

**REVIEW ARTICLE**

# Psychosocial modification of general self-efficacy in older adults: A restricted review

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**Abstract**

**Objectives:** In recent years, the concept of general self-efficacy has increased in popularity. General self-efficacy is positively associated with quality of life and has the potential to act as a psychological buffer against adverse events and circumstances. However, due to the long-term influences that are said to shape general self-efficacy beliefs, they may be resistant to intervention, particularly within the older population. This restricted review aimed to explore whether psychosocial interventions could improve the general self-efficacy of older adults. Aspects of intervention design associated with improvements were also investigated.

**Methods:** A restricted review was undertaken. This included a keyword search of four major health databases (PubMed, CINAHL, PsycINFO and AgeLine). Search terms focused on general self-efficacy and the commonly used measures of this concept and were limited to the older adult population.

**Results:** In total, 848 articles were screened, with 20 studies proceeding to data extraction. The modification of general self-efficacy in older adults appears possible, with 7 out of the 20 included studies reporting improvements postintervention. Despite issues relating to the quality of included studies and the generalisability of their results, several aspects of intervention design coincided with intervention success, including intervention duration, and employing sufficiently-qualified staff.

**Conclusions:** Future research must address the generalisability issues identified in this review. Studies comparing the effectiveness of individual- and group-based interventions, the efficacy of remote delivery platforms and the possibility for long-term transfer of any improvements are needed to contribute the high-quality data required for policy and practice decisions in this area.

**KEYWORDS**

healthy ageing, positive psychology, psychosocial intervention, self-efficacy

[Correction added on 16 May, after first online publication: CAUL funding statement has been added.]

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## 1 | INTRODUCTION

Global population ageing represents a major demographic transformation, with wide-ranging ramifications for health and the burden of non-communicable disease.<sup>1,2</sup> In response to global ageing, many countries have adopted healthy ageing initiatives,<sup>3–6</sup> which seek to promote health and well-being throughout the life course by optimising individuals' health-related attributes. These attributes relate to one's ability to meet basic needs, learn and grow, be social, be mobile and contribute to society, collectively referred to as functional ability.<sup>7</sup> This functional ability is itself determined by intrinsic capacity—the composite of one's physical and mental capacities—the environment, and the interaction between the two.<sup>8</sup> One concept that might assist healthy ageing, particularly in the area of intrinsic capacity, is that of perceived self-efficacy.

Perceived self-efficacy relates to an individual's belief in their own ability to achieve outcomes through action.<sup>9</sup> It is related to motivation and perseverance and influences the kinds of activities people are likely to undertake.<sup>10,11</sup> Importantly, higher self-efficacy is related to improved physical health and psychological outcomes.<sup>12,13</sup> Self-efficacy beliefs are determined by four key influences: performance accomplishments (or mastery), vicarious experience, verbal persuasion and emotional arousal.<sup>9</sup> Interventions aimed at improving self-efficacy beliefs must address one or more of these areas. Improvements in self-efficacy could help increase an individual's intrinsic capacity and, therefore, improve their functional ability.

Perceived self-efficacy is most often measured as a domain-specific concept, such as caring self-efficacy or coping self-efficacy.<sup>14</sup> However, the concept of general self-efficacy (GSE)—developed by Sherer and Maddux in the 1980s<sup>15</sup> to refer to the globalised or trait-like form—has increased in popularity over recent years. General self-efficacy relates to individuals' perceptions of ability across a range of situations. Historically, GSE has received criticism due to its generality and difficulties in measuring the trait as separate from associated concepts like self-esteem, hope, locus of control and neuroticism,<sup>16–19</sup> along with GSE's failure to predict behaviours.<sup>14,16,17</sup> Those who support the use of GSE argue that this generalised form positively influences domain-specific beliefs,<sup>20</sup> leading to the hypothesis that high GSE can act as a psychological buffer against adverse events and circumstances.<sup>16</sup> Studies have also linked GSE with healthy ageing and demonstrated GSE is positively associated with quality of life.<sup>21</sup> Key differences between the work on domain-specific self-efficacy and research focusing on GSE include a lack of systematic reviews and meta-analyses investigating the modifiability

### Policy Impact

This review highlights an increasing interest in the modification of general self-efficacy in older adults, including via interventions not primarily targeting the concept. It is not yet possible to make any sort of prediction regarding the success of such interventions in supporting or improving general self-efficacy, beyond the fact that it appears possible.

of GSE compared to domain-specific efficacies<sup>12,22,23</sup> and the lower presentation of GSE as a primary outcome in research designs than domain-specific efficacies.

Researching domain-specific self-efficacy, such as balance self-efficacy,<sup>23</sup> pain self-efficacy<sup>24</sup> or exercise self-efficacy,<sup>25</sup> provides a narrow focus for interventions and measurements. However, GSE research and interventions must contend with the broader and inherently vaguer concept of a general self-perception. This raises questions about how interventions that seek to modify GSE, as a situation-independent belief, have been designed and delivered.<sup>14</sup>

As it is thought that GSE is most influenced by aggregate lifetime experience, it may also be more difficult to modify than domain-specific self-efficacies.<sup>26</sup> This is of particular importance within older populations, a group complicated by higher heterogeneity compared to younger ones<sup>27</sup> and the potential need to modify beliefs which have been reinforced over a longer period of time and a wider range of unique experiences. No prior systematic reviews investigating psychosocial interventions to modify GSE in older adults have been identified.

Hence, a restricted review of the published research investigating psychosocial interventions targeting GSE in older adults (aged 65 and over) was completed. This approach differs from that of a full systematic review in that it does not seek to provide a definitive collection of current research or statistical conclusions as to the efficacy of GSE interventions. Instead, this review aimed to explore the following two research questions.

1. Is there sufficient evidence to support the view that older adults' GSE can be modified by psychosocial interventions?
2. What aspects of intervention design might be associated with GSE modification in older adults?

The findings of this review will add to the evidence base in this area and are intended to inform the design

of future interventions targeting general self-efficacy in older adults.

## 2 | METHODS

A restricted review is a knowledge synthesis that streamlines or omits various elements required in a full systematic review. These restrictions may include the use of limited search strategies, a lower number of databases or the use of fewer researchers in the collection and analysis of data, and are intended to reduce the time and resources required to assess what is already known about a topic.<sup>28,29</sup> While there is no universally accepted approach to conducting such reviews, various guides do exist.<sup>29-31</sup> This restricted review followed the guidelines for the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)<sup>32</sup> and included additional recommendations for reducing bias.<sup>30</sup>

### 2.1 | Search strategy

The databases included in this review were PubMed, CINAHL (EBSCO), PsycINFO (Ovid) and AgeLine, and were selected to provide coverage of both psychosocial interventions and the older adult population. A keyword, title and abstract search was conducted, with truncation and wildcards modified as required. Searches were undertaken in May 2021 using the following keywords and phrases: 'general\* self-efficacy', 'global\* self-efficacy', 'GSE', 'GSES' (i.e. General Self-Efficacy Scale) and 'NGSE' (i.e. New General Self-Efficacy Scale), connected with the Boolean operator 'OR'. This simplified query was intended to return as many results as possible where GSE was discussed. As some studies have shown perceived self-efficacy can be enhanced by interventions not primarily designed to improve self-efficacy,<sup>24</sup> no intervention-specific search terms were included.

