การประเมินภาวะกลัวการหกล้มในผู้สูงอายุไทยที่อาศัยอยู่ในชุมชนโดยใช้เครื่องมือวัดใหม่

Measuring Fear of Falling in Thai Community-dwelling Older Adults with a New Measure

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บทคัดย่อ

แบบสอบถามภาวะกลัวการหกล้มถูกสร้างขึ้นภายใต้กรอบแนวคิดเรื่องความกลัวและการประเมินค่าภาวะคุกคามของลาซารัสและอิซซาร์ด ต่อมาแบบสอบถามภาวะกลัวการหกล้มฉบับสั้นได้ถูกพัฒนาขึ้นและได้ถูกแปลเป็นภาษาไทย การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อ ทดสอบคุณสมบัติของแบบสอบถามภาวะกลัวการหกล้มฉบับสั้นภาษาไทยและสำรวจภาวะกลัวการหกล้มในผู้สูงอายุไทยที่อาศัยอยู่ในชุมชน กลุ่มตัวอย่างเป็นผู้สูงอายุจำนวน 330 คนที่อาศัยอยู่ในชุมชน ซึ่งร้อยละ 93.6 ของกลุ่มตัวอย่างรายงานว่ามีภาวะกลัวการหกล้ม และมีคะแนนเฉลี่ยกลัวการหกล้มค่อนข้างสูง (mean=7.16; SD=2.65; range=1-10) คุณสมบัติของเครื่องมือถูกทดสอบโดยการหาค่าความเที่ยง (α=.91) ความตรงเชิงโครงสร้าง ความตรงตามสภาพปัจจุบัน ความตรงเหมือน และความตรงจำแนก ผลการวิจัย พบว่า แบบสอบถามภาวะกลัวการหกล้มฉบับสั้นภาษาไทย ประกอบไปด้วย 1 องค์ประกอบ คือ ผลของภาวะคุกคาม แบบสอบถามภาวะกลัวการหกล้มฉบับสั้นภาษาไทยมีความสัมพันธ์ทางบวกระดับปานกลางกับแบบสอบถามกลัวการหกล้มคะแนน 1-10 (r=.37, p<.001) และแบบประเมินความเป็นกังวลว่าจะหกล้ม (r=.46, p<.001) อย่างมีนัยสำคัญทางสถิติ และมีความสัมพันธ์ทางบวกระดับต่ำกับแบบประเมินภาวะวิตกกังวล (r=.25, p<.001) อย่างมีนัยสำคัญทางสถิติ โดยมีความสัมพันธ์ทางลบระดับต่ำกับแบบประเมินภาวะซึมเศร้า (r=-.05) อย่างไม่มีนัยสำคัญทางสถิติ ผลการวิเคราะห์ถดถอยพหุคูณพบว่า ปัจจัยที่มีความสัมพันธ์กับภาวะการกลัวหกล้ม ได้แก่ มีปัญหาในการมองเห็น มีความเป็นกังวลว่าจะหกล้ม และมีภาวะวิตกกังวล (R^2=.23, *Adjusted* R^2=.23, F(3, 326)=33.05, p<.001) ผลการศึกษาวิจัยครั้งนี้แสดงให้เห็นว่าแบบสอบถามภาวะกลัวการหกล้มฉบับสั้นภาษาไทยมีคุณสมบัติในระดับดีเยี่ยมทั้งความตรงและความเที่ยง

