

LUND UNIVERSITY

Psychometric properties of the Swedish version of the General Self-Efficacy Scale in stroke survivors.

Carlstedt, Emma; Månsson Lexell, Eva; Pessah-Rasmussen, Hélène; Iwarsson, Susanne

Published in: International Journal of Rehabilitation Research

DOI: 10.1097/MRR.00000000000131

2015

Link to publication

Citation for published version (APA):

Carlstedt, E., Månsson Lexell, E., Pessah-Rasmussen, H., & Iwarsson, S. (2015). Psychometric properties of the Swedish version of the General Self-Efficacy Scale in stroke survivors. International Journal of Rehabilitation Research, 38(4), 333-337. https://doi.org/10.1097/MRR.000000000000131

Total number of authors: 4

General rights

Unless other specific re-use rights are stated the following general rights apply:

- Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the

legal requirements associated with these rights. • Users may download and print one copy of any publication from the public portal for the purpose of private study or research.

- You may not further distribute the material or use it for any profit-making activity or commercial gain
 You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: https://creativecommons.org/licenses/

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117 221 00 Lund +46 46-222 00 00

Psychometric properties of the Swedish version of the General Self-Efficacy Scale in stroke survivors

Short title: Psychometric properties of the General Self-Efficacy Scale

Emma Carlstedt¹, Eva Månsson Lexell^{1, 2}, Hélène Pessah-Rasmussen^{1,2} and Susanne Iwarsson¹

¹Department of Health Sciences, Lund University, Sweden

²Department of Neurology and Rehabilitation Medicine, Skåne University Hospital, Sweden

Corresponding author:

Emma Carlstedt, Department of Health Sciences,

Lund University, SE-221 00 Lund, Sweden.

Email: Emma.Carlstedt@med.lu.se

Conflicts of Interest: None declared.

Source of Funding: This work was supported by the Swedish Stroke Association [*Strokeförbundet*], the Swedish Research Council for Health, Working Life and Welfare (Forte; Grant No. 2006-1613), and the Ribbingska Foundation in Lund, Sweden.

Abstract

The objective of this study was to assess the psychometric properties of a Swedish version of the General Self-Efficacy Scale (GSE) in stroke survivors. The GSE was administered by the same assessor on two occasions three weeks apart with 34 stroke survivors (21 men, 13 women; mean age= 68.1) six to ten month after stroke. Psychometric properties including targeting and scaling assumptions, and several reliability indices, were calculated. The mean score was well above the midpoint of the scale, and the total scores spanned almost the whole scale range. Floor and ceiling effects were within the limits of 15–20% for total scores (0% and 8.8%, respectively), but not for each item individually. Total skewness was estimated at-1.02 and skewness for individual items as -1.55 to -0.33. The corrected item-total correlations were all above 0.3 except for one item. Cronbach's alpha was high (0.92) and the test–retest reliability was acceptable (ICC_{2,1}=0.82). The mean difference (d) was -0.68 (n.s.). The SEM was 2.97 (SEM%; 9.40). In conclusion, although targeting in relation to skewness and ceiling effects was seen in some items, the GSE was reliable for use in mobile stroke survivors six to ten month post stroke.

Keywords

Cerebrovascular disorders, reliability, reproducibility of results, self-efficacy

Introduction

Annually, around 25,000 people experience a stroke in Sweden, and most of them (80%) are 65 years old or older (The Swedish Stroke Register, 2013). Stroke is among the most common cause of disability in adults and can result in various types of physical, cognitive and psychological impairments. Physical impairments, such as hemiparesis and reduced balance can often impact the individual's ability to move around (Michael *et al.*, 2005) and different kinds of mobility devices are common. Cognitive impairments – for example, aphasia, reductions in memory, and ability to engage in abstract thinking (Claesson *et al.*, 2005) – are experienced by 64% of those aged 65+ (Jin *et al.*, 2006). A psychological impairment such as depression occurs in approximately one-third of all stroke survivors (Hackett *et al.*, 2005). The different types of impairments following stroke can play a crucial role in an individual's ability to manage everyday activities in the home as well as in society (Mayo *et al.*, 2002; Combs *et al.*, 2013; Adamit *et al.*, 2014).

