GENERAL SELF-EFFICACY AMONG COMMUNITY DWELLING OLDER ADULTS AND NURSING HOME RESIDENTS: A CROSS-SECTIONAL SURVEY

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ABSTRACT

General self-efficacy (GSE) encourages health promoting behaviour and is useful construct from positive psychology used also in patient´s education. Unfortunately, there is currently limited evidence on GSE among elderly in Slovakia. This study aims to explore GSE and its determinants among community dwelling elderly and elderly residing in nursing homes with focus on examining the gender, age and „living situation" differences of GSE. Methods: Data were collected by Slovak version of General Self-efficacy Scale (Schwarzer, Jerusalem,1981) from the Survey of Fear of falling among community dwelling elderly. Non-parametric tests were used to explore relation between GSE and gender, age, activity of daily living, living situation and mobility. Results: The participants older than 75 years had GSE score significantly lower than younger older adults (26.6 ± 8.1 vs. 23.7 ± 6.3; $p < 0.001$). There was a significant difference between elderly living in community and nursing home residents (21.1 ± 5.7 vs. 27.2 ± 7.4; $p < 0.001$). Age, need for constant health/social care and fear of falling were shown as significant determinants of GSE. Conclusion: More attention should be paid for the poor GSE of elderly above 75 years and nursing home residents e.g. when applied for patient´s education. Results of first pilot study of GSE among elderly in Slovakia sounds with results of previously published research. Further research is recommended that focuses on the GSE of older adults and more health-related variables and outcomes.

Keywords: *General self-efficacy, community dwelling older adults, nursing home residents*

INTRODUCTION

Ageing of the population of Slovakia as a long-time consequence of reproductive behaviour and improving life conditions in various areas (education, science, hygiene, healthcare) is an irreversible process in the scope of the future decades. In the following 50 years Slovakia will transform from one of the youngest countries of the European Union into one of the oldest states [1]. That

is why, in a long-term perspective the healthcare system should focus on seniors. We see opportunities mainly in the area of health support and prevention aimed at reduction of events that lead to worsening of the quality of life of seniors on individual level and result in high treatment expenses on economical level. In some cases they lead to a long-term (often lifelong) institutional care.

The ability of health care professionals to support healthy aging requires the identification of factors that indicate poor health-promoting behaviors as well as preventable adverse events, which mean serious complication for seniors. Correspondingly, there has been increasing focus on the role of positive psychological resources, which are expected to play a role in reducing suffering on the health of older adults. General self-efficacy (GSE) is based on Bandura's theory of self-efficacy, reflecting the degree of overall self-confidence that individuals perceive when dealing with difficult situations. Self-efficacy influences the way individuals feel, think, self-motivate, and behave [2]. Older adults with lesser GSE have consistently been found to limit their involvement in activities of daily living and reduce their efforts in activities they do [3]. In case of a fear of falling (FOF) the situation is identical. FOF is defined as lasting concern about falling that leads to an individual avoiding activities that one remains capable of performing [4]. It is a frequent and serious problem of a senior population, with significant impact on senior's somatic and mental health, style of life and its quality [5]. Though self-efficacy had been studied in different areas (including balance, falls, healthcare adherence) among older adults, studies on general self-efficacy in this group are rather rare. Similarly, there is a lack of data in the FOF and its corelates in the group of older adults in Slovakia.

In recognition of this, we aimed to map: the level of GSE, FOF, mobility and self-rated health; age and gender differences in GSE; whether older adults' who receive health/social care services have lower GSE than those who do not, and the relationship between FOF and GSE.

MATERIAL AND METHODS

Design

This was a cross-sectional survey involving 292 older adults consecutively recruited from a community (via senior centers) across Slovakia and nursing home residents (only Western and Middle part of Slovakia). The participants were ambulant (with or without gait aid) older adults (65 + years) who were well-oriented in time, place and person.

The participant´s socio-demographic variables (age, gender, highest educational attainment, residence) were documented. The Falls Efficacy Scale-International, Timed up and go test, the General Self-efficacy Scale, and EQ VAS were used to collect data on fear of falling, mobility, self-rated heath, and general self-efficacy among the participants. All the questionnaires/measures have been

cross-culturally adapted in Slovakia [6] The questionnaires were either self- or researcher administered depending on each participant preference. Measurements were always administered by trained members of the research team. Collection of the data was conducted by the authors of the study, students of nursing and sisters working in nursing homes. Written consent was obtained from each of the participants after the aims of the study had been explained to them. This research was conducted in accordance with the Declaration of Helsinki. The Ethic committee of The Alexander Dubcek University in Trencin approved the study (i.no.2/2021)

Research instruments

General Self-Efficacy Scale is designed to assess the general sense of perceived self-efficacy with the aim of predicting coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. It is a 10-item self-administered scale with a 4-point Likert scale response options. The sum of the responses to all the 10 items are obtained to yield the final composite score which ranges from 10 to 40 with higher scores indicating higher self-efficacy. Each item refers to successful coping and implies an internal-stable attribution of success. It has acceptable internal consistency (α = 0.76–0.90), and criterion-related validity is well documented [2].