Search results were limited to peer-reviewed articles published in English. A population limitation of 65 years and over was applied, in recognition of the potential need to tailor self-efficacy interventions to specific groups.<sup>23</sup> The CINAHL search excluded MEDLINE records to reduce the number of duplicate records. No publication date limitation was applied.

### 2.2 | Eligibility criteria

The study inclusion criteria followed the PICOS format<sup>33</sup> and were as follows: (a) a study population aged 65 years or over, (b) interventions with a psychosocial component,

(c) intervention results were compared to a control group or pre-post comparison with one or more groups, (d) GSE was measured at baseline and postintervention and (e) any intervention evaluation study, using any design methodology, peer-reviewed, published in English and for which a full text was available. Studies were excluded if: (a) GSE was modified to target a specific domain, or was measured only as a predictor or mediating variable, or for validation of a scale, or (b) interventions involved strictly physical treatments or activities, or skills training without any psychosocial component. Results of the literature search and screening process are presented below (Figure 1).

### 2.3 | Study selection

The results of each database search were uploaded for screening in the Covidence software package. Title and abstract screening followed by full-text screening of all articles was undertaken by the first and second authors. Conflicts were discussed between all three authors and articles were included or excluded by consensus.

### 2.4 | Quality appraisal

Due to the exploratory aims of this review, no minimum research quality requirement was set. However, the quality of included studies is still of interest and a quality assessment was conducted in line with PRISMA and rapid review guidelines.<sup>30,32</sup> The Effective Public Health Practice Project (EPHPP) tool<sup>34</sup> was used, as this has shown excellent inter-rater agreement for final quality grading when compared to the Cochrane Collaboration Risk of Bias tool.<sup>35</sup> The appraisal was conducted by the first author, with a random selection of studies audited by the second author.

### 2.5 | Data extraction and synthesis

All relevant quantitative and descriptive data were extracted by the first author using a customised template. Extracted data included author details, year, country of study, aims, study design information, sample sizes, intervention details (e.g. types of therapy, delivery mode and duration), measure of self-efficacy used, results and relevant study limitations identified by the authors. A summarised version is presented below (see Table 1). As this was not a full-scale systematic review, meta-analysis was not attempted. Instead, relevant study findings, along with our analysis, are presented in a narrative style.<sup>28,30</sup>

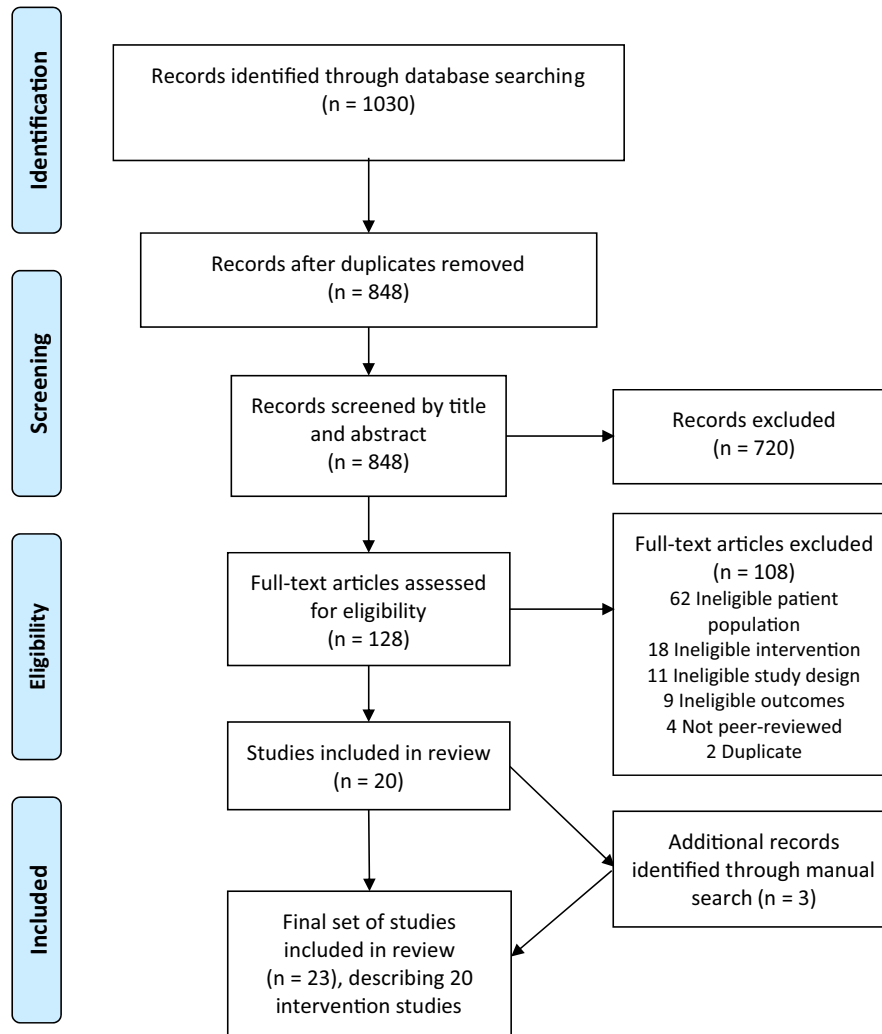


FIGURE 1 Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow diagram for study selection

### 3 | RESULTS

#### 3.1 | Search results

In total, 848 records were uploaded to Covidence for title and abstract screening. After removing studies that failed to meet the inclusion criteria, the remaining 128 records were examined in a full-text review. This removed an additional 108 records and left 20 studies that met all inclusion criteria. Three supporting articles were located manually and treated as protocols.<sup>36-38</sup>

#### 3.2 | Quality appraisal

None of the included studies received a quality appraisal of 'strong', with the global quality ratings split between 'moderate' ( $n = 10$ ) and 'weak' ( $n = 10$ ). Common issues included selection bias, confounding factors and lack of blinding (Appendix S1). Three studies were rated as 'moderate risk' despite receiving no 'weak' ratings,<sup>39-41</sup> due to a

combination of sample characteristics, attrition rates and the fact that one of these studies was a pilot.

#### 3.3 | Study locations

The studies were conducted in a variety of countries: eight from countries where English would be considered the primary language (three from the United Kingdom, three from Australia and two from the United States of America); and 12 from countries where a language other than English is the primary language (China, Denmark, Germany, Japan, Netherlands, Norway and Sweden) or where a second language has equal official status (Canada).