One concept that is attracting interest is self-efficacy, which is considered an important aspect of a person's ability to manage every day activities post stroke (Korpershoek *et al.*, 2011). Self-efficacy is related to both cognitive function (Lewin *et al.*, 2013) and depression and seems to play an important role in the measurement of rehabilitation outcomes post stroke (Jones and Riazi, 2011; Lewin *et al.*, 2013). Self-efficacy is a component of Bandura's social cognitive theory and can be explained as a person's belief or confidence in his or her capability to realize a specific task (Bandura, 1997; Bandura, 2006). It reflects the statement that if people do not believe that they have the power to perform a specific assignment, they will not do it (Bandura, 1997). Self-efficacy has become a key factor in self-management programmes to improve health-related behaviour among people with chronic diseases (Lorig and Holman, 2003)

including stroke (Jones *et al.*, 2013). It also seems that improved self-efficacy decreases the use of healthcare among individuals with chronic diseases (Lorig *et al.*, 2001). There are incentives to mitigate the consequences of stroke, both for the individuals affected and for the healthcare cost involved (Claesson *et al.*, 2005; Husaini *et al.*, 2013). Strengthening self-efficacy through self-management programmes might be one way of attaining this, but to do so we need reliable instruments that can evaluate the effects of such programmes, targeting specific groups of the population.

There are different ways to measure self-efficacy. Bandura advocated focusing on selfefficacy in a specific task or situation (Bandura, 1997; Bandura 2006) – for example, by using the Chronic Disease Self-Management Program (CDSMP) (Lorig *et al.*, 1996) or the Stroke Self-efficacy Questionnaire (Jones *et al.*, 2008). Other argues that selfefficacy also can be targeted on a generalized level, thus referring to the individual's overall confidence in his or her ability to manage different situations in life. The widely accepted General Self-Efficacy Scale (GSE) (Schwarzer and Jerusalem, 1995) is an example of such an instrument. The psychometric properties of the GSE have been analysed using data from 25 countries, showing good internal consistency (α =0.86, range=0.75-0.91) in a large cross-national sample (n=19,120) (Scholz *et al.*, 2002). However, the instrument has been only sparsely used in a Swedish context (Löve *et al.*, 2012; Nilsson *et al.*, 2015). Even though psychometric properties of the GSE have been studied in different languages and study populations, to the best of our knowledge no study has investigated such properties in the Swedish version of the GSE in post stroke survivors.

Accordingly, the overall aim of this study was to assess the psychometric properties of the Swedish version of the GSE in a sample of stroke survivors six to ten month after

stroke. More specifically, the aims were to 1) investigate the targeting and scaling assumptions of the GSE, and 2) to explore the reliability of the GSE.

Methods

Participants

Thirty-four participants were recruited from a university hospital in the south of Sweden during October 2012-February 2014, including those who had sustained a first-ever stroke as well as those with recurrent strokes. The inclusion criteria were: 1) six to ten months since the most recent stroke; 2) a self-report stating independent indoor as well as outdoor mobility three months post stroke; and 3) an age of 55 or older. Exclusion criteria were insufficient language skills to participate in the data collection. The mean age of the participants were 68.1 years and they were all living in ordinary housing in the community. The sample consisted of 21 men and 13 women, people with/without mobility devices, with/without impaired cognitive function and with/without depression. Participant characteristics are presented in Table 1.

Insert Table 1 about here

Ethics

All participants received verbal and written information about the study, and gave their informed consent to participate. They were aware that they could withdraw at any time without any consequences for their future care. The Regional Ethical Review Board in Lund, Sweden, approved the study (Ref. No. 2012/174).

The General Self-Efficacy Scale

The GSE scale consists of ten statements such as "*I can solve most problems if I invest the necessary effort.*" Possible responses are scored 1–4, where 1 represents "*Not at all true*", 2 "*Hardly true*", 3 "*Moderately true*" and 4 "*Exactly true*". This gives a total score ranging from 10–40; higher scores indicate a greater sense of general self-efficacy (Schwarzer and Jerusalem, 1995). The GSE has been translated into Swedish (Koskinen-Hagman *et al.*, 1999) and has been demonstrated to be valid (Löve *et al.*, 2012).