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ABSTRACT

Fear of falling (FOF) is a major problem for community-dwelling older adults, which can lead to activity restrictions and contribute to disability. The FOF Questionnaire (FFQ) was developed for the assessment of FOF based on Lazarus and Izzards's conceptual definitions of fear and appraisals of harm. Later, the shorter FFQ was developed and has been translated into the Thai language. The purposes of this study were to explore the psychometric properties of the Thai Short-FFQ and examine FOF in Thai older adults living in a community. A total of 330 Thai community-dwelling older adults completed the survey (64.8% female, aged 69.92±7.11 years). A high number of Thai older adults reported FOF (93.6%) with a high mean FOF rating of 7.16 (SD=2.65) on a 1-10 scale. The reliability of the Thai Short-FFQ was examined as well as the construct, concurrent, convergent, and divergent validity. Principle component factor analysis confirmed that the short scale had one component, "harm outcomes," explained 68.72% of the variance. The mean score was 20.83 (SD=2.9; range11-24), with a Cronbach's alpha of .91. This Thai Short-FFQ had a significant moderate correlation with the FOF rating 1-10 (r=.3, p<.001) and the Falls Efficacy Scale-International (r=.46,p<.001), whereas it had a low correlation with the Thai Geriatric Anxiety Scale (r=.25, p<.001). The relationship between the Thai Short-FFQ and the Center for Epidemiology Studies Depression (CESD) scale was not statistically significant (r=-.05). Multiple regression analyses indicated that visual impairment, concern about falls, and anxiety were significantly associated with the Thai Short-FFQ (R^2=.23, *Adjusted* R^2=.23, F (3, 326) = 33.05, p< .001). The findings suggest that the Thai Short-FFQ has excellent psychometric properties and is valid to use in further research aimed at assessing the FOF in terms of appraisals of harm falls this might cause to Thai community-dwelling older adults.

Keywords: Fear of falling, FOF Questionnaire, Thai Older Adults, Community

Introduction

Fear of falling (FOF) impacts older adults' quality of life, as fears lead to reduced physical activity and ultimately disability. Recent studies reported the prevalence of FOF ranges from 23.0% to 100.0% among Asian older adults living in community (Chang, Chen, & Chou, 2016; Hoang, Jullamate, Piphatvanitcha, & Rosenberg, 2017; Lipardo et al., 2019; Thiamwong & Suwanno, 2017) and incidence ranges from 13.7% to 45.4% of older adults living in the community (Clemson, Kendig, Mackenzie, & Browning, 2015; Oh-Park, Xue, Holtzer, & Verghese, 2011). FOF can be presented even without an experience of falls (Iaboni et al., 2015; Jefferis et al., 2014). FOF has been found to be associated with adverse consequences including low gait speed (Lipardo et al., 2019), activity avoidance and a reduction of leaving the home (Choi, Jeon, & Cho, 2017; Gaxatte et al., 2011), a decrease in quality of life (Schoene et al., 2019), recurrent falls (Jeon, Gu, & Yim, 2017), lower activity of daily living (Brustio, Magistro, Zecca, Liubicich, & Rabaglietti, 2018), and disability (Choi et al., 2017; Makino et al., 2018).

Risk factors for FOF in community-dwelling older adults have been examined in a number of studies. Results from these studies suggest that the risk factors for developing FOF include being female, older age, having a history of falls (Hoang et al., 2017), depression, anxiety (Payette et al., 2017), balance and mobility impairment, visual impairment, low perceived general health, and multiple medications (Thiamwong & Suwanno, 2017). Previous research revealed that prevalence of FOF in Thai community-dwelling older adults using a single item is high ranging from 72.2% to 95.6% and FOF has often been studied within a self-efficacy framework (Khuankwai, 2007; Phongphanngam, 2015; Thiamwong, 2011; Wongpanitkul, 2012).

In past decades, researchers have developed instruments to understand the impact of FOF, measuring several constructs related to FOF. The construct of fear was originally assessed using a single question such as "Are you afraid of falling?" Later, several measures were developed based on self-efficacy theory, in which personal beliefs about one's capability to perform activities of daily life without falling or losing one's balance (Greenberg, 2012; Hill, Schwarz, Kalogeropoulos, & Gibson, 1996; Scheffer, Schuurmans, Van dijk, Van der hooft, & De rooij, 2008; Tinetti, Richman, & Powell, 1990; Yardley et al., 2005). These measures have been tested in several cross-cultural studies including Thailand. While fear and falls efficacy are different constructs, they may be related.

To provide an in-depth measure the concept of fear of falling, Dayhoff,

Baird, Bennett, & Backer (1994) developed the multi-dimensional FOF Questionnaire (FFQ), an instrument used to determine FOF as a function of the emotional of fear and appraisals of potential of harm based on Lazarus's theory. They proposed that fear can cause emotional arousal affecting self-efficacy. A short version has also been developed (Noimontree & Lach, 2017). However, the Short-FFQ had not been translated into Thai language or used in Thailand. Hence, the researchers of this study translated the Short-FFQ into Thai language in order to have measures to assess several dimensions of FOF. This additional information could help inform development of interventions for older adults living in community. There are a paucity of studies related to the concept of fear especially in Thailand. The purposes of this study were to assess the psychometric properties of the translated Thai Short-FFQ and to explore FOF among Thai community-dwelling older adults.

