

Knowledge of Care and Service Mind Behavior among Caregivers for the Elderly in Urban Areas of Udon Thani Province, Thailand

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Objective: To assess the knowledge of care, explore the service mind behavior among caregivers for the elderly and examine factors related to knowledge of care and service mind behavior among family caregivers for the elderly.

Materials and Methods: A cross-sectional descriptive survey was conducted among caregivers for the elderly in urban areas of Nong Samrong Municipality, Udon Thani Province by using a self-administered questionnaire. Data analyses were based on knowledge of care of the elderly revealing KR20 = 0.82 and service mind behavior showed Cronbach alpha = 0.93 and percentage, mean, SD, and 95% CI were used for description. The inferential statistics such as the independent sample t-test and ANOVA were used to test related factors.

Results: The present study found the response rate was 95.54%. The caregivers of the elderly mean score was 5.93 (SD 1.25), 95% CI 5.73 to 6.13; and service mind behavior mean was 3.65 (SD 0.028), 95% CI 3.59 to 3.70. Factors related to knowledge of elderly care among the caregivers were gender, marital status, education level, and career with statistical significance. In addition, the present study also found gender, marital status and career were statistically significant with the service mind behavior at p -value <0.05.

Conclusion: Family caregivers need to be educated, and knowledge promoted as well as service mind behavior for the elderly, factors such as gender, educational level, marital status, and career should be targeted.

Keywords: Knowledge of care, Service mind behavior, Caregiver

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Thailand's older population represents the second fastest growing group of the elderly in Southeast Asia⁽¹⁻³⁾. Changes in age structure taking place in Thailand reflect on the higher technology in medical care and the public health improvement have led to a higher age population. Average, on the life expectancy is 71 for men and 78 for women⁽²⁾. Future ageing population will occur even more rapidly, with the number of the elderly projected to increase to over 20 million by 2035, at that point, they will constitute over 30% of the country population⁽³⁾. Results of the decline fertility and longer lifespan affect family size and independency ratio. Health is a key concern for older people. The elderly with end stage chronic diseases and cancer have increased, the death rates are 80% to 85% and 25%, respectively⁽⁴⁾, and also depression, the estimated prevalence of depression in the older population ranges from 6% to 10%⁽⁵⁾. This ageing trend

is always accompanied with an increased disability and a terminal dependency. The trend expands the need for care of the elderly, and there is a concern for providing quality care in Thai society. The primary care role in Thai society for the elderly is within the family, particularly spouses and adult children^(5,6). In 2014, 85% of the elderly live with living children⁽³⁾, although the percentage that reported children as their main source of economic support decreased between 2011 and 2014⁽³⁾. They are the most important source of help and support from informal networks^(7,8).

The terms informal caregiver was family caregiver refer to an unpaid family member or relative⁽⁹⁾. In Thailand, the trend of care needs of dependent elderly is increasing due to the increased ageing population, along with the chronic diseases and disabilities, while the capacity of the families to take care of them is decreasing, resulting in increasing demand for institutional care⁽¹⁰⁾. Thus, almost all elderly who need long term care receive informal care provided by their own families and relatives⁽¹¹⁾. So the authority should be concerned with several issues that affect the quality

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of care of the elderly. Family members have provided care and support the number of patients living with illness. But the caregivers were not confident about their ability to manage illnesses, due to inadequate knowledge, attitude, and skill⁽⁹⁾. Improvement can be obtained through caregiver competency by teaching caregivers needed skills that will enhance patient safety. Family caregivers must be able to manage arrangements, identify the problems and basic needs of the elderly, plan, monitor the plan, and evaluate the plan for elderly care. However, given the caregivers essential role in caring for their family members and the hazards they face in doing so, their needs and capacities to provide care should be carefully assessed^(9,13). The present study aimed to assess knowledge of care, explore service mind behavior among caregivers for the elderly, and examine factors related to knowledge of care and service mind behavior among family caregivers for the elderly. To better understand the factors of caring for the elderly, this may help the authorities to develop interventions or policies to reduce health problems in ageing families.

Materials and Methods

The present study was a cross-sectional descriptive survey conducted in urban areas of Nong Samrong Municipality, Udon Thani Province. The study population was the caregivers who have lived with the elderly in their home for more than 6 months. The exclusion criteria were the caregivers for the elderly who had mental retardation or having any health problems which affected the usual care for the elderly and were incapable to participate in the research project. The sample size was calculated for the number of caregivers for the elderly using simple random sampling, and calculated based on a pilot study on the knowledge of care among caregivers for the elderly in similar areas as the study, which showed the mean knowledge of caregivers of the elderly was 5.12 (SD 1.35). The WinPepi sample size calculation was applied for confidence level = 95%, maximum acceptable difference = 4% of mean and size of population of 2,032 from the registration records at the Social Welfare Section of Nong Samrong Municipality, Udon Thani Province (2017). Thus, the sample size required 157 elderly caregivers.

