): a Rasch analysis using data from the Scottish Health Education Population Survey. *Health Qual Life Outcomes*, 7(1), 1-8.

The World Bank (2022). Population ages 65 and above, total - France, United Kingdom, Belgium, Netherlands. https://data.worldbank.org/indicator/SP.POP.65UP.TO?end=2021&locations=FR-GB-BE-NL&start=1960&view=chart Accessed 27/02/2023

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.

Vilagut, G., Forero, C. G., Pinto-Meza, A., Haro, J. M., De Graaf, R., Bruffaerts, R., ... & ESEMeD Investigators. (2013). The mental component of the short-form 12 health survey (SF-12) as a measure of depressive disorders in the general population: results with three alternative scoring methods. *Value in Health*, 16(4), 564-573.

Wang, C. & Burris, M. A. Photovoice: Concept, Methodology, and Use for Participatory Needs Assessment. *Health Education & Behavior*. 1997;24(3):369-387. doi:10.1177/109019819702400309

Ware, Jr, J. E., Kosinski, M., & Keller, S. D. (1996). A 12-Item Short-Form Health Survey: construction of scales and preliminary tests of reliability and validity. *Medical care*, 220-233.

World Health Organisation (2017). Global Strategy and Action Plan on Ageing and Health. Geneva: World Health Organization.

Yin, R. K., (2013). *Case study research: Design and methods*. Sage publications.

Interreg

2 Seas Mers Zeeën

EMPOWERCARE

EUROPEAN UNION