#### 3.4 | Study characteristics

Seventeen of the included studies were randomised controlled trials (RCTs). Usual care was the dominant comparator, accounting for 12 of the 17 RCTs. Of the remaining

TABLE 1 Summary of included studies

Author	Country	Aims	1. Study design 2. Control type 3. Sample size 4. Sample description	1. Intervention description 2. Interaction type 3. Delivery mode	Mean age (years)	GSE measure	Results	EPHPP rating
Randomised controlled trials								
Barnes & Markham (2018)	United Kingdom	To develop and contribute to the theory and evidence base for single-component, psychosocial interventions that address the difficulties experienced by informal carers of people with dementia	1. Pilot RCT 2. Alternative activity 3. 55IG = 28 4. Carers of people with dementia	1. A manual-based treatment designed for dementia care aimed at building self-efficacy. 2. Individual 3. Face-to-face	IG = 67.0 CG = 68.0	GSES (Schwarzer)	There were no significant group differences in change in general self-efficacy. Treatment mean difference: -0.4, Control mean difference: +0.1 ( $p = 0.70$ )	Weak
Bosma et al. (2011)	Netherlands	To examine whether education level was associated with benefits derived from a self-management intervention	1. RCT 2. Usual care 3. 361IG = 183 CG = 178 4. Patients with Type 2 diabetes or COPD and depression	1. A tailored and nurse-administered intervention aimed at reducing depression and increasing quality of life. 2. Individual 3. Face-to-face	IG = 70.8 CG = 70.6	GSE (Sherer)	Unclear	Moderate
Bringsvor et al. (2018)	Norway	To examine the effects of the COPD-specific health promoting self-management intervention on different self-management-related domains, self-efficacy, and sense of coherence	1. RCT 2. Usual care 3. 182IG = 92 CG = 90 4. Patients with COPD	1. Weekly 2-hour-long conversations to increase participants' consciousness of their potential, their internal and external resources, and their abilities to use them. 2. Group 3. Face-to-face	IG = 68.5 CG = 69.3	GSES (Schwarzer)	No significant changes were found for self-efficacy	Weak

TABLE 1 (Continued)

Author	Country	Aims	1. Study design 2. Control type 3. Sample size 4. Sample description	1. Intervention description 2. Interaction type 3. Delivery mode	Mean age (years)	GSE measure	Results	EPHPP rating
Connor et al. (2019)	United States	To evaluate the efficacy of the Care Coordination for Health Promotion and Activities in Parkinson's Disease program	1. RCT 2. Usual care 3. 328IG = 162 CG = 166 4. Veterans with Parkinson's disease	1. Action plans with patients that included problem-specific interventions, problem-solving and clinical referrals. 2. Individual 3. Telephone	IG = 69.0 CG = 71.0	GSES (Schwarzer)	No significant difference from baseline between usual care and intervention group (95% CI) = -0.88 (-2.04, 0.29)	Moderate
Cooke et al. (2016)	Australia	To evaluate the feasibility of testing an education intervention to improve self-efficacy in patients undergoing hip or knee replacement	1. Pilot RCT 2. Usual Care 3. 82IG = 40 CG = 42 4. Hip or knee surgery patients	1. Participants were given a DVD demonstrating self-efficacy activities to undertake four times before admission. 2. Individual 3. DVD and Telephone	67.0 (range 36–86 years)	GSES (Schwarzer)	Self-efficacy increased for both groups from baseline to 6 weeks postdischarge with no significant differences between groups at any time point	Moderate
Dawson et al. (2014)	Canada	To develop a meta-cognitive strategy training protocol; to determine feasibility of recruiting; and to ascertain whether the protocol would result in far transfer of training effects as a way of reducing older adults' everyday life problems	1. Pilot RCT 2. Alternative activity 3. 19IG = 10 CG = 9 4. Healthy, community dwelling older adults with complaints of cognitive difficulties and everyday problems.	1. Education on successful ageing and learning and practising meta-cognitive strategy. 2. Mixed 3. Face-to-face	IG = 74.1 CG = 73.7	GSE (Sherer)	Within-group changes were significant ( $p < 0.05$ ) for the experimental group, but the magnitude of change was very small ( $\beta = 0.01$ ). Repeated measures ANOVA did not show a significant group $\times$ time interaction for general self-efficacy	Moderate

(Continues)

TABLE 1 (Continued)

Author	Country	Aims	1. Study design 2. Control type 3. Sample size 4. Sample description	1. Intervention description 2. Interaction type 3. Delivery mode	Mean age (years)	GSE measure	Results	EPHPP rating
Devi et al. (2014)	United Kingdom	To examine the effectiveness of a Web-based cardiac rehabilitation program for those with angina	1. RCT 2. Usual care 3. 95IG = 48 CG = 46 4. People with angina	1. Individualized, tailored goals focused on exercise, diet, emotions and smoking. 2. Individual 3. Internet	IG = 66.3 CG = 66.2	GSES (Schwarzer)	Significant improvement in the intervention compared to control at 6 weeks ( $ES = 0.52$ , 95% CI 0.30–4.79, $p = 0.03$ ), but no significant improvement at 6-month follow-up ( $ES = 0.09$ , 95% CI –2.32 to 3.34, $p = 0.72$ )	Weak
Doyle et al. (2017)	Australia	To investigate the impact of CBT and an active social control (befriending) on depression and anxiety symptoms	1. RCT 2. Befriending 3. 95IG = 48 CG = 46 4. People with COPD	1. Behavioural activation, activity scheduling, relaxation training, exposure hierarchies and social skills training, as well as cognitive strategies. 2. Individual 3. Telephone	IG = 68.5 CG = 67.0	GSES (Schwarzer)	There was a significant change in general self-efficacy for both groups at follow-up and postintervention. The overall effect was a small-to-medium change for both the CBT and befriending groups (Cohen's $d = 0.3$ ). Self-efficacy improved more with CBT than with befriending	Moderate
Elzen et al. (2007)	Netherlands	To evaluate the short-term and longer-term effects of the Chronic Disease Self-Management Program among chronically ill older people in the Netherlands	1. RCT 2. Usual care 3. 144IG = 68 CG = 68 4. Chronically ill	1. Exercise; cognitive symptom-management techniques; information on nutrition; fatigue-management; use of medication; managing emotions; communication; problem-solving; decision-making. 2. Group 3. Face-to-face	IG = 68.2 CG = 68.5	GSE (Sherer) Adapted	There were no significant differences in self-efficacy between the intervention and the control group (T1, $p = 0.09$ ; T2, $p = 0.06$ )	Weak

TABLE 1 (Continued)

Author	Country	Aims	1. Study design 2. Control type 3. Sample size 4. Sample description	1. Intervention description 2. Interaction type 3. Delivery mode	Mean age (years)	GSE measure	Results	EPHPP rating
Fors et al. (2018)	Sweden	To evaluate the effects of person-centred support via telephone in those with COPD and/or CHF	1. RCT 2. Usual care 3. 243IG = 120 CG = 123 4. People who were chronically ill	1. Telephone calls where RNs attempted to build a partnership with patients to deepen their understanding patients' capabilities, resources and potential for self-care. 2. Individual 3. Telephone	IG = 78.3 CG = 76.9	GSES (Schwarzer)	Mean (SD) improvement in GSE was significantly greater in favour of the intervention group at both three months 0.7 ( $\pm$ 5.8) vs. -2.2 ( $\pm$ 6.1); $p$ = 0.01 and six months 0.9 ( $\pm$ 6.4) vs. -2.0 ( $\pm$ 6.8); $p$ = 0.006. Splitting the composite score into each component separately in the ITT analysis showed that significantly more patients in the control group had deteriorated in self-efficacy at 6 months	Weak
Ghielen et al. (2017)	Netherlands	To investigate the feasibility and the efficacy of a body awareness training program (BEWARE) in the treatment of wearing-off-related anxiety in patients with Parkinson's disease	1. Pilot RCT 2. Usual care 3. 46IG = 23 CG = 23 4. People with Parkinson's disease	1. Psychoeducation, training in ACT, imaginary exposure exercises, diminishing avoidance behaviour, physical exercises and homework assignments. 2. Group 3. Face-to-face	IG = 59.6 CG = 66.6	GSES (Schwarzer)	There was no significant improvement in self-efficacy in the BEWARE treatment condition when compared to usual care ( $p$ = 0.71)	Moderate