Procedure

The data collection was made as a part of a wider data collection of several questionnaires. It was performed by the same assessor (first author; EC), on two occasions three weeks apart (± 2 weeks), at the outpatient clinic at the Department of Neurology. At the beginning of each first occasion, the assessor described the background of the study. She then explained the purpose of the questionnaire, read the questions out loud and recorded the participant's answers on the printed form. Each occasion lasted approximately 30–60 min, whereof the data collection regarding GSE lasted about 10 minutes. All 34 participants completed the test at both T1 and T2 and there were no missing data.

Statistical methods

Descriptive statistics were used to present participant characteristics, including the use of walking devices indoors and outdoors, cognitive impairments and depressive symptoms. Targeting and scaling assumptions, and the Cronbach's alpha, were calculated based on data from the first test occasion (T1). All other calculations were made based on data from T1 and T2.

Targeting was studied by assessing the score distribution, floor and ceiling effects, and skewness of the scale (Hobart and Cano, 2009). The full scale range should be used in the total sample and the total mean score should stay close to the midpoint of the scale (in the GSE = 25). Floor and ceiling effects should not exceed 15–20 %. The recommended range for skewness statistics is ± 1 (Hobart *et al.*, 2004). Floor and ceiling effects and skewness were calculated for the total GES score as well as for the individual items.

Scaling assumptions were evaluated, calculating the distribution of the mean score and the SD of each item– that is, to estimate if the items were taken at the same point of the scale and demonstrated equivalent variance (Hobart and Cano, 2009). Also, the corrected item-total correlations were calculated as an indication of whether each of the items represented the same underlying construct (should exceed 0.3) (Nunnally and Bernstein, 1994; De Vet *et al.*, 2014).

Reliability was examined in different ways. In terms of the internal consistency of the scale, Cronbach's alpha was calculated, the desired value being between 0.70 and 0.90 (De Vet *et al.*, 2014). The intra-class correlation coefficient (ICC) (Shrout and Fleiss, 1979; McGraw and Wong, 1996) was used to explore test–retest reliability. Two-way mixed (ICC_{2,1}) single measures with absolute agreement (McGraw and Wong, 1996) were used. The ICC should reach 0.80 to be acceptable for group comparisons but must exceed 0.90 when individual scores are of interest (Nunnally and Bernstein, 1994). To capture any systematic or random differences, the mean difference (d) between T1 and T2 was measured.

The standard error of measurement (SEM) was computed using the formula $SD_{baseline} \times \sqrt{1 - reliability}$ (Weir, 2005; Streiner and Norman, 2008). Since SEM is expressed in

absolute values, SEM% (SEM%= (SEM/mean) $\times 100$ were calculated in order to report a relative value that might be easier to comprehend (Lexell and Downham, 2005).

P-values below 0.05 indicate statistical significance. The IBM SPSS Statistics 22.0 software was used for the analyses.

Results

The total mean score (31.7) was above the midpoint of the scale, although the midpoint was within the SD (6.95). The total scores spanned almost the whole scale range (13-40). The floor and ceiling effects were 0 and 8.8 %, respectively. When looking at each item separately, the floor effects were 0%–14.7% (mean 7.4 %) and the ceiling effects were 26.5%–61.8% (mean 45.7 %). The ten percent lowest values contained 2.9% of the answers and the ten percent highest values contained 26.5%. The distribution of the total score showed skewness at -1.02. On the item level skewness ranged from -1.55 to -0.33. The means of the ten items were distributed between 2.74 and 3.47. The corrected item-total correlation was satisfying for all but one item, which did not exceed the value of 0.3 (see Table 2).

