

A Comprehensive Study on Home Care Needs Among Elderly in an Urban Area of Ho Chi Minh City, Vietnam

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Abstract

Homecare service for elderly has been available in Ho Chi Minh City, Vietnam since 2009, but it is unknown whether homecare needs of elderly are met. Therefore, the objective of the study is to investigate homecare needs among elderly with the aim of providing baseline information to inform policy development to improve homecare services in the city. A cross-sectional study was conducted from 12 July to 12 November, 2015. Three hundred and nine older adults (≥ 60 years old) living in the District 12 of Ho Chi Minh City were randomly chosen and completed interviews using a structured questionnaire. Chi Square tests or ANOVA tests were used to examine the significant associations between elderly characteristics and homecare needs. The mean scores of activities of daily living (ADLs) and instrumental activities of daily living (IADLs) were 5.72 out of 6 and 5.16 out of 8, respectively. The mean score of Affect Balance was 6.23 out of 10. Only 54 of 309 participants (17.48%) had home health care needs, whereas 274 (88.67%) participants had health information needs. Factors having statistically significant associations with homecare needs included older age, male gender, low allowance, living alone and higher number of comorbidities. Elderly in District 12 had low ADLs needs, low psychological needs, low health care needs, but high health information needs and IADLs needs. Services including private care service, chatting service, home health care and health information services may be developed to meet those needs.

Keywords: homecare needs, elderly, ADLs, IADLs

1. Introduction

Population aging is now an increasing trend in a large part of the world. In most developed countries, the population has been ageing for many decades, while in developing countries population ageing has taken place relatively recently (United Nations Population Fund, 2012). The number of people who turn 60 each year worldwide is nearly 58 million, equivalent to almost two persons every second (United Nations Population Fund, 2012). It is estimated that the proportion is projected to nearly double to 22 per cent by 2050 (UNDESA Population Division, 2010).

Old age is often characterized as a period of susceptibility of chronic illnesses (Baltes & Mayer., 1999), psychological problems (Pratt & Norris, 1994), declining physical functioning (R. M. Ryan, 1995), restricted cognitive abilities (E. B. Ryan & Kwong-See, 1993), and lack of health information (Giacalone, Blandino, Talamini, & et al, 2007). Studies on changes in functional ability showed that elderly experiences inevitably decreases upon individuals' ability to carry out basic activities of daily living (ADLs) including bathing, dressing, using the toilet, transferring from bed to chair, and feeding oneself (Avlund, Pedersen, & Schroll, 2003). In addition to decrease in ADLs, older people may also have limitations on instrumental activities of daily living (IADLs) that includes such activities as the ability to prepare meals, take medications properly, go grocery shopping, do housework, and manage money (Kshetri & Smith, 2011). Since proven to be associated with reduced independence (Harwood, Prince, Mann, & Ebrahim, 1998), functional disabilities and other disadvantages among elderly could be used to evaluate the needs for formal and informal community and home care (Fuchs, Blumstein, Novikov, & et al, 1998). On the other words, there are four main types of homecare needs among elderly including home health care needs, ADLs/IADLs needs or home help needs, psychological needs and health information needs (Giacalone et al., 2007).

Homecare needs are essential among elderly but often neglected or unmet (Giacalone et al., 2007). A survey in Canada showed that 33% to 67% of seniors with ADL or IADL needs did not receive any form of home care in preceding year (Carrière, 2006). Studies from other countries also revealed that the prevalence of at least one unmet ADL or IADL need ranged between 20% and 50%, depending on the sample characteristics, the definition of unmet needs, and which ADL/IADL are considered (Carrière, 2006; Komisar, Feder, & Kasper, 2005).

In Vietnam, the recent trend has shown that the population is aging (Hoi, Phuc, Dung, Chuc, & Lindholm, 2009). In 1979, there were 3.71 million men and women aged 60 and above, representing 6.9% of the total population, and in 1989 the total of elderly was of 4.64 million, accounting for 7.2% of the total population. In 2006 there were over 7.8 million of the elderly, yielding a proportion of 9.2% (General Statistics Office, 2007). By the year 2020, Vietnam is expected to have more than 12 million older persons and the proportion of older population is estimated to be 26.1% by 2050 (United Nations, 2007).