(Continues)



TABLE 1 (Continued)

Author	Country	Aims	1. Study design 2. Control type 3. Sample size 4. Sample description	1. Intervention description 2. Interaction type 3. Delivery mode	Mean age (years)	GSE measure	Results	EPHPP rating
Jiang et al. (2021)	China	To determine the effects of a social cognitive intervention to increase volunteering on secondary psychological health outcomes (including general self-efficacy)	1. RCT 2. Alternative activity 3. 384IG = 193 CG = 191 4. Chinese adults aged 50 years and older with no physical, cognitive, or psychological conditions	1. Four weekly 60-min group sessions targeting social cognitive intervention and information. 2. Group 3. Face-to-face	IG = 69.8 CG = 72.7	GSES (Schwarzer)	There was no significant time x group interaction on general self-efficacy at the 6-month follow-up, $F(3, 762.30) = 0.23, p = 0.88$ (Greenhouse–Geisser correction)	Moderate
Knaevelsrud et al. (2017)	Germany	To investigate the efficacy and feasibility of an Internet-based, therapist-guided cognitive-behavioural therapy for older individuals with PTSD symptoms	1. Feasibility RCT 2. Wait list 3. 94IG = 47 CG = 47 4. People with clinically meaningful (i.e. subsyndromal or greater) PTSD symptoms	1. Structured writing assignments that were facilitated through a secured Web-based platform. 2. Individual 3. Internet	IG = 70.9 CG = 71.9	GSES (Schwarzer)	There was a significant increase in self-efficacy from pre- to post-treatment with moderate <i>ES</i> (0.38 within-group, 0.39 between-group). These increases remained stable at the 12-month follow-up. Significant group x time interaction effects were observed for GSE which indicated a significantly higher increase of these resource-oriented variables in the treatment group than in the WL	Moderate

TABLE 1 (Continued)

Author	Country	Aims	1. Study design 2. Control type 3. Sample size 4. Sample description	1. Intervention description 2. Interaction type 3. Delivery mode	Mean age (years)	GSE measure	Results	EPHPP rating
Moriyama et al. (2009)	Japan	To investigate the efficacy of a 12-month self-management education program for people with type 2 diabetes	1. RCT 2. Usual care 3. 75IG = 50 CG = 25 4. People with type 2 diabetes	1. Patient analysis of condition along with disease-specific management skills, setting goals and behavioural monitoring to give patients control over their lifestyle. 2. Individual 3. Mixed	IG = 66.4 CG = 65.2	GSE (Sherer)	For changes over time within a group, only the intervention group showed significant differences, with significant chronological improvements in GSE ( $p < 0.001$ ). Two-way repeated-measures ANOVA $F = 6.61$ , $p < 0.001$	Weak
Quinn et al. (2016)	United Kingdom	To develop and evaluate a self-management intervention for people with early-stage dementia, based on SCT and self-regulation theory	1. Pilot RCT 2. Usual care 3. 24IG = 13 CG = 11 4. People with early-stage dementia and their caregivers	1. Eight weekly 90-min group sessions. Techniques included providing information, enhancing self-efficacy and encouraging vicarious learning. 2. Group 3. Face-to-face	IG = 75.2 CG = 76.1	GSES (Schwarzer)	The intervention participants showed gains in self-efficacy compared to control participants with small $ES$ at both three (Cohen's $d = 0.35$ ) and six months (Cohen's $d = 0.23$ ) postrandomization	Weak
Rees et al. (2015)	Australia	To investigate the effectiveness of a low vision self-management program in older adults	1. RCT 2. Usual care 3. 153IG = 93 CG = 60 4. Clients of low vision rehabilitation services	1. Based on previous research, social cognitive theory, theories of coping with illness and disability, techniques from adult learning, group processes and cognitive-behavioural approaches. 2. Group 3. Face-to-face	IG = 80.1 CG = 80.5	GSES (Schwarzer)	At one-month ( $p = 0.95$ ) and six-month ( $p = 0.18$ ) follow-up assessments, no significant between-group differences were found for self-efficacy. Univariate and multivariate analyses revealed no impact of the intervention on outcome measures	Moderate

(Continues)

TABLE 1 (Continued)

Author	Country	Aims	1. Study design 2. Control type 3. Sample size 4. Sample description	1. Intervention description 2. Interaction type 3. Delivery mode	Mean age (years)	GSE measure	Results	EPHPP rating
Szöis et al. (2016)	Denmark	To evaluate the effects of structured, nurse managed TFUs discharge from the hospital following TKA	1. RCT 2. Usual care 3. 117IG = 59 CG = 58 4. People booked for TKA	1. TFUs structured around: communication, cognition/development, breathing/circulation, nutrition, elimination, sleep, pain/perception, skin/tissue, sexuality/reproduction, activity and psychosocial/spirituality/culture. 2. Individual 3. Telephone	IG = 67.3 CG = 67.8	GSES (Schwarzer)	Significant differences in scores were identified in favour of the intervention group on general self-efficacy one-month after TKA ( $p = 0.01$ ), but this effect was not seen at 3 months ( $p = 0.54$ )	Moderate
Non-randomised controlled trials								
Carlstedt et al. (2017)	Sweden	To investigate the feasibility of a self-management intervention focusing on travelling by bus, and potential contributions to an improved ability to travel by bus for people with cognitive impairments after stroke	1. Case study 2. N/A 3. 5 4. People with cognitive impairment after stroke	1. 2hr sessions per week (group and individual), led by an occupational therapist and a physiotherapist. These contained problem-solving, goal setting and skills training as part of self-management. 2. Mixed 3. Face-to-face	72.2 (mean)	GSES (Schwarzer)	GSE was slightly lower than in general stroke sample. However, no statistical conclusions can be drawn	Weak
Fullen & Gorby (2016)	United States	To assess the impact of the Resilient Ageing group program on the combination of participants' perceived resilience, self-efficacy, and multidimensional wellness	1. Cohort study 2. N/A 3. 36 4. Purposively selected cognitively intact older adults	1. 9-week curriculum focused on the whole person and intended to influence psychological wellness and participants' self-concepts. 2. Group 3. Face-to-face	78.0 (mean)	GSES (Schwarzer)	No significant changes were found for self-efficacy ( $F = 0.06$ , $p = 0.81$ )	Weak

TABLE 1 (Continued)