The present study tool was a self-administrated questionnaire which was composed of three parts: general information, knowledge of care of the elderly and service mind behavior. The validity of this questionnaire was reviewed and approved by three

experts in the areas of ageing and gerontology. The reliability was also checked. The knowledge of care of the elderly revealed KR 20 = 0.82, and service mind behavior showed Cronbach alpha = 0.93. The knowledge of care of the elderly was composed of two important areas: the basic knowledge of care and case management when the elderly person was in troubled with chronic diseases, with 10 questions. The total score was 10 by item response; the correct answer had a score of 1 and the wrong answer had a 0 score. In addition, the part of service mind behavior was composed of 23 items, on a 5-point Likert scale. The item response ranged from 1 (never) to 5 (always). The 23 items were summed to calculate a mean total score up to 5, with a higher level meaning having a higher service mind.

Data were collected by two trained interviewers in the communities and were monitored by the researchers and research assistant. The data double entry techniques were used to ensure the accuracy of the data entry process. Descriptive statistics such as frequency, percentage, mean, standard deviation [SD], and 95% confidence interval [CI] were used to describe the characteristics of caregivers of the elderly, knowledge of care of the elderly and service mind behavior. Inferential statistics such as independent sample t-test and ANOVA were used to test factors related to knowledge of elderly care and service mind behavior. Prior to starting data collection, the present study was reviewed and approved by the Ethics Committee for Research on Human Subjects (HE591219), Faculty of Medicine, Khon Kaen University, Thailand.

Results

The response rate was 95.54%. Most of the caregivers of the elderly were female. The mean age was 38.53 years old (SD 8.38). Half of the caregivers of the elderly were married. Most of the caregivers had completed a bachelor degree, secondary school, and primary school in order. Half of the caregivers were hired; the median income/month was 10,000 baht (IQR 6,500) and perceived financial status was not having enough money and being in debt. Most of the caregivers of the elderly were relatives, had no experience in care of the elderly and did not want to hire a professional caregiver (Table 1).

Knowledge of elderly care among caregivers of the elderly

In terms of the basic knowledge, the study found the highest percentage of correct answers were the part

of health promotion for the elderly, the ageing process and symptoms of chronic disease: diabetes mellitus,

Table 1. Characteristics of caregivers of the elderly

Characteristics	Number (n = 150)	Percentage (%)
Gender		
Male	33	22.0
Female	117	78.0
Age (years) minimum 23, maximum 58, mean 38.53, SD 8.38		
Marital status		
Married	86	57.3
Widowed	10	6.7
Separated	16	10.7
Single	38	25.3
Education level		
No schooling	1	0.7
Primary school	23	15.3
Secondary school	53	35.3
College diploma	17	11.3
Bachelor degree	56	37.3
Career		
Grocer	21	14.0
Hired laborer	82	54.7
Farmer	23	15.3
Government official	24	16.0
Income per month (baht) minimum 6,000, maximum 25,000, median 10,000, IQR 6,500		
Perception of financial status		
Enough and left over	10	6.7
Enough but no money left	52	34.7
Not enough and in debt	88	58.7
Relationship with the elderly		
Daughter/son	132	88.0
Niece	13	8.7
Relative	5	3.3
Experience in elderly care		
Yes	58	38.7
No	92	61.3
Wanted to hire an institutional caregiver for some time		
Yes	69	46.0
No	81	54.0

dementia and depressive syndrome, in order. In the area of case manager knowledge, the present study found the highest percentage of correct answers were planning for elderly care, identifying the questions for management, identifying the needs for care of the elderly and monitoring the plan for care of the elderly, respectively (Table 2).

Service mind behavior among caregivers of the elderly

The present study found the highest mean score of service mind behaviors were being responsible for elderly care in the family, willing to give and support their elderly, willing to help their elderly, giving and advising about elderly care practice and being patient. The lowest mean score for service mind behavior were smiling, risk assessment for health problems of the elderly and health advice for their elders (Table 3).

Factors related to knowledge of elderly care and service mind behavior among elderly caregivers

The factors found in the present study that were related to knowledge of elderly care among caregivers of the elderly, and which were statistically significant were gender, marital status, educational level, and career. In addition, the present study also found gender, marital status and career were statistically significant with service mind behavior with p -value <0.05 (Table 4).

