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Fall Concerns among Carers of an Older Person

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Abstract

Older people fall at least once a year, resulting in many devastating complications that affect the older person and the carers. Many carers are concerned that the older person will fall. Three hundred ninety carers of an older person participate in this study. The study found that the carers have a high level of fall concern. The level of concern was significantly associated with the demographic variables of the older person and the level of depression, stress, anxiety, and strain. Hence, there is a dire need for a fall prevention programme and educational program for the carers.

Keywords: fall; carers; fall concerns; elderly.

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1.0 Introduction

In Malaysia, the elderly population is growing every year, contributing to an ageing country. The ratio of the population aged 65 years and older (old age) rose from 6.7% in 2019 to 7.0% in 2020 (Department of Statistic Malaysia (DOSM), 2020). By 2030, Malaysia is expected to become an ageing nation where 15% of the overall population is older (Rashid, S. A., 2016).

Falling is always regarded as a natural aspect of the ageing process. An older person is susceptible to falls due to a decrease in physical, cognitive and affective capacities and co-morbidities associated with chronic diseases (Yeong et al., 2016). Low balance and gait, medication, joint weakness disorders, impaired cognition resulting in low safety awareness, low vision, environmental causes, and unsuitable footwear are the most common modifiable risk factors for falls (Odasso & Camicioli, 2020). Most physical and psychological impairments are due to a natural phase of ageing (Byun, Kim & Kim, 2020).

Falls also have significant implications for carers of an older person. Some caregivers reported hurting themselves while trying to prevent falls or help the care recipient get up from the falls (Davey et al., 2004). Falls put an increased burden on caregivers by altering their routine and reducing their social activities, putting them at risk of psychological distress and social alienation for the caregivers (Dow et al., 2013). A greater level of depression is experienced by the caregivers caring for the older person with a high fall risk expectation in a general elderly population (Meyer et al., 2012). The need for social support among caregivers is essential when taking care of an older person. An increase in the number of persons who provided aid to the caregivers when taking care of an older person decreased their burden (Salama, 2012).

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A study reported that caregivers experienced similar fall-related concerns as their older person (Faes et al., 2010). They were apprehensive about leaving their family members alone and afraid of the probability of having severe accidents (Faes et al., 2010). Fall-related concern increases the caution of an individual; over-estimating the risk of falls often leads to excessive restriction of physical and social activities leading to deconditioning, functional deterioration and lower quality of life (Ang, O'Brien & Wilson, 2020). Four main themes that lead to caregivers' concern were the perception of falls and caregivers' fall risk, care recipients' behaviour and attitude toward the risk of fall, health and function, and the living environment of the care recipient (Marcus Ang et al., 2019).

Many current studies mainly focus on the older person, but not many studies focus on the role of carers in preventing falls. Hence, there is a need for this study to be conducted. This study aims to identify the level of fall concern among parents. The objectives are (1) To determine the level of concern among cares of an older person, (2) To determine the association between the fall concern with the strain of caring for the older person, stress, anxiety and depression among carers, (3) to identify the association between the concern on fall with the demographic characteristics of the older person and the carers. The healthcare professional can use the information obtained from this study to develop intervention strategies and discuss their fall concern to enhance fall prevention programmes and other related issues regarding caring for an older person at home.

2.0 Literature Review

The literature stressed that there are several complications of falls in an older person that lead to physical complications; fracture, functional deterioration, death, pain, mild injury and loss of mobility (Bekibele, & Gureje, 2010; Kwan et al., 2011; Odasso & Camicioli, 2020; Ngamsangiam & Suttanon, 2020). Falling also leads to psychological complications such as depression, stress, anxiety and activity restriction (Briggs et al., 2018; Bloch et al., 2014; Hull et al., 2013; Painter et al., 2012). Furthermore, falling and near to falling lead to fear of falling, social alienation, and limitation in activities of daily living (ADL), which eventually negatively impacts the general well-being of the older person. (Rogerson & Emes, 2008; Kwan et al., 2011; Fall & Lie, 2020).