Author	Country	Aims	1. Study design 2. Control type 3. Sample size 4. Sample description	1. Intervention description 2. Interaction type 3. Delivery mode	Mean age (years)	GSE measure	Results	EPHPP rating
Knaevelsrud et al. (2014)	Germany	To investigate the effect of integrative testimonial therapy in mitigating PTSD symptoms among older adults who were traumatized child survivors of WWII	1. Cohort study 2. N/A 3. 30 4. Patients with childhood trauma and PTSD	1. Therapy consisted of a) resource-oriented biographical reconstruction, b) moderated exposure and c) cognitive reconstruction. 2. Individual 3. Internet	71.7 (mean)	GSES (Schwarzer)	ANOVA revealed a significant effect of time ( $F = 7.25, p = 0.002$ ), with a medium treatment effect size found for self-efficacy (Cohen's $d = 0.38$ ) at post-treatment, maintained at a 3-month follow-up	Weak

Abbreviations: ACT, acceptance and commitment therapy; CBT, cognitive-behavioural training or therapy; CG, control group; CHF, chronic heart failure; COPD, chronic obstructive pulmonary disease; EPHPP, Effective Public Health Practice Project quality appraisal; ES, Effect size; GSE, general self-efficacy; IG, intervention group; ITT, intention to treat; PTSD, posttraumatic stress disorder; RNs, registered nurses; SCT, social cognitive theory; TFU, telephone follow-up; TK.A, total knee arthroplasty; VIPS, Swedish acronym for the concepts of well-being, integrity, prevention and safety.

RCTs, control groups were placed on a waitlist<sup>42</sup> or received the following alternative treatments: a one-hour discussion session using individualised and generic information,<sup>43</sup> befriending,<sup>44</sup> didactic education and cognitive stimulation<sup>45</sup> and physical activity.<sup>41</sup> Of the included RCTs, five were described as pilot studies and one as a feasibility study. The remaining non-RCTs were as follows: two pre-post cohort studies<sup>46,47</sup> and one pilot case study.<sup>48</sup> Only seven studies sought to investigate GSE as a primary outcome, with the remaining 13 listing GSE as a secondary outcome.

### 3.5 | Sample characteristics

The inclusion of pilot and feasibility studies had important implications for the range of sample sizes. While the full-scale RCTs ( $n = 11$ ) contained an average of 199 participants in total, the pilot and feasibility RCTs ( $n = 6$ ) involved much smaller sample sizes, averaging only 53 participants in total. Among the non-RCTs ( $n = 3$ ), total sample sizes were even smaller, averaging only 24 participants.

The specific characteristics of these samples are also worth noting. Almost all ( $n = 15$ ) of the included studies targeted a population with moderate-to-severe health issues, including Parkinson's disease, dementia, COPD, angina, diabetes, depression and anxiety, vision impairment, cognitive impairment, chronic illness and PTSD. By contrast, the remaining studies recruited adults aged 50 years and older with no physical, cognitive or psychological conditions<sup>41</sup>; individuals with only subjective cognitive difficulties and everyday problems who were otherwise healthy<sup>45</sup>; patients requiring hip and knee surgery who were otherwise healthy<sup>49</sup>; carers of people with dementia<sup>43</sup>; and cognitively intact older adults.<sup>46</sup>

Participant attrition further reduced these often small and heterogeneous samples. Attrition rates were calculated comparing the number of participants at final follow-up to the number initially randomised, as per the EPHPP (2009)<sup>34</sup> appraisal guidelines. Where attrition differed between groups, the higher rate was recorded. In total, 10 studies failed to keep attrition at or below the 20% threshold required for a 'strong' quality rating in this domain.<sup>39,41,44,47,49-53</sup> Not including a case study<sup>48</sup>—in which just five individuals participated—only one of the remaining studies achieved attrition below 10%.<sup>54</sup> However, this was a pilot study with a sample size of only 24.

### 3.6 | Intervention characteristics

By-and-large, interventions were delivered by either nurses or registered psychologists (Appendix S2). The majority ( $n = 11$ ) of the interventions were delivered to

individuals, with group sessions provided in seven studies and a mix of these approaches utilised in a further two studies. Modes of intervention delivery also varied. Of the interventions that were delivered remotely, four used telephone communication exclusively,<sup>39,44,53,55</sup> two were mixed, involving some telephone communication in conjunction with another method—a DVD<sup>49</sup> and face-to-face<sup>56</sup>—and three were delivered via the Internet.<sup>42,47,52</sup> Every platform type was represented in studies that reported a level of improvement in GSE postintervention.

### 3.7 | Intervention duration and follow-up

Both the duration of active intervention and follow-up durations varied greatly (Appendix S2). At the shorter end of active intervention, participants in one study were required to watch a 20–30 min DVD and work through the contained activities four times prior to admission to surgery,<sup>49</sup> while another resulted in an average of only 40 min' worth of telephone follow-ups per participant.<sup>55</sup> The opposite end of the spectrum required participants to undertake three-hour group activities once per week for 8 weeks.<sup>57</sup> Study duration was similarly diverse, with studies lasting from 2 weeks<sup>49,55</sup> to between 18 and 24 months.<sup>39</sup> This disparity largely depended on the underlying intervention and follow-up strategy employed.

### 3.8 | Measurement instruments utilised

The majority ( $n = 16$ ) of the studies included in this review assessed GSE using the GSES scale developed by Schwarzer and Jerusalem.<sup>58</sup> Three of the remaining studies<sup>45,50,56</sup> used the original GSE scale,<sup>15</sup> with a final study<sup>59</sup> using an adapted scale.<sup>60</sup>

### 3.9 | Intervention results

Fewer than half ( $n = 7$ ) of the included studies reported an increase in GSE postintervention. Of the studies reporting effect sizes, one achieved a small effect size at both three and 6 months postrandomisation.<sup>54</sup> Two other studies registered medium effect sizes,<sup>42,47</sup> with post-treatment improvements maintained at 3 months and 12 months. A medium effect size, but no significant improvement at 6-month follow-up, was also reported.<sup>52</sup> The final study showed a small-to-medium effect size, lasting for up to 8 weeks.<sup>44</sup> The remaining studies reporting increases in GSE did not provide effect sizes. Instead, one study identified significantly better results in the intervention group

than in the control group at both three and 6 months postintervention,<sup>53</sup> with a second study recording a significant difference from baseline to 1-month follow-up.<sup>55</sup> The one multiple case study design included in this review<sup>48</sup> reported a decrease in GSE at follow-up, but this study included only five participants and no statistical data were reported. Findings from one study<sup>50</sup> were unclear in both the identified article and a related article identified by hand searching.<sup>36</sup> The remaining studies failed to show a significant improvement in GSE (see Table 1).

## 4 | DISCUSSION

Chief among this review's findings is the lack of high-quality evidence for the modifiability of GSE. As such, there is insufficient evidence to support conclusions regarding the level of GSE modifiability in older adults, beyond the fact that it appears possible. While several studies did identify improvements, the overall quality of the included evidence is considered low, due to issues concerning study designs that provided only low-level evidence, lack of statistical power, lack of blinding leading to bias, confounding and high attrition, all of which have a negative impact on the applicability of findings.

While most studies included were RCTs, more than one-third of these were pilot or feasibility studies. This limits the applicability of findings, as the aim of pilot and feasibility studies (i.e. to assess a proposed design or the feasibility and cost of an intervention, rather than intervention efficacy per se) influences decisions in relation to sample sizes and the statistical power of results.<sup>61</sup> The impact of these limitations was acknowledged where authors have suggested '*considerable caution*'<sup>45</sup> be taken when interpreting results, as they are '*likely to be underpowered*'.<sup>43</sup> This limitation extended beyond the included pilot studies, with the authors of 12 other articles acknowledging issues with the statistical power of their studies.