The Falls Efficacy Scale-International [6] is a 16-item scale developed for measuring fear of falling among older adults. It has four-point Likert scale responses rated from 1–4. It includes a balanced range of items assessing basic activities that provoked: low and medium levels of fear in some people (e.g., getting dressed, going up or down stairs) and high levels of fear in some people (e.g., walking in a slippery surface). Scores of the individual items are summed to get the total score which ranges from 16 (no concern about falling) to 64 (severe concern about falling). The scoring is interpreted thus: low concern (16-19 points), moderate concern (20-27 points) and high concern (28-64 points) Scale exhibited acceptable internal consistency (Cronbach's alpha = 0.92), test-retest reliability (ICC = 0.83) and construct validity (r = 0.97) [7].

The Timed Up and Go (TUG) test is a simple, quick, and widely used clinical performance-based measure of mobility and balance [8].

The EQ VAS records the patient's self-rated health on a vertical visual analogue scale, where the endpoints are labelled 'The best health you can imagine' and 'The worst health you can imagine'. The VAS can be used as a quantitative measure of health outcome that reflect the patient's own judgement.

Statistics

The empirical data were processed in the statistical programme STATISTICA. For statistical processing of the data we used sums, average values

(so-called average point score, x) and medians calculated on the basis of the responses of participants. Non-parametric Mann-Whitney U-Test was used for determination of the significance of differences in the GSE. For verification of the association between the GSE and FOF we used the Spearman's correlation. Internal consistence of the scales was detected by Cronbach´s α.

RESULTS

Among the 292 participants, 83 (28.4%) were males, 209 (71.6%) were females. Bigger part of the sample consisted of younger seniors aged 65 – 75 years (52.4 %). More than half of the elderly were community dwelling (67.5%) and the rest of the sample reside in nursing homes (32,5%). The majority of participants were high school graduates (from 11 to 12 years of schooling) (97%). The elderly´s GSE score was 25.4 ±7.16 points and 167 (54.2%) scored under the median value. The average score of the FOF reached the value of 33±12.9 points. Lower level of the FOF was recorded in 42 (14.4 %) of seniors, average score was reached by 84 (28.8 %) of seniors and high level of the fear of falling was experienced by 166 (56.8 %) seniors.

Table 1. *Characteristics of older adults*

Variables	***n***				
Age	292	**65-75 years**			**75 < years**
		153/52.4%			139/47.6%
Gender		**Males**			**Females**
		83/28.4%			209/71.6%
Residence		**Community dwelling**			**Nursing home**
		197/67.5%			95/32.5%
		x	***SD***	***X_m***	***Min - max***
GSE		25.4	7.2	25	11-40
FES-SK		33	12.9	31	16-64
Self-rated health*		66.9	17.64	70	20-100
TGUG	196	27.6	13.7	21	8-84

*VAS scale – part of EQ-5D-5L questionnaire; n – number of participants; x – Average; SD – Standard deviation; X_m – Median; Min-max – Range

The differences and correlation between surveyed variables and GSE are comprehensively demonstrated in table 2.

Table 2. *Differences and correlation of GSE and selected variables*

Variables	**n**	**GSE**			**p**
		x	**SD**	X_m	
Age	**292**				
65-75 years		153	26.6	27	**<0,001***
75 < years		139	23.7	23	
Gender					
Males		83	26.4	8.1	0.087
Females		209	24.8	7.1	
Residence					
Home		197	27.2	7.4	**<0,001***
Nursing home		95	21.1	5.7	
FOF		R	CI		
TS FES-SK		-0.52	-95%	+95%	**<0,001***
			-0.6	-0.43	

n – number of participants; x – Average; SD – Standard deviation; X_m – Median

R – Spearman's correlation coefficient, p – value of the testing criterion, p <0,05*; CI – Confidence interval

