International Journal of Public Health Asia Pacific *Open Access: E-Journal*
ISSN: xxxx-xxxx (Online)

Factors affecting caregiver's performance of rehabilitation care for elderly dependents at Mae Sot District, Tak province

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ABSTRACT

Background: Care giver is a very important person who takes care of elderly group for health rehabilitation and wellbeing with quality of life.

Objectives: This descriptive study aimed to study either selected factors associated or jointly predicting factors affecting caregiver's performance of rehabilitation care for elderly dependents at Mae Sot district, Tak Province.

Method: Population consisted of 150 caregivers who had completed training elderly care program within 70 hours which were registered in Mae Sot district, Tak Province, in fiscal year 2020, and the sample size calculation used Daniel formula for 107 cases, and systematic random sampling was performed for collecting data. Data collected by questionnaires composed of 7 parts including, characteristics, predisposing factors (knowledge, attitude, health perception), enabling factors, reinforcing factors, and performance of elderly care dependents. In addition to checking questionnaire standardization, validity was checked by 3 experts and tried out testing reliability by Cronbach's coefficient alpha about 0.86. Data was analyzed by using statistical as Pearson product moment correlation coefficient and stepwise multiple regression analysis.

Results: An association analysis found that, knowledge of elderly' health problem was associated with caregiver's performance of rehabilitation care for elderly dependents at Mae Sot district, Tak Province with statistic significant (r=0.291, P-value =0.002). Prediction model analysis reported that knowledge of elderly' health problem and caregiver education sorted out factors with 15.1%.

Conclusion: Thus, improving knowledge of caregiver is very necessary which affects attitude and skill of rehabilitation care for elderly group, to support training process and practice.

Keywords: Caregiver**,** Elderly dependents

1. Introduction

The United Nations (UN) defined aging society as people aged 60 years and more about 10% or aged more than 65 years for 7%. Moreover, if the proportion of people aged more than 60% accounting for 20% as called “complete aged society”. In Thailand, the next twenty year or in 2035 an estimated people aged more than 60 years about 30% as “super aged society” [1]. The report from Tak province showed the number of elderlies in 2016 accounting for 57,191 cases, which is 5.07% as elderly dependents who will receive holistic health care in physical, mental health from health service system as called long term care (LTC). The result from health status assessment of elderly group in 2016 reported that elderly groups who received treatment continuously such as; elderly patient with congenital disease (69.4%), elderly dependents (0.7%) and elderly’ long term care (8.1%) [2].

The elderly’s health problem may affect quality of life of elderly and daily life activities, don’t get health service system accessibility, lack of health rehabilitation continuously. Moreover, the performance of family member for elderly care tend to be decreasing, particularly the workforce age group moving as labor to capital city and social community is changing from rural to urban. In addition, all problems affect health status and health care among elderly dependent groups. Particularly, the number of elderlies who has been only living still increased, if we compare the proportion between the workforce age and elderly group about 4.5:1, in the future, this proportion may decrease to 2.5:1. Thus, the proportion of caregiver who are responsible to take care elderly is not enough [3].

In Thailand, Ministry of Public Health by Department of Health set the training program for caregiver as guideline for caregiver’s performance of rehabilitation care for elderly dependents. The training is the best way to improve caregiver’s performance of rehabilitation care for elderly dependents. To encourage caregiver, family member was participated in rehabilitation care for elderly dependents in community. In addition, the researcher would like to know the factor affecting caregiver’s performance of rehabilitation care for elderly dependents and apply these factors to create appropriate program for caregiver in Tak Province. Therefore, this present study aimed to study either selected factors like characteristics, predisposing factors (knowledge, attitude, health perception), enabling factors, (reinforcing factors) association or jointly predict factor affected caregiver’s performance of rehabilitation care for elderly dependents at Mae Sot district, Tak Province.