The complications of a fall do not only affect an older person but also affect the caregivers who are taking care of them. In elderly care, home caregivers, who are usually family members, consider absolute necessary people in delivering care (Ng et al., 2016). Several studies have emphasized that the complication of falls toward the carer leads to increased bodily pain, reporting worse health, weight loss, anxiety, depression and poorer quality of life (Xie et al., 2016; Ho et al., 2009).

Hence, carers of the elderly with a high risk of falling experience increased levels of depression as a result of emotional and psychological disturbances such as anxiety, stress, concern, fear, shock, wrath, frustration and blaming themselves for their care recipient's fall (Dow et al., 2013; Ahmad Zubaidi et al., 2020; Faes et al., 2009). A study on caregivers taking care of older people showed moderate to severe burden and high psychological distress in caregiving (Abreu et al., 2020; Borsie et al., 2016). Caregivers of an older person with a higher risk of falls pose a significant strain on caregiving (Meyer et al., 2012).

The extent of burden in caregiving was associated with the social supports available; the number of visitors to the household (Zarit, Reever, & Bach-Peterson, 1980). Caregivers who have more daily interaction with family and friends would have greater psychological well-being (Fengler & Goodrich, 1979) and lower burden level (Zarit, Reever, & Bach-Peterson, 1980) than carers' who have less frequent contact with their social support network.

Apart from that, it is found that carers had a higher level of fall concerns than their care recipient (Shen et al., 2015). Caregivers, like their care recipient, had similar concerns about falls. It shows that carers suffer in the same way as older persons regarding fall worries (Ang et al., 2019), such as dread of unknown fall effects such as hospitalization or fractures and rejection of fall prevention recommendations (Faes et al., 2010). Caregivers who lack social support were found to be experiencing a higher level of stress than caregivers who perceive adequate social support (National Academies of Sciences, Engineering, and Medicine, 2016).

Concern regarding their care recipient's high risk of falling or having an accident at home lead to a constant state of worry regarding their safety, causing them to remain vigilant and reluctant to leave their care recipient alone, causes them to limit their social interaction with their friends, family and even spouse hence causing social withdrawal and increased their overall burden (Ang et al., 2020; Habermann & Shin, 2017).

Caregiving was associated with feeling frustrated, angry, drained, guilty or helpless due to providing care to the care recipient, losing self-identity, lower self-esteem, depression, constant concern, or uncertainty (McPherson et al., 2011). Feeling of being tied up, alone, uncertainty about the future and anxiety represent the pressures many caregivers live under (Nygaard, 1988). This adds to the carers' capacity to handle the challenge of caring for an older person.

3.0 Methodology

3.1 Research design

A quantitative cross-sectional study design was used to identify the level of fall concern among carers of an older person and its relationship with depression, stress, anxiety and strain. The data was collected among 390 caregivers of an older person from June 2021 to February 2022 through a purposive and snowball sampling strategy.

3.2 Method of data collection

The inclusion criteria for this study are (1) carer who provided support for older people in at least one activity of daily living (ADL), (2) caring for an older person aged 60 years and above and living in their own home (3) Caregivers provided care to the older person for at least three months. The participants were identified and selected through personal contact, face-to-face interview and a WhatsApp group. The participants who fit into the inclusion criteria were given a goggle link to the questionnaire. They also were encouraged to forward the questionnaire to other carers. The sample size was calculated using the Raosoft® sample size calculator (Raosoft, 2016). Based on the sample size calculator, with a statistical significance (alpha) of 0.05 (95% confidence interval [95% CI]), 384 participants are sufficient to provide 80% power of the study. Ethical clearance was obtained from the Universiti Teknologi Mara (UiTM), Research Ethics Committee {Ref. No. REC/06/2021 (MR/468)} prior to the study. All respondents were informed that their participation were voluntary, and they had provided consent before participating in this study. All the information from the respondent is kept private and confidential.