Method

Participants and Setting

Participants in this study were 330 Thai community-dwelling men and women who met the following inclusion criteria: 60 years of age or older, living in the Muang district, Phayao Province, Thailand, and able to verbally communicate in Thai language. Potential participants were not included in the study, if they could not repeat back the purpose of the study to assure they were cognitively intact and understood the study. The sample size of 330 exceeded the recommendations for factor analysis by Pett, Lacky, and Sullivan (2003) of 300 participants. This study was approved by the Ethical Review Committees of the University of Phayao, Thailand. All potential participants signed the informed consent prior to participation and data collection. All participants preferred researchers to read the questionnaires to them.

Instruments

The questionnaires consecutively included demographic data, perceived health status, history of falls, FOF, the Thai Short-FFQ, the Thai CESD-10, the Thai Short FES-I, and the Thai GSA-10 scale. Before collecting data the instruments were pilot tested with 28 older adults who had similar characteristics with the target population to assess their internal consistency.

Demographic questionnaire and history of falls. Demographic data included age, gender, marital status, educational level, height, weight, health conditions, living situation, socioeconomic status, and perceived health status. The frequency of falls, fall injuries, FOF (yes/no and rating 1-10), and activity avoidance due to FOF were

included. For FOF, participants were asked, “Are you fearful or concerned that you might fall? If yes, how concerned are you that you might fall? Scores ranged from one to ten, with one being least concerned and ten being very concerned.

FOF Questionnaire FFQ (Short-FFQ). The FFQ was developed by Dayhoff, Baird, Bennett, & Backer (1994) to examine FOF based on Lazarus and Izzards’s conceptual definition of fear, appraisal of potential harm, and coping potential related to potential falls. It consisted of 20 items. Each item is rated on 4-point Likert scale (1= strongly disagree to 4 = strongly agree). The total score ranged from 20-80. The original FFQ had 4 factors including: physical harm, existential harm, coping potential, and fear. Noimontree and Lach (2017) developed the Short-FFQ by using the original FFQ with a total of 267 community-dwelling older adults in the U.S. Exploratory factor analysis yielded one factor of “harm outcomes” and included 6 items, with Cronbach’s alpha of .86. This scale was moderately correlated with the FES-I and rating of FOF.

After receiving permission to translate the Short-FFQ from the second author (HL), the first author (SP) and her team translated the Short-FFQ into Thai language using the procedure for cross-cultural instrument translation and adaptation (Phongphanngam & Lach, 2019). The process included forward translation by bilingual translators whose first language was Thai, back translation by bilingual translators whose first language was English. Then, three English versions (one original and two translated versions) were examined by the second author who is an expert in FOF and one of the developers of the short-FFQ. Finally, the Thai short-FFQ was pilot tested with older adults who had characteristics similar to the future population. It was determined that no words had to be changed or revised, which yielded the final the Thai short-FFQ.

Center for Epidemiologic Studies Depression (CESD-10) Scale. The original CES-D Scale was developed to assess the current level of depressive symptoms in the general population in the Community Mental Health Survey study by Radloff (1977). The original scale had 20 items that measured both positive and negative affects. The content in each item reflects how an individual has felt during the past week. Each item is scored using a 4-point scale of 1 to 4 (rarely or none of the time, some or a little of the time, occasionally or a moderate amount of the time, and most or all of the time). The CES-D was translated for use with Thai college students and depressed adolescents by

Vorapongsathorn, Pandii, and Traimchaisri (1990). The shorter CESD-10 was developed by a research group at Stanford University (Andresen, Malmgren, Carter, & Patrick, 1994). Scores for the CESD-10 range from 0 to 30, with a higher score indicating a greater depressed mood. The CESD-10 cutoff score for depression of 10 had an excellent correlation with the cutoff score of 16 for the original CES-D [k = .97, p < .001] (Andresen et al., 1994).