2. Methodology

An analytical cross-sectional study was carried out with independent variables including; characteristic, (knowledge, attitude, health perception), enabling factor, reinforcing factor follow the theory as Green and Kreuter [4]. Dependent variable was caregiver's performance of rehabilitation care for elderly dependents at Mae Sot district, Tak Province. Population was 150 caregivers which were registered in Mae Sot district, Tak Province, in fiscal year 2020, and completed 70 hours training for elderly care program. Sample size was calculated using Daniel [5] formula for 107 cases, systematic random sampling was determined.

2.1 Research instruments

Data collecting by questionnaires composed of 7 parts including,

Part 1: Characteristic of caregiver were as follow: age, sex, religion, marital status, education completed, occupational, average family income, experience' elderly care, family member relationship

Part 2: Knowledge variables were as follows: elderly' health problems, elderly' health care. A categorical variable which had three categories, defined as "yes", "no" and "not sure". Scale items were composed of both positive and negative statements. For interpretation the score used Bloom theory [6] classified as 3 level such as; high level (score ≥80%) moderate level (score 61%-79%) low level (score ≤60%).

Part 3: Attitude variables were as follows: elderly health, elderly health care. Attitude were measured on five-point likert scales with response options ranging from strongly disagree, disagree, uncertain, agree, to strongly agree. Scale items were composed of both positive and negative statements.

Part 4: Health perception variables were as follows: risk perceive, severity perceive, benefit perceive, barrier perceive. Perceptions were measured on five-point likert scales with response options ranging from strongly disagree, disagree, uncertain, agree, strongly agree. Scale items were composed of both positive and negative statements.

Part 5: Enabling variables were measured on five-point likert scales with response options ranging from strongly disagree, disagree, uncertain, agree, strongly agree. Scale items were composed of both positive and negative statements.

Part 6: Reinforcing variables were measured on five-point likert scales with response options ranging from strongly disagree, disagree, uncertain, agree, strongly agree. Scale items were composed of both positive and negative statements.

Part 7: Caregiver's performance variables were as follows: take oral drug, blood pressure, pulse, heart rate, retained foley catheter, dry dressing, wet dressing, tepid sponge, suction, nasogastric tube, oxygenation therapy. Caregiver's performance was measured on five-point likert scales with response options ranging from strongly disagree, disagree, uncertain, agree, strongly agree. Scale items were composed of both positive and negative statements.

For interpretation the score part 3, 4, 5, 6 and 7 follow as Best John theory [7] classified as 3 level by mean score such as; high level (score 3.67–5.00), moderate level (score 2.34–3.66) low level (score 1.00–2.33)

The questionnaire was checked for completeness and satisfactory content validity and approved by 3 experts in health promotion field. The reliability of the likert scales was tested on 30 caregivers' elderly and tried out testing reliability [8] about 0.86.

2.2 Data analysis

Data was analyzed by using statistical as Pearson product moment correlation coefficient and Stepwise multiple regression analysis.

3. Results

Table 1 shows the basic characteristics of the study population. Most of the caregiver were women (91.6%), average age was 35-55 years (62.6%) (41.95±11.75, range 18-73). Most of the women (67.3%) were married or had a partner. The 60.7% of women had secondary education and 40.2% of women were house working. Average household income between 5,000 to 15,000 baht (14,970.07±18,426.80, range 0-99,900). Most of the elderly were their parents (68.2%), caregiver's experience less than 5 years (62.6%) (5.59±6.40, range 1-30).