3.3 Research instrument

Four research instruments were used in this study. The instruments are (1) the demographic questionnaires of the carers and the older person, and (2) the 16 items of the Carers' Fall Concern Instrument (CFC-I) (Ang, O'Brien & Wilson, 2020) to measure the level of fall concern among carers to an older person, (3) the 21-items Malay version of the Depression, Anxiety, Stress Scale (M-DASS-21) (Musa et al., 2007) (4) the 13-items of the Malay version of Caregiver Strain Index (CSI-M) (Othman & Teck, 2014).

3.4 Method of data analysis

SPSS (Version 23.0) was used to determine the level of fall concern among carers, strain, depression, anxiety and stress. Pearson correlation coefficient test, was used to analyze the relationship between the fall concern with the demographic characteristics of the carers and the older persons, the level of strain, depression, anxiety and stress.

4.0 Findings

4.1 Descriptive analysis of the participants and the outcome measures

There are 390 carers of an older person who participate in this study. Most of the carers are female (79%, n=308), age between 18 – 35 years old (65.60%, n=256), having a tertiary educations (76.40%, n=298). Almost all carers look after someone closely related to them, such as their parents and grandparents (62.30%, n=244 and 26.90%, n=105), respectively. More than half of the participants have been staying with the person they cared for for more than five years (68.70%, n=268) and the mean of caring for the older person is 10.88 (6.84) hrs per day. More than half of the people they cared for are females over 71 years old. Almost all of the older people had a fall (94.61%, n=369), and the mean of falls is three times per life duration. The CFC-I indicates a high level of concern regarding falls to the person they cared for, with a mean of concern of 63.70(19.95). There are 188 carers (48.20%) who are experiencing strain as measured by the CSI. The stress, anxiety and depression, as measured by DASS-21, indicated a high level of stress, anxiety and depression among the carers. Most of the carers are having extremely severe anxiety (71.50%, n=276), severe stress (33.10%, n=129) and moderate depression (61.30%, n=239). The description of the carers, the older person, and the outcome measures results are shown in Table 1 below.

Table 1. Descriptive analysis of the participants and the outcome measures

No	Variables	Mean (SD)	Group	n (%)
1	Gender of carers	-	Male	82 (21.00)
			Female	308 (79.00)
2	Age	32.77(13.92)	18 – 35 years old	256(65.60)
			36 – 45 years old	48(12.3)
			46 – 60 years old	72(18.5)
			Above 60 years old	14(3.60)
3	Marital status	-	Single	230 (59.00)
			Married	136 (34.90)
			Widow/widower	24 (6.20)
4	Household income	-	Below RM 2500	169 (43.30)
			RM2501 – RM7000	155 (39.70)
			Above RM7001	66 (16.90)
5	Education	-	Did not go to school	2 (0.50)
			Primary education	4(1.00)
			Secondary education	86(22.10)
			Tertiary education / University	298(76.40)
6	Relationship with the older person	-	Parents (father/mother)	244(62.30)
			Grandparents (Grandmother/father)	105(26.90)
			Relatives	3(0.76)
			In-laws (Father / Mother)	24(6.15)
7	Duration of staying with the older person	54.14(61.78)	Husband / Wife	14(3.60)
			3 – 60 months	268(68.70)
			61 – 120 months	72(18.50)
			121 – 181 months	23(5.90)
			182 – 241 months	19(4.90)