DISCUSSION

Previous studies had shown that GSE can promote elderly people to develop healthy living behaviors and help delay the development of diseases and complications it plays a key role in the individual behavior change, and can improve the self-confidence and sense of achievement of the elderly. [9] Participants' median of GSE score was 25 of the range of the scoring spectrum (10–40, and 54,2% of participant scored under the median, depicting a lower level of general self-efficacy in their age group. This may be a cause for concern considering the reported adverse effects of poor self-efficacy to health and well-being of elderly. Participants in our study exhibited high level and prevalence of fear of falling. High prevalence of FOF had been reported in neighbor countries and over the world [10] and this had been attributed to the negative impact of ageing process on the body systems [11]. Our study found that males had higher GSE than females, although it has not reached statistically significant level. It may

be caused by different position of women in the society in the past, when seniors participating in this study matured and entered productive age of life. Concept of a man capable of providing for his family was wide-spread. Men were raised and supported in the spirit of independence and ambition, they were expected to dominate in the society, while women were educated in the spirit of subordinate position and their achieving of higher education was rare [12]. We assume that such attributes of traditional roles could play a certain role in creation of the differences in the GSE in a gender context. It's worthy to explore gender difference in GSE. In the present study, participants' age had significant negative correlation with their GSE and positive correlation with their FOF. This may not be unexpected considering the deleterious effect of ageing on the psychological, physical, and social health of older adults [13] which would understandably reduce their GSE general self-efficacy and increased their FOF. Also the earlier evidence indicates that global measures of self-efficacy show age differences, with older adults having lower self-efficacy and greater concern about their performance than younger adults. Our findings shows that older adults receiving health/social services in nursing homes demonstrated statistically significantly lower GSE than community dwelling counterparts (27.2±7.4 vs 21.1±5.7, p <0,001). Whitehall et al. [14] published similar findings in a systematic overview and meta-analysis, where seniors scored as follows: older adults receiving care provided by primary care providers had the greatest GSE score (31.80), followed by inpatients in a rehabilitation ward (30.77), then those attending education courses (29.39), then those attending an outpatient clinic (29.33), followed by residents of nursing homes (27.13), and lastly, those receiving acute medical inpatient care (27.05). Community dwelling seniors in our conditions, who are relatively active and healthy (or well-compensated) reach lower average values of the GSE score than nursing home residents or hospitalized seniors with acute health complications, which is a significant finding, which may be caused by the fact that the health care provision within nursing homes varies substantially across countries. Some nursing homes have disposal of rehabilitative services while other only very limited or none. There are also other underlying factors contribute to the GSE of elderly in nursing homes such as adaption to facility, decision to enter, the quality of care, length of stay, and social engagement influence the GSE of their residents. Participant´s FOF had significant negative correlation their GSE. However, no previous study is available for referencing on the relationship between FOF and GSE. The significant relationship between fear of falling and GSE (described as an individual's overall belief in his/her ability to succeed), a construct that confers physical, functional, cognitive, behavioral and psychological benefits would also understandably reduce FOF. In case of FOF, the GSE is implemented as a universal prerequisite of specific fall efficacy associated with falling, which represents a resilience factor. Such findings led Tinetti et al. to the use of the fall efficacy concept in their research. Using Bandura's self-efficacy theory, interpreted FOF as low perceived self-efficacy in performing various activities, taking into account one's personal risk to experience a potential fall. Those who reported a significant lack of confidence were viewed to have a FOF. This initial conceptualization of falls efficacy and

fear of falling used in parallel led to much inquiry towards managing falls and FOF [15].

Limitations

The participants were conveniently recruited, and this could have to some extent affected the generalizability of the present results. The participants were recruited irrespective of their comorbidity thereby making it difficult ascertaining the roles of comorbidities on the levels and interrelationships between the constructs. The cross-sectional nature of the study did not allow the establishment of direction of causality with findings only reported based on the observed relationships and the results of presented study should be interpreted with caution.

CONCLUSION

In conclusion, our study found that more than 54 % of participant scored under the median of GSE score, depicting a lower level of general self-efficacy in this age group. This may be a cause for concern considering the reported adverse effects of poor self-efficacy to health and well-being of elderly. Participants in our study also exhibited high level (33.1±12.9) and prevalence of the FOF. In this regard, the seniors are threatened by higher risk of falling, social isolation, anxiety and depression, institutionalization and worsening of the quality of their life. The GSE of younger adults (65-75 years) was significantly higher than that of the older (75+). The results of this study highlight also the slight gender difference in GSE among elderly. The significant correlates of GSE of elderly are age, living condition/residence and FOF. These results substantiate the hypothesized role of self-efficacy in FOF and underscore the need to consider ways of enhancing self-efficacy as well as fall efficacy interventions aimed at reducing FOF in community dwelling elderly and nursing home residents. The high FOF and low GSE in the sample are worrisome and require attention of relevant stakeholders (including the government, health professionals, civil society and so on).

CONFLICT OF INTERESTS

The authors have no conflict of interests to declare.

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