Many of the domains of risk assessed as part of the quality appraisal were adequately covered in research designs. However, lack of blinding and confounding factors (e.g. relying on within-group analyses as opposed to between-group analyses; lack of adequate randomisation; and, consequently, an uneven balance of participant characteristics between groups) were common areas of concern that must be addressed in future research designs (see Appendix S1 for the quality appraisal of these domains). While older populations are often characterised by higher heterogeneity than younger ones,<sup>27,62</sup> most of the included studies directly targeted populations with specific moderate-to-severe health issues (see (4) *sample description* in Table 1 for the specific health conditions of each study population). This serves to limit the generalisability

of results from these populations, meaning the findings are less valid for healthier individuals. If confidence in results is to be improved, future research designs must adequately address these limitations.

What this review does substantiate is the existence of broad interest in GSE as a personal resource, especially as it relates to the older adult population, where chronic conditions and comorbidities may increasingly have an impact on health-related quality of life. The breadth of this growing interest can be seen in the number of countries represented in this review, along with the existence of pilot and feasibility studies undertaken as precursors to full-scale RCTs. Additionally, the inclusion of GSE as a secondary outcome suggests an intention to take advantage of the potential for GSE improvements resulting from multidisciplinary interventions not primarily designed to target GSE. The potential for interventions to protect against declines in GSE, rather than attempt increases, is another aspect that should be considered in future interventions.<sup>53</sup>

#### 4.1 | Implications for future research

As well as designing research programs that adequately address the above statistical, quality and generalisability issues, future research should consider several key areas identified in this review.

As the most successful studies involved individual training or therapy, future research would do well to assess the efficacy of such an approach on a larger scale. However, the disadvantage of a purely individual approach is that it neglects the important roles of vicarious experience and modelling in behaviour<sup>9</sup>—notions supported within several of the included studies.<sup>44,45,48,49,54,56</sup> The authors of these studies articulated additional benefits of group interventions, such as enhanced feasibility, social support and a sense of giving back to the group. Therefore, future research should also seek to compare outcomes of individual and group interventions.

Where a group approach is used, staff training should include group-specific skills and education. The fact that this had not occurred in one study was recognised by those authors as a potential weakness.<sup>51</sup> Regarding the training and qualification levels of those responsible for intervention delivery, interventions delivered by professionals who were experienced in the therapies coincided with intervention success. Where foundational knowledge or experience with the mode of intervention delivery was lacking, additional staff training was highlighted as an important requirement and a potential limitation where this had not occurred sufficiently.<sup>39,42,45,47,53</sup> The use of manuals and guides is also recommended to ensure intervention fidelity.

Several authors discussed concerns regarding interventions that were considered too short to impact participants' GSE,<sup>43,48,54</sup> with the use of 'booster sessions' suggested as a means of addressing this issue in future research designs.<sup>45,50</sup> Remote modes of delivery (discussed below) could be used to incorporate these additional sessions into research designs. Extending the duration of future interventions in this way might also help to modify long-held beliefs that are resistant to short-term interventions.<sup>51,56</sup> Of the studies reporting significant GSE improvements, only one involved an intervention delivered within 6 weeks.<sup>55</sup> Many authors cited the need for prolonged follow-up to assess whether long-term gains are achievable.<sup>43-45,51,53,54,59</sup> Most studies involved a minimum 3-month postintervention measurement, with the majority of these conducting follow-ups 6 months postintervention. The design of future studies must consider the costs associated with high follow-up frequency and longer study durations. Additionally, longer studies might also increase participant fatigue, contributing to higher rates of attrition.<sup>49</sup>

There was no discernible difference between intervention modes, with face-to-face, telephone and Internet delivery of interventions all reporting GSE improvement. The majority of discussion around remote delivery concerned the benefits for patient access, improved feasibility, lower cost and extended study durations.<sup>42,44,49,52,56,57</sup> Non-inferiority trials should investigate the efficacy of Internet and telecommunications versus face-to-face delivery for the modification of GSE.

Where authors discussed the merits of various GSE scales, this centred on the potential benefits of alternative measures that were more proximal to the specific health issues of their patient populations. These included measurements targeting: caring and communication difficulties,<sup>43</sup> cognitive difficulties related to dementia,<sup>54</sup> self-management<sup>51</sup> and anxiety.<sup>40</sup> It should be noted that such adaptations would result in measuring domain-specific self-efficacy, rather than GSE.

#### 4.2 | Limitations

Restricted reviews have several inherent limitations. First, given the restricted database search, there exists a risk that important studies have not been included. Second, including studies of all levels of quality, along with the heterogeneity of both interventions and samples, limits the generalisability of reported findings. Third, the reduced number of researchers involved in a restricted review also increases the risk of bias. Despite these commonly understood trade-offs, comparisons with full systematic reviews have shown that results do not always

differ substantially.<sup>28,30</sup> As it was the aim of this review to represent as wide a range of intervention types as possible, moderated by cautious interpretation of study findings, the increased risks were deemed acceptable.

## 5 | CONCLUSIONS

This is the first restricted review of psychosocial intervention studies targeting GSE in older adults. Fewer than half of the studies reviewed reported improvements in GSE postintervention, issues around study quality and the generalisability of results require that these findings be interpreted cautiously. As such, there is insufficient evidence to support conclusions regarding the level of GSE modifiability in older adults, beyond the fact that it appears possible. Given this, the implications for practice are limited. What this review does highlight is a broad interest in GSE as a personal resource that can assist in the healthy ageing of older adults. Further randomised controlled trials are needed to evaluate the effectiveness of various psychosocial interventions to improve GSE. The design of these interventions and studies to evaluate their efficacy (and effectiveness) should be informed by the issues and recommendations identified in this review.

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## CONFLICTS OF INTEREST



Prof. Yvonne Wells is an Associate Editor of *Australasian Journal on Ageing*.

## DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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## REFERENCES