Short-Falls Efficacy Scale-International (FES-I). The FES-I was developed to assess FOF in terms of concern about falling while performing 16 activities included basic and instrumental activities of daily living (Yardley et al., 2005). Each activity is scored from 1 [not at all concerned] to 4 (very concerned) points, resulting in a total score ranging from 16 (absence of concern) to 64 [extreme concern], with higher scores reflecting higher level of concern about falling (Yardley et al., 2005). The Short-FES-I developed in 2008 consists of seven items given a possible score range from 7 to 28. The resulting total score can be used to categorize level of concern about falling into three groups: low concern [score 7-8], moderate [score 9-13], and high [score 14-28] (Kempen et al., 2008). The FES-I has been translated for use and shown to have excellent psychometric properties across community-dwelling sample populations in various countries included Thailand (Phongphanngam, 2015; Thiamwong, 2011).

Geriatric Anxiety Scale-a Ten-item Short Form (GSA-10). The original GSA is a 25-item self-report questionnaire used to determine anxiety symptoms including somatic, cognitive, and affective domains in older adults. It is scored using a 4-point Likert scale ranging from 0 (not at all) to 3 (all of the time), with total score ranging from 0-75 and higher scores indicating more severe anxiety (Segal, June, Payne, Coolidge, & Yochim, 2010). The shorter GSA-10 was developed in 2015 for use with older adults living in community and in the clinical setting with the scoring system ranging from 1-30. Total raw scores of 1-6, 7-9, 10-11, and 12-30 indicate that participants have minimal, mild, moderate, and severe anxiety, respectively (Mueller et al., 2015). Permission was obtained from the tool developer Dr. Segal, and the GSA-10 was translated using the same method used for the Short-FFQ.

Data Analyses

Descriptive statistics were used to characterize the sample and assess the scores on each instrument. The research question of this study was “Does the Thai Short-FFQ have the same psychometric properties as the English Short-FFQ?” Principle component factor analysis was

performed to examine the factor structure of the Thai Short-FFQ. Correlation analyses (Person and Spearman rho) were used to assess 1) convergent validity between the Thai Short-FFQ and the 1-10 FOF rating scale raw score, 2) concurrent validity between the Thai Short-FFQ and the Thai Short-FES-I raw score, and 3) divergent validity among the Thai Short-FFQ, the Thai CESD-10, and the Thai GAS-10. It was hypothesized that the correlations between the Thai Short-FFQ with the FOF rating scale and the Thai Short-FES-I would be moderate to high, while the relationships between the Thai Short-FFQ with the Thai CESD-10 and the Thai GAS-10 would be low as mentioned from the original study testing the FFQ (Dayhoff et al., 1994). Internal reliability of each questionnaire was assessed using Cronbach's Alpha (α). Multiple regression was conducted to determine relationships among FOF and associated factors. Prior to performing factor analysis, correlation, and regression, the data and the assumption of each statistics methods were examined for suitability with the selected methods (Pallant, 2013; Tabachnick & Fidell, 2013).

Results

Characteristics of the Participants

The demographic characteristics of the 330 participants are described in Table1. The mean age of participants was 69.92 years (SD = 7.11) with an age range of 60-93, and 214 (64.8%) were women. Most participants were married (61.1%), living with a family member (58.4%), had primary school educational (68.2%), and received government monthly welfare (94.8%). Approximately 50.0% of participants reported that they had good health status. Most participants (76.7%) reported that they had medical conditions (range=1-7, mean=1.95, SD=1.03). The most common medical conditions reported were hypertension (44.2%), dyslipidemia (25.5%), and diabetes mellitus (14.5%). The mean number of medications used was 1.89 (SD = 1.93; range=0-9). Only 14 out of 330 participants (4.2%) scored in the depressed range on the Thai CESD-10 depression. The mean score on the Thai GSA-10 was 2.15 (SD = 2.52; range = 0-14). Most participants (60.0%) reported that they had minimal anxiety, followed by no anxiety (33.9%), mild anxiety (4.2%), moderate anxiety (.6%), and severe anxiety (1.2%).

Of participants, 93 (28.2%) had fallen in the past year (mean = .5; SD = 1.18; range = 0-10), including 13.9% with one fall, and 14.3% with more than one. Among those who reported they had fallen, 57.0% reported that they had been injured as a consequence of falling. FOF

was reported by 93.6% of participants, with a high mean rating of 7.16 out of 10 (SD = 2.65; range 1-10). The mean score on the Thai Short-FFQ was 20.83 (SD = 2.91; range 11-24). Falls self-efficacy scores were moderate, with the mean score on the Thai Short-FESI scale of 18.33 (SD = 5.61; range 7-28), including 6.1% low concern, 15.2% moderate concern, and 78.8% high concern. Overall 79.7% of participants mentioned that they had restricted their activities due to FOF, (sometimes 66.2%, often 20.1%, rarely 12.9%, and very often .8%; Table 2).