8	Duration of caring for an older person (hrs/day)	10.88(6.84)	Above 242 months 3 – 6 hours per day 7 – 10 hrs per day 11 – 14 hrs per day	8(2.10) 142(36.40) 66(16.90) 109(27.90)
9	Age of the older person cared for.	72.39(8.56)	Above 15 hrs per day 60 – 70 years old 71 above	73(18.70) 176(45.10) 214(54.90)
10	Gender of the older person	-	Male Female	117(30.00) 273(70.00)
11	Older person have chronic diseases.	-	Yes No	294(75.4) 96(24.60)
12	History of falls	-	Yes No	369(94.61) 21(5.40)
13	Number of falls	-	No fall 1 – 3 times 4 – 7 times 8 – 10 times	21(5.40) 159(40.80) 193(49.50) 17(4.40)
14	Caregiver Strain Index (CSI)	5.85(3.91)	Scores 6 and below greater level of stress. (scores >7)	202(51.80) 188(48.20)
15	Carers Fall Concern (CFC-I)	63.70(19.95)	-	-
16	Anxiety	23.70(9.15)	Normal (0 – 7) Mild (8 – 9) Moderate (10 – 14) Severe (15 – 19) Extremely severe (20+)	32(8.20) 6(1.50) 24(6.20) 49(12.60) 276(71.50)
17	Stress	25.61(9.36)	Normal (0 – 14) Mild (15 - 18) Moderate (19 - 25) Severe (26 - 33) Extremely severe (34+)	53(13.60) 25(6.40) 98(25.10) 129(33.10) 85(21.8)
18	Depression	21.89(8.96)	Normal (0 – 9) Mild (10 - 13) Moderate (14 - 20) Severe (21 - 27) Extremely severe (28+)	- - 239(61.30) 64(16.40) 87(22.30)

4.2 Association between the fall concern with the demographic characteristics of the participants and the older person, carers strain, stress, anxiety and depression among the carers.

The results indicate a positive, strong correlation ($p < 0.05$, $r < 0.50$) between fall concern as measured by the CFC-I with the duration of care, age of the older person, number of falls, the strain of caring (as measured by the CSI) for the older person, anxiety, stress and depression among the carers (as measured by the DASS-21) as shown in table 2 below.

Table 2. Correlation between the fall concerned with the demographic and the outcome measures.

Variable	1	2	3	4	5	6	7	8	9	10
1. CFC-I	-									
2. Age of the carers	-0.09	-								
3. Duration of staying with the older person	0.03	0.10	-							
4. Duration of care /day	0.49	0.03								
5. Age of the older person	0.19*	0.02	0.00**	-						
6. Number of fall	0.00	0.67	0.96	-0.03	-					
7. CSI	0.10*	0.20**	0.18**	0.03	0.47					
8. Anxiety	0.71**	-0.13	0.01	0.22**	0.04	-				
9. Stress	0.00	0.006	0.74	0.00	0.34					
10. Depression	0.55**	-0.03	0.05	0.35*	0.12*	0.69**	-			
	0.00	0.49	0.27	0.00	0.01	0.00				
	0.85**	-0.08	0.04	0.12*	0.15**	0.56**	0.46**	-		
	0.00	0.10	0.40	0.01	0.00	0.00	0.00	0.00		
	0.85**	-0.07	0.04	0.13**	0.15**	0.56**	0.46**	0.99**	-	
	0.00	0.11	0.39	0.00	0.00	0.00	0.00	0.00	0.00	
	0.15**	-0.16**	-0.09	0.07	-0.12*	0.10*	0.14*	0.07	0.07	-
	0.00	0.00	0.06	0.11	0.01	0.04	0.00	0.15	0.12	

** Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed).

5.0 Discussion

This study aimed to identify the level of fall concern among carers of an older person and its relationship with depression, stress, anxiety and strain. This study found that the caregivers have a high level of fall concern and higher than in a previous study (Ang, O'Brien, & Wilson, 2019). In addition, this study also found that the fall concern in carers is associated with strain, anxiety and depression, which is similar to a previous study (Vo, et al., 2020). This may be because the carers constantly worry about the care recipient falling and the possible fall consequences, such as a fracture and increased dependency on ADL (Ang, O'Brien, & Wilson, 2019). Similarly, carers tend to constantly fear and anxiety about leaving the care recipient alone (Faes, Reelick, Banningh, & Gier, 2010). Another study state that although low strain level, caregivers still experience strain and burden when caregiving. This may be because many caregivers may perceive caregiving of an older person as a normal part of life, aligned with cultural values, faith, personal and religious belief, synonym with the concept of filial piety, which is often practised in Eastern society, or they may have difficulty to express their strain (Aman et al., 2020).