- United Nations. *Global issues: Ageing*. <https://www.un.org/en/sections/issues-depth/ageing/>. Accessed July 6, 2021.
- World Health Organization. *Noncommunicable diseases*. <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>. Accessed October 10, 2021.
- Australian Institute of Health and Welfare. *Older Australia at a glance: Healthy ageing*. <https://www.aihw.gov.au/reports/older-people/older-australia-at-a-glance/contents/healthy-ageing>. Accessed August 20, 2020.
- Public Health England. *A consensus on healthy ageing*. <https://www.gov.uk/government/publications/healthy-ageing-consensus-statement>. Accessed July 12, 2021.
- U.S. Department of Health & Human Services. *Healthy ageing*. <https://www.hhs.gov/aging/healthy-aging/index.html>. Accessed July 12, 2021.
- World Health Organization. *Decade of healthy ageing*. <https://www.who.int/ageing/decade-of-healthy-ageing>. Accessed July 8, 2021.
- World Health Organization. *Decade of Healthy Ageing: Baseline Report. Summary*. Geneva, Switzerland: World Health Organization; 2021. <https://apps.who.int/iris/handle/10665/338677>
- Cesari M, Araujo de Carvalho I, Amuthavalli Thiyagarajan J, et al. Evidence for the domains supporting the construct of intrinsic capacity. *J Gerontol: Series A*. 2018;73(12):1653-1660. doi:10.1093/gerona/gly011
- Bandura A. Self-efficacy: toward a unifying theory of behavioral change. *Psychol Rev*. 1977;84(2):191-215. doi:10.1037/0033-295X.84.2.191
- Bandura A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall; 1986.
- Gallagher MW. Self-efficacy. In: Ramachandran VS, ed. *Encyclopedia of Human Behavior*, 2nd edn. San Diego, CA: Academic Press; 2012:314-320.
- Hudes R, Rich JB, Troyer AK, Yusupov I, Vander Morris S. The impact of memory-strategy training interventions on participant-reported outcomes in healthy older adults: a systematic review and meta-analysis. *Psychol Aging*. 2019;34(4):587-597. doi:10.1037/pag0000340
- Infurna FJ, Gerstorf D. Perceived control relates to better functional health and lower cardio-metabolic risk: the mediating role of physical activity. *Health Psychol*. 2014;33(1):85-94. doi:10.1037/a0030208
- Scherbaum CA, Cohen-Charash Y, Kern MJ. Measuring general self-efficacy: a comparison of three measures using item response theory. *Educ Psychol Meas*. 2006;66(6):1047-1063. doi:10.1177/0013164406288171
- Sherer M, Maddux JE, Mercandante B, Prentice-Dunn S, Jacobs B, Rogers RW. The self-efficacy scale: construction and validation. *Psychol Rep*. 1982;51(2):663-671. doi:10.2466/pr0.1982.51.2.663
- Chen G, Gully SM, Eden D. Validation of a new general self-efficacy scale. *Organ Res Methods*. 2001;4(1):62-83. doi:10.1177/109442810141004
- Bandura A. *Self-efficacy: The Exercise of Control*. New York, NY: W.H. Freeman; 1997.
- Judge TA, Erez A, Bono JE, Thoresen CJ. Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *J Pers Soc Psychol*. 2002;83(3):693-710. doi:10.1037/0022-3514.83.3.693
- Zhou M, Kam CCS. Hope and general self-efficacy: two measures of the same construct? *J Psychol*. 2016;150(5):543-559. doi:10.1080/00223980.2015.1113495
- Eden D. Pygmalion, goal setting, and expectancy: compatible ways to boost productivity. Article. *Acad Manage Rev*. 1988;13(4):639-652. doi:10.5465/AMR.1988.4307530
- Kostka T, Jachimowicz V. Relationship of quality of life to dispositional optimism, health locus of control and self-efficacy in

- older subjects living in different environments. *Quali Life Res.* 2010;19(3):351-361. doi:10.1007/s11136-010-9601-0
22. Korpershoek C, van der Bijl J, Hafsteinsdóttir TB. Self-efficacy and its influence on recovery of patients with stroke: a systematic review. *J Adv Nurs.* 2011;67(9):1876-1894. doi:10.1111/j.1365-2648.2011.05659.x
  23. Tang A, Tao A, Soh M, et al. The effect of interventions on balance self-efficacy in the stroke population: a systematic review and meta-analysis. *Clin Rehabil.* 2015;29(12):1168-1177. doi:10.1177/0269215515570380
  24. Wyld V, Dixon S, Blom AW. The role of preoperative self-efficacy in predicting outcome after total knee replacement. *Musculoskeletal Care.* 2012;10(2):110-118. doi:10.1002/msc.1008
  25. Rovniak L, Anderson E, Winett R, Stephens R. Social cognitive determinants of physical activity in young adults: a prospective structural equation analysis. *Ann Behav Med.* 2002;24(2):149-156. doi:10.1207/S15324796ABM2402\_12
  26. Shelton SH. Developing the construct of general self-efficacy. *Psychol Rep.* 1990;66(3):987-994. doi:10.1177/003329419006600301
  27. Lowsky DJ, Olshansky SJ, Bhattacharya J, Goldman DP. Heterogeneity in healthy aging. *J Gerontol Series A, Biol Sci Med Sci.* 2014;69(6):640-649. doi:10.1093/gerona/glt162
  28. Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Inform Libraries J.* 2009;26(2):91-108. doi:10.1111/j.1471-1842.2009.00848.x
  29. Garritty C, Gartlehner G, Kamel C, et al. Cochrane rapid reviews. Interim guidance from the cochrane rapid reviews methods group. cited December 2020, 2021. <https://methods.cochrane.org/rapidreviews/cochrane-rr-methods>
  30. Plüddemann A, Aronson JK, Onakpoya I, Heneghan C, Mahtani KR. Redefining rapid reviews: a flexible framework for restricted systematic reviews. *BMJ Evid-based Med.* 2018;23(6):201-203. doi:10.1136/bmjebm-2018-110990
  31. Khangura S, Konnyu K, Cushman R, Grimshaw J, Moher D. Evidence summaries: the evolution of a rapid review approach. *Syst Rev.* 2012;1(1):10. doi:10.1186/2046-4053-1-10
  32. Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred reporting items for systematic reviews and meta-analyses: the prisma statement. *BMJ.* 2009;339(7716):e78-336. doi:10.1136/bmj.b2535
  33. Amir-Behghadami M, Janati A. Population, intervention, comparison, outcomes and study (PICOS) design as a framework to formulate eligibility criteria in systematic reviews. *Emerg Med J.* 2020;37(6):387. doi:10.1136/emerm ed-2020-209567
  34. Effective Public Health Practice Project (EPHPP). Quality assessment tool for quantitative studies. <http://www.ephpp.ca/tools.html>
  35. Armijo-Olivo S, Stiles CR, Hagen NA, Biondo PD, Cummings GG. Assessment of study quality for systematic reviews: a comparison of the cochrane collaboration risk of bias tool and the effective public health practice project quality assessment tool. *J Eval Clin Pract.* 2012;18(1):12-18. doi:10.1111/j.1365-2753.2010.01516.x
  36. Lamers F, Jonkers CCM, Bosma H, et al. A minimal psychological intervention in chronically ill elderly patients with depression: a randomized trial. *Psychother Psychosom.* 2010;79(4):217-226. doi:10.1159/000313690
  37. Jiang D, Warner LM, Chong AM-L, Li T, Wolff JK, Chou K-L. Promoting volunteering among older adults in hong kong: a randomized controlled trial. *Gerontologist.* 2020;60(5):968-977. doi:10.1093/geront/gnz076
  38. Warner LM, Jiang D, Chong AM-L, Li T, Wolff JK, Chou K-L. Study protocol of a multi-center rct testing a social-cognitive intervention to promote volunteering in older adults against an active control. *BMC Geriatr.* 2019;19(1):22. doi:10.1186/s12877-019-1034-1
  39. Connor KI, Cheng EM, Barry F, et al. Randomized trial of care management to improve parkinson disease care quality. *Neurology.* 2019;92(16):1831-1842. doi:10.1212/WNL.0000000000007324
  40. Ghielen I, van Wegen EEH, Rutten S, et al. Body awareness training in the treatment of wearing-off related anxiety in patients with parkinson's disease: results from a pilot randomized controlled trial. *J Psychosom Res.* 2017;103:1-8. doi:10.1016/j.jpsychores.2017.09.008
  41. Jiang D, Warner LM, Chong AM-L, Li T, Wolff JK, Chou K-L. Benefits of volunteering on psychological well-being in older adulthood: evidence from a randomized controlled trial. *Aging Ment Health.* 2021;25(4):641-649. doi:10.1080/13607863.2020.1711862
  42. Knaevelsrud C, Böttche M, Pietrzak RH, Freyberger HJ, Kuwert P. Efficacy and feasibility of a therapist-guided internet-based intervention for older persons with childhood traumatization: a randomized controlled trial. *Am J Geriatr Psychiatr.* 2017;25(8):878-888. doi:10.1016/j.jagp.2017.02.024
  43. Barnes CJ, Markham C. A pilot study to evaluate the effectiveness of an individualized and cognitive behavioural communication intervention for informal carers of people with dementia: the talking sense programme: Individualized communication cbt for dementia carers. *Int J Lang Commun Disord.* 2018;53(3):615-627. doi:10.1111/1460-6984.12375
  44. Doyle C, Bhar S, Fearn M, et al. The impact of telephone-delivered cognitive behaviour therapy and befriending on mood disorders in people with chronic obstructive pulmonary disease: a randomized controlled trial. *Br J Health Psychol.* 2017;22(3):542-556. doi:10.1111/bjhp.12245
  45. Dawson D, Richardson J, Troyer A, et al. An occupation-based strategy training approach to managing age-related executive changes: a pilot randomized controlled trial. *Clin Rehabil.* 2014;28(2):118-127. doi:10.1177/0269215513492541
  46. Fullen MC, Gorby SR. Reframing resilience: pilot evaluation of a program to promote resilience in marginalized older adults. *Educ Gerontol.* 2016;42(9):660-671. doi:10.1080/03601277.2016.1205409
  47. Knaevelsrud C, Böttche M, Pietrzak RH, Freyberger HJ, Renneberg B, Kuwert P. Integrative testimonial therapy: an internet-based, therapist-assisted therapy for german elderly survivors of the world war ii with posttraumatic stress symptoms. *J Nerv Ment Dis.* 2014;202(9):651-658. doi:10.1097/NMD.0000000000000178
  48. Carlstedt E, Iwarsson S, Ståhl A, Pessah-Rasmussen H, Månsson LE. Bus trips-a self-management program for people with cognitive impairments after stroke. *Int J Environ Res Public Health.* 2017;14(11):1353. doi:10.3390/ijerph14111353
  49. Cooke M, Walker R, Aitken LM, Freeman A, Pavey S, Cantrill R. Pre-operative self-efficacy education vs. Usual care for patients undergoing joint replacement surgery: a pilot