Discussion

The characteristics of family caregivers, the present study found that most of the caregivers of the elderly were female and the mean age of caregiver for the elderly was middle aged similar to the study of Maurin and Boyd, Thanakwang, and Brodsky et al^(12,13,21) which found that in Thailand most caregivers was 85% and 73.8%. Most of the caregivers had completed a bachelor degree and were employees and received 10,000 baht (IQR 6,500) income/month,

Table 2. Knowledge of elderly care among caregivers of the elderly

Knowledge of elderly care	Number of answers correct	Percentage (%)	95% CI
Basic knowledge			
1. Ageing process	98	65.3	57.45 to 72.63
2. Health promotion for the elderly	132	88.0	82.04 to 92.50
3. First aid for the elderly	64	42.7	34.93 to 50.69
4. Risk factors of chronic disease	45	30.0	23.07 to 37.69
5. Symptom of chronic disease: diabetes mellitus, dementia, and depressive syndrome	86	57.3	49.31 to 65.07
Case management for the elderly who suffer from chronic diseases			
1. Identify the question for management	104	69.3	61.61 to 76.32
2. Identify the needs for care of the elderly	85	56.7	48.65 to 64.43
3. Plan for elderly care	107	71.3	63.71 to 78.14
4. Monitoring the plan for elderly care	85	56.7	48.65 to 64.43
5. Evaluation of the plan for elderly care	84	56.0	47.98 to 63.79
Total mean 5.93 SD 1.25, minimum 3 maximum 9, 95% CI 5.73 to 6.13			

Table 3. Service mind behavior among caregivers for elderly

Service mind behavior	Mean	SD	95% CI
1. Smile	3.50	0.50	3.42 to 3.58
2. Daily talk to the elderly	3.74	0.55	3.65 to 3.83
3. Help their elder without being requested	3.63	0.58	3.53 to 3.72
4. Good attention and caring	3.66	0.57	3.57 to 3.75
5. Health advisory for their elders	3.53	0.69	3.42 to 3.64
6. Giving health information to their elders	3.59	0.60	3.49 to 3.68
7. Explain the steps for elderly health care	3.69	0.66	3.58 to 3.79
8. Explain health status to their elder	3.57	0.50	3.49 to 3.65
9. Attention and good connection with the community health volunteers and health service staff for care of their elderly	3.65	0.49	3.57 to 3.73
10. Coordinating with health promotion hospital for their elderly care	3.57	0.67	3.47 to 3.68
11. Willing to give and support their elderly	3.77	0.75	3.65 to 3.89
12. Willing to help their elderly	3.76	0.65	3.65 to 3.87
13. Willing to give helpful information for their elderly	3.61	0.67	3.50 to 3.72
14. Giving and advising for elderly care practice	3.76	0.54	3.67 to 3.85
15. Good patience	3.76	0.43	3.69 to 3.83
16. Elderly care leaders in the family	3.68	0.47	3.60 to 3.76
17. Responsible for elderly care in the family	3.91	0.56	3.82 to 4.00
18. Consider health problem decisions	3.55	0.69	3.44 to 3.66
19. Assess risks for elderly health problems	3.52	0.50	3.44 to 3.60
20. Assess risks for aids/health instruments of the elderly	3.65	0.63	3.55 to 3.76
21. Self-evaluation about elderly care	3.59	0.60	3.49 to 3.68
22. Good listening	3.62	0.51	3.54 to 3.70
23. Good aptitude	3.57	0.70	3.45 to 3.68
Total mean 3.65 SD 0.028, minimum 2.91 maximum 4.35, 95% CI 3.59, 3.70			

while perceived financial status was not having enough money and being in debt. This result is confirmed by the study of Knodel and Chayovan^(5,6). Lastly, the present study also found that most caregivers of the elderly were descendants, since in Thai culture, the act of taking care of older parents is based on the concepts of Thanakwang (the sense of gratitude towards parents)⁽¹³⁾.

In term knowledge of elderly care among the family caregivers, the present study found the area of knowledge that was well known was health promotion, due to this kind of knowledge about care of the elderly being easy to find from any health promotion place in hospital in Thailand. However, the number of caregivers of the elderly who answered correctly about specific topics such as the ageing process, symptoms of chronic disease, first aid for the elderly and risk factors of chronic disease was much lower. This point requires a recommendation for training about knowledge that caregivers of the elderly must know.

In the area of case manager knowledge which is important for the caregiver of the elderly to know to improve the quality of life, reduce depressive symptoms and improve practice, the importance of knowledge of case management was confirmed by Seltzer et al, Song et al, and Friedman et al views that

the case management role is the most important care providing function that a family caregiver can fulfill on behalf of an elderly relative⁽¹⁴⁻¹⁶⁾. The present study found most of them knew about the plan for elderly care. However, there are important skills that the caregiver of the elderly must know in all 5 dimensions and the elderly caregiver must start to practice them to care for the elderly when health problems arise.