Table 1: General characteristics of caregiver' elderly (n=107)

Characteristics	Number	Percentage
Sex		
Male	9	8.40
Female	98	91.60
Age group (years)		
>35	29	27.10
35-55	67	62.60
<55	11	10.30
Mean = 41.95, S.D.= 11.740, Min =18, Max =73		
Marital Status		
Single	18	16.80
Married	72	67.30
Widowed/Divorced	17	15.90
Education		
Not study	2	1.90
Primary school	21	19.60
Secondary school	65	60.70
Diploma	9	8.40

Characteristics	Number	Percentage
Graduate or higher	10	9.30
Occupation		
No work	5	4.70
House working	43	40.20
Company general employee	23	21.50
Government service	3	2.80
Merchant/ Business	11	10.30
Agriculture worker	22	20.60
Average family income (Baht/Month)		
> 5,000	29	27.10
5,000 – 15,000	50	46.70
< 15,000	28	26.20
Mean =14,970.07, S.D.= 1,426.84, Min = 0, Max = 99,900		
Duration time for elderly' care practicing (years)		
> 5	67	62.60
5-10	26	24.30
< 10	14	13.10
Mean = 5.59, S.D.= 6.400, Min = 0, Max = 30		
Relationship with elderly		
Parent	73	68.20
Others	34	31.80

Table 2 presents the percentages of dependent variables with high, medium and low level. Predisposing factors including; knowledge, attitude and health perception factor. Considering, knowledge factor had mean score with high level (2.35±0.586) such as; knowledge of elderly health problems (55.1%) and knowledge of elderly health care (50.5%), respectively. Attitude had mean score with high level (2.92±0.264) such as; attitude of elderly health (66.4%), attitude of elderly health care (99.1%), respectively. Health perception had mean score with high level (2.93±0.248) such as benefit perceive (99.1%) severity perceive (96.3%) risk perceive (93.5%) and barrier perceive (71%), respectively. Enabling factors had mean score with high level (2.95±0.212) and reinforcing factors had mean score with high level (2.99±0.090).

Table 2: Level of knowledge, attitude, health perception, enabling factors and reinforcing factor

Variables	Levels (%)			Mean	SD.
	High	Moderate	Low		
Knowledge	41.10	53.30	5.60	2.35	0.586
- Knowledge of elderly' health problems	55.10	27.10	17.80	2.37	0.771
- Knowledge of elderly' health care	50.50	43.90	5.60	2.44	0.602
Attitude	92.50	7.50	-	2.92	0.264
- Attitude of elderly' health	66.40	33.60	-	2.66	0.474
- Attitude of elderly' health care	99.10	0.90	-	2.99	0.09.6
Health perception	93.50	6.50	-	2.93	0.248
- Risk perceive	93.50	6.50	-	2.93	0.248
- Severity perceive	96.30	3.70	-	2.96	0.190
- Benefit perceive	99.10	0.90	-	2.99	0.966

Variables	Levels (%) High	Moderate	Low	Mean	SD.
- Barrier perceive	71.00	20.60	8.40	2.62	0.637
Enabling factors	95.30	4.70	-	2.95	0.212
Reinforcing factors	99.10	0.90	-	2.99	0.090

Table 3 is presented to investigate the associations of all factors and caregiver's performance of rehabilitation care for elderly dependents at Mae Sot District, Tak Province. The result showed that factor was associated with caregiver's performance of rehabilitation care for elderly dependents with statistics significantly including; education completed (r=0.187, P-value=0.05), knowledge of elderly health problems (r=0.291, P-value=0.002), respectively.

Table 3: Association between characteristics of caregiver, knowledge, attitude, health perception perceptions and caregiver's performance of rehabilitation care for elderly dependents.

Variables	Caregiver's performance of rehabilitation care for elderly dependents	
	Variables	P-value
Characteristics		
Education completed	0.187	0.050*
Knowledge	0.621	0.000
Knowledge of elderly' health problems	0.291	0.002*
Knowledge of elderly' health care	0.008	0.936
Attitude	-0.006	0.950
Attitude of elderly' health	0.046	0.640
Attitude of elderly' health care	0.073	0.455
Health perception	-0.035	0.721
Risk perceive	-0.093	0.338
Severity perceive	0.148	0.128
Benefit perceive	0.073	0.455
Barrier perceive	-0.150	0.124
Enabling factors	0.098	0.316
Reinforcing factors	-0.077	0.429