- randomised controlled trial. *Scand J Caring Sci.* 2016;30(1):74-82. doi:[10.1111/scs.12223](https://doi.org/10.1111/scs.12223)
50. Bosma H, Lamers F, Jonkers CCM, van Eijk JT. Disparities by education level in outcomes of a self-management intervention: the delta trial in the Netherlands. *Psychiatr Serv.* 2011;62(7):793-795. doi:[10.1176/ps.62.7.pss6207\\_0793](https://doi.org/10.1176/ps.62.7.pss6207_0793)
51. Bringsvor HB, Langeland E, Oftedal BF, Skaug K, Assmus J, Bentsen SB. Effects of a copd self-management support intervention: a randomized controlled trial. *Int J Chron Obstruct Pulmon Dis.* 2018;13:3677-3688. doi:[10.2147/COPD.S181005](https://doi.org/10.2147/COPD.S181005)
52. Devi R, Powell J, Singh S. A web-based program improves physical activity outcomes in a primary care angina population: randomized controlled trial. *J Med Internet Res.* 2014;16(9):186. doi:[10.2196/jmir.3340](https://doi.org/10.2196/jmir.3340)
53. Fors A, Blanck E, Ali L, et al. Effects of a person-centred telephone-support in patients with chronic obstructive pulmonary disease and/or chronic heart failure - a randomized controlled trial. *PLoS One.* 2018;13(8):e0203031. doi:[10.1371/journal.pone.0203031](https://doi.org/10.1371/journal.pone.0203031)
54. Quinn C, Toms G, Jones C, et al. A pilot randomized controlled trial of a self-management group intervention for people with early-stage dementia (the smart study). *Int Psychogeriatr.* 2016;28(5):787-800. doi:[10.1017/S1041610215002094](https://doi.org/10.1017/S1041610215002094)
55. Szöts K, Konradsen H, Solgaard S, Østergaard B. Telephone follow-up by nurse after total knee arthroplasty: results of a randomized clinical trial. *Orthop Nurs.* 2016;35(6):411-420. doi:[10.1097/nor.0000000000000298](https://doi.org/10.1097/nor.0000000000000298)
56. Moriyama M, Nakano M, Kuroe Y, Nin K, Niitani M, Nakaya T. Efficacy of a self-management education program for people with type 2 diabetes: Results of a 12 month trial. *Jpn J Nurs Sci.* 2009;6(1):51-63. doi:[10.1111/j.1742-7924.2009.00120.x](https://doi.org/10.1111/j.1742-7924.2009.00120.x)
57. Rees G, Xie J, Chiang PP, et al. A randomised controlled trial of a self-management programme for low vision implemented in low vision rehabilitation services. *Patient Educ Couns.* 2015;98(2):174-181. doi:[10.1016/j.pec.2014.11.008](https://doi.org/10.1016/j.pec.2014.11.008)
58. Schwarzer R, Jerusalem M. Generalized Self-efficacy Scale. In: Weinman J, Wright S, Johnston M, eds. *Measures in Health Psychology: A User's Portfolio Causal and Control Beliefs*; Windsor, UK: NFER-NELSON; 1995:35-37.
59. Elzen H, Slaets JPJ, Snijders TAB, Steverink N. Evaluation of the chronic disease self-management program (cdsmp) among chronically ill older people in the netherlands. *Soc Sci Med.* 2007;64(9):1832-1841. doi:[10.1016/j.socscimed.2007.02.008](https://doi.org/10.1016/j.socscimed.2007.02.008)
60. Bosscher RJ, Smit JH. Confirmatory factor analysis of the general self-efficacy scale. *Behav Res Ther.* 1998;36(3):339-343. doi:[10.1016/S0005-7967\(98\)00025-4](https://doi.org/10.1016/S0005-7967(98)00025-4)
61. Thabane L, Ma J, Chu R, et al. A tutorial on pilot studies: the what, why and how. *BMC Med Res Methodol.* 2010;10:1. doi:[10.1186/1471-2288-10-1](https://doi.org/10.1186/1471-2288-10-1)
62. Abellan Van Kan G, Rolland Y, Andrieu S, et al. Gait speed at usual pace as a predictor of adverse outcomes in community-dwelling older people an international academy on nutrition and aging (iana) task force. *J Nutr Health Aging.* 2009;13(10):881-889. doi:[10.1007/s12603-009-0246-z](https://doi.org/10.1007/s12603-009-0246-z)

## SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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