Table 1 Demographic Characteristics of Sample (N=330)

Characteristics	N	%
Gender		
Male	116	35.2
Female	214	64.8
Age range 69-93 years mean = 69.92 years (SD = 7.11)		
Marital Status (n=329)		
Single or never married	16	4.9
Married	201	61.1
Divorced	13	4.0
Widowed	91	27.7
Separated	8	2.4
Level of Education (n=329)		
No formal school	58	17.6
Primary school	225	68.4
Secondary school	26	7.9
High school or diploma	5	1.5
College	5	1.5
Bachelor	9	2.7
Master or higher	1	.3
Living arrangement (n=329)		
Living alone	57	17.3
Living with spouse/partner	80	24.3
Living with other family members	101	30.7
Living in extended family	91	27.7
Source of Income (can select more than 1)		
Government monthly welfare	313	94.8
Pension	16	4.8
Working	163	49.39

Table 1 continued

Characteristics	N	%
Support by family members	72	21.8
Medical Conditions (can select more than 1) selected only top 10		
None	77	23.3
Hypertension	146	44.2
Hyperlipidemia	84	25.5
Diabetes Mellitus	48	14.5
Back or neck pain	21	6.4
Osteoarthritis	20	19.3
Gout	17	5.2
Osteoporosis	16	4.8
Visual problems	16	4.8
Gait impairment	15	4.5
Benign Prostatic Hyperplasia (BPH)	9	2.7
Number of medical conditions range = 1-7 mean = 1.92 SD = 1.36		
Number of medications range 0-9 mean = 1.89 SD = 1.93		
Self-rated Health Status		
Excellent	15	4.5
Very good	28	8.5
Good	168	50.9
Fair	113	34.2
Poor	5	1.5

Table 2 Falls and Fear of Falling Characteristics of the Sample (N= 330)

Variable	n	%
Number of falls		
0	237	76.8
1	46	13.9
2 or more	47	14.3
Range 0-10 Mean = .5 SD = 1.18		
Fall injury (n=93)		
Yes	53	57.0
No	40	43.0
Fear of falling		
Yes	309	93.6
No	21	6.4
FOF rating scale (1-10) mean = 7.16 SD = 2.65		
Do you have limited your activity because of FOF?		
Yes	263	79.7
No	67	20.3
How often do you limited your activity due to FOF? (n = 263)		
Rarely	34	12.9
Sometimes	174	66.2

Table 2 continued

Variable	n	%
Often	53	20.2
Very often	2	.8
Short-FES-I score (total score = 7-28)		
Low (score = 7-8)	20	6.1
Moderate (score = 9-13)	50	15.2
High (score = 14-28)	260	78.8

Reliability

Internal reliability of the Thai Short FES-I for the pilot test (n = 28) was .87, and .91 for the full sample (n = 330); .62 and .76 for the Thai CESD-10; and .84 and .80 for the Thai GSA-10, respectively. For the Thai Short-FFQ, internal consistency for the pilot testing was .76 and for the study was .91. The alpha did not improve significantly with deletion of items.

Construct Validity of the Short FFQ Thai Version

In order to examine the internal structure of the Thai Short-FFQ, PCA (listwise deletion) was used. The result showed the presence of one component with an eigenvalue exceeding 1 that explained 68.72% of the variance (see Table 3). In order to help determine the number of components, Monte Carlo PCA for Parallel Analysis was conducted (Pallant, 2013; Watkins, 2006), that also suggested that only one component was suitable.

Table 3 Mean, Standard Deviation, and Component Loading of the Items on the Short FFQ Thai Version (item range 1-4; n = 330)

Item	Mean	SD	Single Component
1	3.43	.63	.91
2	3.48	.60	.90
3	3.36	.57	.86
4	3.58	.57	.83
5	3.45	.58	.76
6	3.53	.58	.68

Convergent and Concurrent Validity of the Thai Short-FFQ

For convergent validity, a Person's product-moment correlation of the Thai Short-FFQ with the FOF Rating Scale yielding a moderate correlation (r = .37; p < .001; n = 309). The Person's product-moment correlation was performed to

assess concurrent validity for the Thai Short-FFQ with the Thai Short-FES-I which was also demonstrated a moderate relationship (r = .46; p < .001; n = 330).