In part of service mind behavior among the family caregivers, service mind in the present study referred to empathy and mindfulness. Service mind affects the quality of care as confirmed by the study of Watcharasing⁽¹⁷⁾. The present study found that the highest mean score of service mind behavior were being responsible for elderly care in the family, and being willing to give and support their elderly. This is due to the Thai gratitude culture and a general normative prescription for family members to take on the role of long-term care provider^(5,6,17). However, some points of service mind had low mean score such as smiling, risk assessment for elderly health problems and health advice for their elders need to be taught and promoted for caregivers of the elderly.

The present study found gender was related to knowledge of care and service mind behavior among the family caregivers. These results are similar to the

Table 4. Factors related to knowledge of elderly care and service mind behavior among care givers of the elderly

Factor	Knowledge of elderly care			Service mind behavior		
	Mean	SD	p-value	Mean	SD	p-value
Gender			<0.001*			<0.001*
Male	4.91	1.16		3.47	0.26	
Female	6.22	1.12		3.70	0.35	
Age group			0.299			0.820
23 to 40 years old	6.02	1.28		3.64	0.31	
Over 40	5.81	1.21		3.66	0.39	
Marital status			<0.001*			<0.001*
Married	5.59	1.15		3.53	0.38	
Widowed	5.80	1.03		3.87	0.22	
Separated	6.31	1.20		3.83	0.16	
Single	6.58	1.29		3.77	0.23	
Educational level			0.030*			0.152
No school/primary school	5.54	1.53		3.76	0.33	
Secondary school	5.70	0.95		3.58	0.36	
College diploma	6.41	1.46		3.71	0.24	
Bachelor degree	6.18	1.24		3.64	0.36	
Career			0.006*			<0.001*
Grocer	5.14	1.49		3.23	0.12	
Hired laborer	5.99	1.06		3.68	0.31	
Farmer	5.96	1.19		3.95	0.28	
Government official	6.42	1.44		3.60	0.33	
Relationship with the elderly			0.935			0.304
Daughter/son	5.95	1.24		3.63	0.35	
Niece	5.85	1.28		3.76	0.29	
Relative	5.80	1.64		3.78	0.45	
Experience in elderly care			0.072			0.960
Yes	6.16	1.09		3.65	0.41	
No	5.79	1.33		3.65	0.31	

* Statistically significant <0.05

study of Song et al and Wolff et al which revealed gender was an independent factor related to higher knowledge^(15,18). Marital status is one factor related to knowledge of care and service mind behavior among the caregivers of the elderly. This result was confirmed by the study of Pornkuna which revealed that there are changes in the family caregiver role, and the family caregiver assumes more new responsibilities⁽¹⁹⁾. The single person, widower or divorcee had a higher score of knowledge of care and service mind behavior than married people; the explanation may be that they have more time to care for the elderly, where married people would have to assume more new responsibilities^(18,20). And education level is related to knowledge of care, this result is confirmed by the study of Song et al and He et al which revealed that the degree of education of the family caregiver had a statistically significant relationship with the knowledge of the caregiver^(15,22) similar to the studies of Loureiro et al, Brodsky et al, He et al, and Docherty et al⁽²⁰⁻²³⁾. The higher educated got a higher score of knowledge of care due to the group having higher abilities to get health knowledge^(22,23).

The type of career was related to knowledge of care and service mind behavior among the caregivers for the elderly. This result was confirmed by the study of Brodsky et al and He et al which revealed that employers could only give workers a limited amount of paid time off for learning^(21,22). This is different from farmers who are more flexible and can adapt more easily.

This study was success in data collection with a high response rate of 95.53%. There were some limitations in the age range of the care giver samples who had ages between 18 to 60 years old, and some limitations on research design of the cross-sectional descriptive study. However, the findings of the present study can be applied in other similar context areas. The authors suggest further qualitative study on the essential knowledge for elderly care, a quantitative study of a case manager practice program and a service mind training program for the family caregiver.

Conclusion

The present study found that the caregivers of the elderly knowledge of care mean score was 5.93 (SD 1.25), 95% CI 5.73 to 6.13, and service mind behavior mean was 3.65 (SD 0.028), 95% CI 3.59 to 3.70. Factors related to knowledge of elderly care among elderly caregivers were gender, marital status, education level, and career, with statistical significance. In addition, the present study also found gender, marital status, and career were statistically significant with service mind behavior at *p*-value <0.05.

What is already known in this topic?

The present study confirms the family caregiver characteristics: they are descendants, female, single, hired labor and farmers, and have higher education level.

What this study adds?

This study found gaps in the knowledge of the family caregivers that need to provide in the areas of first aid for the elderly, risk factors of chronic disease, and should encourage services mind behavior in the areas of smiling, risk assessment for health problems and health advisory for their elders. The target was the family caregivers.

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Potential conflicts of interest

The authors declare no conflict of interest.

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