Insert Table 2 about here

All reliability indices are shown in Table 3. The internal consistency illustrated by Cronbach's alpha was 0.92 and the ICC_{2, 1} was 0.82 (CI: 0.67, 0.90). The mean differences (d) between T1 and T2 were slightly below zero (-0.68; CI: -2.2, 0.88), although not statistically significant (*p*=0.38). The SEM was 2.97 and the SEM% was 9.40.

Discussion

Overall, the analyses of a set of psychometric properties of a Swedish version of the GSE in stroke survivors six to ten month post stoke suggest that the GSE is reliable for this population, even though not all of the properties were optimal.

The Cronbach's alpha coefficient was high in the present study and high levels have also been estimated in GSE studies targeting other populations (Scholz *et al.*, 2002; Luszczynska et al., 2005; Nilsson et al., 2015). It should be kept in mind that according to some authors (Steiner and Norman, 2008; De Vet et al., 2014) Cronbach's alpha values exceeding 0.90 may indicate a redundancy among the items of a scale, and this could be taken as an indication to consider whether all items should necessarily be included. However, with an alpha value just slightly above 0.90, this is not an issue in the present study. The test-retest – that is, $ICC_{2,1}$ – was estimated at an acceptable level at a group level; optimally, however, it should be slightly higher to be seen as acceptable at an individual level. Still, our results are comparable with the results of a recent study (Nilsson et al., 2015) involving people with Parkinson's disease, in which the estimated ICC was just below our value (0.69-0.80). Furthermore, the mean difference (d) between T1 and T2 in the present study indicated that the participants tended to score lower at T2, but the difference was not statistically significant. While the interpretation of SEM in relation to change scores is intricate, in the sample of the present study a difference of at least 2.97 points is needed to identify a meaningful change, that is, a change that exceeds the measurement error. However, given that measurement error is a random variable with a different value at each measurement occasion and also the large proportions of ceiling effects (discussed below) this result

has to be interpreted with caution, not the least as the SEM in our sample was lower than that found in another study on the GSE (Nilsson *et al.*, 2015).

The fact that the total mean score was above the midpoint of the scale in the present sample is in line with studies involving other stroke samples (Lewin et al., 2013; Omu and Reynolds, 2013). The fact that the item-total correlation exceeded the desirable level for all except one item is positive, but raises some questions of that item (Item 3 – "It is easy for me to stick to my aims and accomplish my goals"). For instance, that question is not as concrete as the other items, but rather abstract. I might be particular difficult for an individual who recently suffered a brain injury to answer an abstract question regarding aims and goals in life. Furthermore, Scholz et al. (2002) have also reported similar problems, with item-total correlations of less than 0.3 on one item of the GSE in six out of 25 countries, and in two of these cases, it was item 3. As to ceiling effects, which occur separately for all individual items (but not for the total scale), they were present particularly for the items "I can always manage to solve difficult problems if I try hard enough", "If someone opposes me, I can find the means and way to get what I want" and "I can usually handle whatever comes my way". Such results are not desirable because the scale gives no room for improvement for items that receive high ratings. Moreover, in the present study the score distribution of the GSE total score as well as the scores for several of the individual items were somewhat negatively skewed, which was not seen at this level in previous studies (Scholz et al., 2002; Nilsson et al., 2015). Taken together, these concerns indicate that further evaluations of the scale in this particular target group are needed. Regarding potential revisions of the instrument, it is important to remember that any diagnosis-specific revisions will form the basis of subsequent comparisons between different populations.

Turning to methodological concerns, this study included a relatively small sample, even if it was within the recommended number of 20–50 participants for reliability studies (Hobart *et al.*, 2012). Still, our sample seems to represent the whole span of the studied subpopulation of stroke survivors – that is, both people with physical, cognitive, and psychological impairments as well as those without such impairments. For example, the sample had the same proportion of participants with reported depressive symptoms (Hackett *et al.*, 2005) and only slightly fewer with cognitive impairments, compared to those of other studies (Jin *et al.*, 2006).

In this study, it was the assessor, rather than the participants themselves, who completed the GSE forms, which could explain the fact that no instances of missing data were found. This could in turn affect reliability, if the questionnaire were used in a different way. However, since we include people with different types of impairments, in order to reduce the sources of variation during administration of the questionnaire, we decided to use the same administration mode throughout.