Divergent Validity of the Thai Short-FFQ

The Spearman Rho correlation of the Thai Short-FFQ with the Thai GAS-10 yielded a weak relationship (r = .25; p < .001; n = 330), while the correlation between the Thai Short-FFQ and the Thai CESD-10 did not meet significance (r =-.05; n = 330).

Factors related to FOF

Standard multiple regression was conducted to explore factors related to FOF in terms of appraisals of harm. The Thai Short-FFQ was used as the dependent variable. The independent variables were significantly related to the Thai Short-FFQ based on correlation analyses in this study. This included visual impairment (r=.15; p<.01; n=330), Thai GAS-10, and Thai Short-FESI. It was found that the model was statistically significant (R^2=.23, *Adjusted* R^2=.23, F (3, 326)=33.05, p< .001) and only the Thai Short-FESI (*beta*=.43, p<.001), and the Thai GAS-10 (*beta*=.13, p<.05) were statistically significant.

Discussion

The purpose of this study was to examine the psychometric properties of the Thai Short-FFQ in community-dwelling older adults and associated factors. In this study, we translated the Short-FFQ and the GSA-10 into Thai language employing a rigorous translation procedure as recommended in the literature (Phongphanngam & Lach, 2019). The results of the present study reveal that both translated instruments have excellent internal consistency in Thai older adults. Regarding construct validity, the Thai Short-FFQ revealed that it has one component as in the Short-FFQ. It also has excellent convergent, concurrent, and divergent validity. The results were congruent with the hypotheses of this study and the results from the original FFQ (Dayhoff et al., 1994) and the Short-FFQ (Noimontree & Lach, 2017) studies.

In the present study, even though almost all participants were independent and functional older adults, they reported that they had FOF and levels were high as found in the previous studies in Thai older adults living in community (Phongphanngam, 2015; Sangpring, Vongsirinavarat, Hiengkaew, & Kaewkungwal, 2012; Thiamwong, 2011; Thiamwong & Suwanno, 2017). This is higher than the study of Noimontree and Lach (2017) conducted in the U.S., that found that a mean score on the FOF rating scale was

4.37 and a mean score on the Short-FFQ was mean = 15.07 (SD = 3.84, range 6-24). Prevalence of FOF and level of FOF found in this study was also higher than other studies worldwide (Brustio et al., 2018; Chang et al., 2016; Kempen et al., 2008; Lipardo et al., 2019).

Regarding factors associated with FOF, the findings from this study reveal that visual impairment, falls self-efficacy, and anxiety were significantly correlated with FOF. These findings were congruent with previous research (Hoang et al., 2017; Payette et al., 2017; Thiamwong & Suwanno, 2017). In addition, FOF was not significantly correlated with depression, whereas other studies found that depression had significant relationship to FOF (Hoang et al., 2017; Payette et al., 2017). Differences in results may be due to the use of different instruments for measuring FOF and depression, or cultural differences as we found high levels of FOF.

Despite recruiting a simple random sample from a list of older adults from different communities; we acknowledge our study has some limitations. The questionnaire items were read to participants; therefore, it is not known whether this influenced their responses which might have been different if they were self-administered. A second limitation is that almost all participants in this study had primary school of education and lived in rural area. Hence, responses might not be the same as those from participants with higher level of education or those who live in urban and/or suburban areas.

Conclusion

The results from this study reveal that the Thai Short-FFQ has excellent psychometric properties in terms of reliability and validity. Therefore, it is ready to use in future study aimed at examining FOF in terms of fear rather than concerns about falling or falls self-efficacy, which could improve methods for assessing FOF. Cross-sectional study and prospective longitudinal studies are needed to examine factors related to FOF as measured by using the Thai Short-FFQ and to observe the tool's sensitivity to change. Research aimed at preventing or reducing FOF should include the Thai Short-FFQ as an instrument for determining older adults' fear about falling since they can have profound effects on FOF of older adults. In terms of FOF, the results from this study suggest that depression and anxiety should be given more attention and included in an intervention program aimed at reducing FOF in older adults.

Declaration of Interest

The authors report no conflict of interest.

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