Furthermore, the result showed that the higher level of carers' fall concern, the higher the depression, anxiety and stress scale. Carers of care recipients with a high fall risk expectation had higher levels of depression than the general aged population (Meyer et al., 2012). In addition, carers' primary concern was the risk of older people falling; nevertheless, evidence suggests that carers are also concerned about the other implications of a fall, leading to high depression among carers. This result is correlated with the study that showed a high risk of falls is associated with a higher level of anxiety (Hallford et al., 2016). Anxiety was significantly associated with fear of falling, fall-related self-efficacy, balance confidence, and outcome expectation (Hull, Kneebone, and Farquharson, 2013).

Hence, a previous study showed a high level of carers' fall concern for care recipients associated with a high-stress scale (Davey et al., 2004). This may be due to the burden of caregiving and occupational deprivation for carers. Fall concern toward care recipients did have psychological effects on carers, such as psychological distress resulting from prolonged stress of caregiving (Ang, O'Brien & Wilson, 2018; Dow et al., 2013). In addition, expectations of filial piety, which is the caregiving of parents as their older in Asian populations, may cause stress for those who are unable to carry out this role (Ang, O'Brien & Wilson, 2018).

Another finding of this study is that there is a strong correlation between fall concern with the duration of care, age of the older person and number of falls. More than half of the carers had a significant increase in concern when the care recipient had their first fall incident, and this is due to the frailty that is experienced by the older person (Dow et al., 2013). A similar study showed that caregiver gender, their relationship with the care recipient, hours of care devoted to caregiving, the care recipient's age, gender, the caregiver's financial status and informal social support were all significantly associated with a higher degree of caregiver burden (Salama, 2012). Regardless of the frequency of previous falls, caregivers of frail older people expressed concern about the unknown implications of a fall, such as fractures or hospitalization (Faes et al., 2010). This result is similar to a study showing that older women with a history of falls have a more significant concern of fall concern, lower health and quality of life, and poorer functional ability (Patil et al., 2014). Being a female spouse who receives minimal informal assistance and assumes more daily caregiving hours is connected with higher levels of caregiver strain (Salama, 2012).

6.0 Conclusion

This study showed that fall concern among carers of an older person was associated with carers strain, depression, stress and anxiety. Duration of care, the age of the elderly person, and the frequency of falls were also associated with fall concerns among carers of an older person. Hence, this study will provide a better understanding of the issues faced by the elderly and their caregivers. Moreover, the study has a significant impact on the community. It raises community knowledge of the needs of older people, allowing them to provide help customized to the unique limitations experienced by older people and their carers. This study can assist in the field of occupational research by providing more perspectives and understanding for caregivers in their fall concerns about elderly people, as well as assisting elderly people in finding opportunities to engage in meaningful work and setting goals or objectives that allow them to live their lives to the fullest. Due to pandemic Covid19, the study has limitations in distributing the questionnaire as the study can only collect data through the online method. Therefore, a broader survey that includes many different populations in Malaysia in various settings is proposed for future study.

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Paper Contribution to Related Field of Study

This research will provide insight into caregivers' concerns, encourage a greater understanding of caregiving for older persons, and potentially allow personalized interventions based on caregivers' concerns. Evaluating caregivers' concerns would provide healthcare professionals with an alternate viewpoint to consider the older person's fall risk and the caregivers' needs for more support at home. This research also encourages healthcare professionals to engage caregivers and discuss carers' fall concerns to strengthen fall prevention strategies for home care recipients and determine whether caregivers have a correct evaluation of fall risk report assessment.

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