In conclusion, this study indicates that the Swedish version of the GSE is reliable for use in mobile stroke survivors six to ten month post stroke, although not all of the psychometric properties studied reached the optimal levels. Further research should assess the GSE in suitable samples of stroke survivors to establish if the existing GSE can be used with confidence in the whole stroke population. Nevertheless, since selfefficacy is gaining increasing attention as a target and outcome of rehabilitation interventions, our study contributes to the development of instruments that target selfefficacy.

Acknowledgements

The authors wish to thank all respondents as well as the employees at the Department of Neurology for assistance during the data collection especially Dr Eva Ask and Dr Maria Macek. This study was accomplished within the context of the Centre for Ageing and Supportive Environments (CASE), Lund University, Sweden.

References

Adamit T, Maeir A, Ben Assayag E, Bornstein NM, Korczyn AD, Katz N (2014). Impact of first-ever mild stroke on participation at 3 and 6 month post-event: the TABASCO study. *Disabil Rehabil* **3**, 1-7.

Bandura A (1997). Self-efficacy: the exercise of control. Basingstoke: W. H. Freeman.

Bandura A (2006). Guide for constructing self-efficacy scales. In Pajares F and Urdan T (eds) *Self-Efficacy Beliefs of Adolestence*. Charlotte: IAP Information Age Publishing, Inc; pp. 307-337.

Claesson L, Lindén T, Skoog I, Blomstrand C (2005). Cognitive impairment after stroke
- impact on activities of daily living and costs of care for elderly people. The Goteborg
70+ Stroke Study. *Cerebrovasc Dis* 19, 102-109.

Combs SA, Van Puymbroeck M, Altenburger PA, Miller KK, Dierks TA, Schmid AA (2013). Is walking faster or walking farther more important to persons with chronic stroke? *Disabil Rehabil* **35**, 860-867.

De Vet HCW, Terwee CB, Mokkink LB, Knol DL (2014). *Measurement in medicine: a practical guide*. 3rd ed. Cambridge: Cambridge University Press.

Gottfries GG, Noltorp S, Nørgaard N (1997). Experience with a Swedish version of the Geriatric Depression Scale in primary care centres. *Int J Geriatr Psychiatry* **12**, 1029-1034.

Hackett ML, Yapa C, Parag V, Anderson CS (2005). Frequency of depression after stroke: a systematic review of observational studies. *Stroke* **36**, 1330-1340.

Hobart JC, Riazi A, Lamping DL, Fitzpatrick R, Thomson AJ (2004). Improving the evaluation of therapeutic interventions in multiple sclerosis: development of a patient-based measure of outcome. *Health Technol Assess* **8**, 1-48.

Hobart J, Cano S (2009). Improving the evaluation of therapeutic interventions in multiple sclerosis: the role of new psychometric methods. *Health Technol Assess* **13**, 1-177.

Hobart JC, Cano SJ, Warner TT, Thompson AJ (2012). What sample sizes for reliability and validity studies in neurology? *J Neurol* **259**, 2681-2694.

Husaini B, Levine R, Sharp L, Cain V, Novotny M, Hull P, Orum G, Samad Z, Sampson U, Moonis M (2013). Depression increases stroke hospitalization cost: an analysis of 17,010 stroke patients in 2008 by race and gender. *Stroke Res Treat* **10**, 1-7.

Jin YP, Di Legge S, Ostbye T, Feightner JW, Hachinski V (2006). The reciprocal risks of stroke and cognitive impairment in an elderly population. *Alzheimers Dement* **2**, 171-178.

Jones F, Partridge C, Reid F (2008). The Stroke Self-Efficacy Questionnaire: measuring individual confidence in functional performance after stroke. *J Clin Nurs* **17**, 244-252.

Jones F, Riazi A (2011). Self-efficacy and self-management after stroke: a systematic review. *Disabil Rehabil* **33**, 797-810.

Jones F, Riazi A, Norris M (2013). Self-management after stroke: time for som more questions? *Disabil Rehabil* **35**, 257-264.