Note: *P-value <0.05

Table 4 is the prediction model that analyzed and reported two selected factors which can predict the caregiver's performance of rehabilitation care for elderly dependents including; knowledge of elderly' health problems (P-value<0.001), education completed (P-value=0.005), respectively. Overall selected factors accounted for 15.1% (R^2 =0.151) of the variance caregiver's performance of rehabilitation care for elderly dependents. The prediction model follows as: Y = 2.575+ [0.294* knowledge of elderly' health problems]+ [0.201*education completed]

Table 4: Factors predicting caregiver's performance of rehabilitation care for elderly dependents

Predicting factors	B	S.E.	Beta	t	P-value
1. Knowledge of elderly' health problems	0.294	0.039	-0.349	-3.771	<0.001
2. Education completed	0.201	0.078	0.265	2.857	0.005
Constant	2.575	0.256	-	10.044	<0.001
Constant = 2.575, F = 9.259, P-value<0.001, R = 0.389, R^2 = 0.151					

4. Discussion

The prediction model analyzed and reported two factors that predicted the caregiver's performance of rehabilitation care for elderly dependents, overall selected factors accounted for 15.1% (R^2 =0.151) of the variance caregiver's performance of rehabilitation care for elderly dependents including; knowledge of elderly health problem, education completed, respectively.

Knowledge of elderly' health problem was associated with caregiver's performance of rehabilitation care for elderly dependents. The findings in this study indicated that caregiver had the knowledge of elderly' health problem having mean score with high level (55.1%), the caregiver's knowledge of elderly' health problem was significant predictor of caregiver's performance of rehabilitation care for elderly dependents. Knowledge is very necessary because if caregiver have the good knowledge they can communicate and receive the health information to develop their performance of rehabilitation care for elderly dependents. Thus, the caregiver's performance has depended on the knowledge and skill from practicing, it may have the confidence to take rehabilitation care for elderly dependents, for instance; blood pressure measurement, wet dressing. Similarly, the concept theory by Green and Kreuter [4] revealed that knowledge is one keyword of predisposing factors as a basic factor that to encourage peoples present their behavior, particularly, how people presented the behavior, it depends on their educational experience. Besides, the knowledge is a major factor affecting individual behavior of person, as knowledge helps how to learn from the experience of people. Similarly, the theory by Ajzen and Fishbein [9] reported that if person have the confidence to present their behavior, their all behaviors have positive effect to themselves. Likewise, the other study founded that caregiver who was responsible to take care of elderly, they need the knowledge about elderly's health problem as elderly' physical changing, elderly' stress [10].

Education completed was associated with caregiver's performance of rehabilitation care for elderly dependents with statistically significant value (P-value=0.002). For the

result analyzed, most of caregivers completed secondary education with 60.70%. One possible reason, care giver who have high education, then, they have better knowledge too, thus, care giver used the knowledge to take care elderly' health and solve elderly' health problems. Moreover, caregiver who completed high education, they can search more health information from the other sources for example; health workers, website, or health care center. Care giver would like to know the important health information as called "demand on information" composed of; illness information, health care information. In order to, take the caregiver' knowledge solve elderly' health problem from elderly' changing into physical, mental, social and spiritual, abnormality symptoms. Similarly, the other study in Tak province [11] reported that the education level of family member was associated with caregiver who was responsible to take care of elderly in family.

5. Conclusion

As, result reported two factors affecting to caregiver's performance of rehabilitation care for elderly dependents including; knowledge of elderly' health problem and education completed respectively. In addition, the investigator will apply all factors to create the activity for caregivers to increase their performance so that, they can practice the rehabilitation health care for elderly dependents.

Acknowledgement

The authors thank the employees from Tak Public Health Provincial Office, and Mae Sot Hospital for supporting the investigator. We would like to thank the participants those completed the questionnaire.

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