Korpershoek C, van der Bijl J, Hafsteinsdóttir TB (2011). Self-efficacy and its influence on recovery of patients with stroke: a systematic review. *J Adv Nurs* **67**, 1876-1894.

Koskinen-Hagman M, Schwarzer R, Jerusalem M (1999). Swedish version of the General Self-Efficacy Scale. Available at: <u>http://userpage.fu-berlin.de/~health/swedish.htm</u> [accessed 16 December 2014].

Lewin A, Jöbges M, Werheid K (2013). The influence of self-efficacy, pre-stroke depression and perceived social support on self-reported depressive symptoms during stroke rehabilitation. *Neuropsychol Rehabil* **23**, 546-562.

Lexell JE, Downham DY (2005). How to assess the reliability of measurements in rehabilitation. *Am J Phys Med Rehabil* **84**, 719-723.

Lorig K, Stewart A, Ritter P, González V, Laurent D, Lynch J (1996). *Outcome measures for health education and other health care interventions*. Thousand Oakes, California: Sage Publication Inc.

Lorig KR, Ritter P, Stewart AL, Sobel DS, Brown BW, Bandura A, Gonzalez VM, Laurent DD, Holman HR (2001). Chronic disease self-management program: 2-year health status and health care utilization outcomes. *Med Care* **39**, 1217-1223.

Lorig KR, Holman HR (2003). Self-management education: history, definition, outcomes, and mechanisms: *Ann Behav Med* **26**, 1-7.

Luszczynska A, Scholz U, Schwarzer R (2005). The general self-efficacy scale: multicultural validation studies. *J Psychol* **139**, 439-457.

Löve J, Moore CD, Hensing G (2012). Validation of the Swedish translation of the General Self-Efficacy scale. *Qual Life Res* **21**, 1249-1253.

Mayo NE, Wood-Dauphinee S, Côté R, Durcan L, Carton J (2002). Activity, participation, and quality of life 6 months poststroke. *Arch Phys Med Rehabil* **83**, 1035-1042.

Mc Graw, Wong SP (1996). Forming inferences about some intraclass correlation coefficients. *Psychol Methods* **1**, 33-46.

Michael KM, Allen JK, Macko RF (2005). Reduced ambulatory activity after stroke: the role of balance, gait and cardiovascular fitness. *Arch Phys Med Rehabil* **86**, 1552-1556.

Nilsson MH, Hagell P, Iwarsson S (2015). Psychometric properties of the General Self-Efficacy Scale in Parkinsons's disease. *Acta Neuro Scand* DOI: 10.1111/ane.12368

Nunnally JC and Bernstein IH (1994). Psychometric theory. New York: McGraw-Hill.

Omu O, Reynolds F (2013). Life satisfaction and self-efficacy in patients affected by first stroke living in Kuwait: a two-phase study. *Physiother Theory Pract* **29**, 443-456.

Scholz U, Gutiérrez Dona B, Sud S, Schwarzer R (2002). Is General Self-Efficacy a
Universal Construct? Psychometric Findings from 25 Countries. *Eur J Psychol Assess*18, 242-251.

Schwarzer R and Jerusalem M (1995). Generalized self-efficacy scale. In: Weiman J Wright S and Johnston M (eds) *Measures in health psychology: A user's portfolio*. *Causal and control beliefs*. UK: Nfer-Nelson; pp. 35-37.

Shrout PE, Fleiss JL (1979). Intraclass correlations: uses in assessing rater reliability. *Psychol Bull* **86**, 420-428.

Streiner DL and Norman GR (2008). *Health measurement scales : a practical guide to their development and use*. 4th ed. Oxford: Oxford University Press.

The Swedish Stroke Register (Riks Stroke) Available at: <u>http://www.riksstroke.org/wp-</u> <u>content/uploads/2014/07/Strokerapport_AKUTTIA3man_LR.pdf</u> [accessed 26 January 2015]

Weir JP (2005). Quantifying test–retest reliability using the intraclass correlation coefficient and the SEM. *J Strength Cond Res* **19**, 231-240.

Wendel K, Risberg J, Pessah-Rasmussen H, Ståhl A, Iwarsson S (2008). Long-term cognitive functional limitations post stroke: objective assessment compared with self-evaluations and spouse reports. *Int J Rehabil Res* **31**, 231-239.

Variable		
Gender		
Men, n (%)	21 (61.8)	
Women, n (%)	13 (38.2)	
Age, years		
Mean (minimum-maximum)	68.1 (58–86)	
Time post stroke, month		
Mean (minimum–maximum)	8.0 (6–10)	
First-ever stroke		
Yes, n (%)	29 (85.3)	
No, n (%)	5 (14.7)	
Stroke subtype		
Infarction, n (%)	33 (97.1)	
Haemorrhage, n (%)	1(2.9)	
Living condition		
Living with partner, n (%)	22 (64.7)	
Living alone, n (%)	12 (35.3)	
Children living at home, n (%)	3 (8.8)	
Housing condition		
Multifamily house, n (%)	21 (68.8)	
Single-family house, n (%)	13 (38.2)	
Mobility device indoors, n (%)	$2 (6.1)^a$	
Mobility device outdoors, n (%)	9 (27.3)	
Self-rated cognitive impairment		

Table 1. Sample characteristics, N=34.

Any cognitive impairment ^b , n (%)	19 (55.9)			
Number of self-rated cognitive impairment ^b ,				
mean (minimum–maximum)	3.2 (0–20)			
Geriatric depression scale (GDS) ^c				
Total score, mean (minimum-maximum)	5.3 (0–19)			
Possible depression $>5p^d$, n (%)	12 (35.3)			

^a One missing

^b Study-specific self-rated cognitive impairment questionnaire. According to Wendel *et al.*(2008) this assessment has showed cognitive impairment to a greater extent compared to an objective assessment.

^c GDS (Gottfries *et al*, 1997)

^d>5p= possible depression

No.	Item	Mean	Corrected item-
		(SD)	total correlation
			(95% CI)
1.	I can always manage to solve difficult	3.41 (0.86)	0.69 (0.46, 0.84)
	problems if I try hard enough		
2.	If someone opposes me, I can find the	3.41 (0.86)	0.55 (0.27, 0.75)
	means and ways to get what I want		
3.	It is easy for me to stick to my aims and	3.47 (0.71)	0.25 (-0.10, 0.54)
	accomplish my goals		
4.	I am confident that I could deal efficiently	2.74 (1.02)	0.68 (0.45, 0.83)
	with unexpected events		
5.	Tanks to my resourcefulness, I know how	3.18 (1.00)	0.66 (0.42, 0.82)
	to handle unforeseen situations		
6.	I can remain calm when facing difficulties	3.15 (0.93)	0.52 (0.22, 0.73)
	because I can rely on my coping		
7.	I can solve most problems if I invest the	3.03 (1.00)	0.68 (0.45, 0.83)
	necessary effort		
8.	When I am confronted with a problem, I	3.06 (0.85)	0.75 (0.56, 0.87)
	can usually find several solutions		
9.	If I am in trouble, I can usually think of a	2.94 (1.04)	0.80 (0.64, 0.90)
	solution		
10.	I can usually handle whatever comes my	3.26 (0.86)	0.60 (0.32, 0.78)
	way		

Table 2. Means (SD) and corrected item-total correlations (CI) for the ten GSE items, N=34.

Table 3. Reliability indices of the GSE, N=34.

Cronbach's alpha (95% CI)	0.92 (0.86, 0.95)
^a ICC 2,1 (95% CI)	0.82 (0.67, 0.90)
Mean difference, đ (95% CI)	-0.68 (-2.23, 0.88)
^b SEM	2.97
^c SEM%	9.4

^a ICC=Intra-class correlation coefficient (two-way random model,

absolute agreement, single measure)

^b SEM=Standard error of measurement, defined as

SEM= SD_{baseline} $\times \sqrt{1 - reliability}$

^c SEM%= (SEM/mean) ×100