Homecare service is still at the dawn of the establishment in Ho Chi Minh City, Vietnam. In Ho Chi Minh, the Health Service has been implemented family doctor offices since 2009 (Bui, 2011) with the main aims are to provide essential cares for patients or persons who need cares at home. Apart from family doctor system, private home care services are also available in Ho Chi Minh City. The services are provided by professional nurses who work for hospitals or commune health stations. They do home care activities as an extra-work out of their working days. In such a system, it is unknown whether homecare needs of elderly are met since there have been a few activities documented to date.

To this end, the study was performed to investigate homecare needs among elderly with the goal of providing baseline information to inform policy development to improve homecare services in the city.

2. Methods

A cross-sectional study was conducted from July 12 to August 12, 2015 at District 12 of Ho Chi Minh City, which includes 11 communes. District 12 consisted of 29,930 elderly, defined as those who are 60 years old and over, in 2014 (People Committee of District 12, 2014). The list of all elderly in the entire district was obtained with permission from the People Committee. Participants were randomly selected from this list.

Participants were asked to undergo free physical examinations at the health commune stations to collect information on blood pressure, height and weight measurements. In addition, participants were interviewed by five trained nurses in the district using a standardized questionnaire based on previous studies (De Veer & De Bakker, 1994; V. S. Nguyen, 2009), consisting of six sections, including demographic information, assessment of ADL needs (Katz, 1983), assessment of IADL needs (Lawton & Brody, 1969), assessment of psychological needs (Bradburn, 1969), assessment health care needs, and assessment of health information.

After data collection, all records was entered and coded in R package. To describe each variable, mean and standard deviation to summary quantitative variables were applied and frequency and proportion to summary qualitative variables were applied. To analyse the relationship between background profile (age, gender, allowance, living arrangement and number of comorbidities) and ADL score, IADL score and ABS score, t-tests or ANOVA tests were applied to test the significant associations. Moreover, Chi Square tests were used to check significant associations between background profile and health care needs and health information needs. The p-value of 0.05 was used as statistical significance.

3. Results

A total of 384 participants were enrolled in the study. However, 74 elderly did not complete two thirds of the questionnaire; therefore they were excluded from the analysis. Thus, only 309 elderly were included for analysis. The demographic profile of the study population is shown in Table 1. The majority (47.9%) of participants were between 60 and 69 years old, and 58.9 % were female. More than seventy per cent (72.17%) of participants did not have monthly allowance. Of those who had allowance, 90.5% had less than five million Vietnamese Dong. Two or more comorbidities were found in 45.6% of participants.

Table 1. Demographic profile of elderly (≥ 60 years) living in District 12 of Ho Chi Minh City (n=309)

Characteristics	n	%	Characteristics	n	%
Gender			Allowance		
Male	127	41.1	Yes	86	27.8
Female	182	58.9	No	223	72.2
Age [mean(range)] 68.67 (60-87)			Amount of allowance*		
60-69	148	47.9	≤ 5 million VND	67	90.5
70-79	104	33.6	> 5 million VND	7	9.5
≥ 80	57	18.5	Number of comorbidities		
Marital status			No comorbidities	5	1.6
Married	225	72.8	1 disease	57	18.4
Widowed	69	22.3	2 diseases	106	34.4
Divorced/separated	15	4.9	> 2 diseases	141	45.6
Family size**			Living arrangement		
2 persons	68	23.3	Living alone	17	5.5
> 2 persons	224	76.7	Living with others	292	94.5
Co-morbid diseases					
Arthritis	174	56.6			
High blood pressure	148	47.9			
Heart diseases	144	46.6			
Osteoporosis	91	29.4			
Gastric diseases	73	23.6			

Characteristics	n	%	Characteristics	n	%
Cataract	46	14.9			
Diabetes	45	14.6			
Respiratory diseases	32	10.4			
Cancer	3	1.0			

*: data missing for 235 participants

** : data missing for 17 participants

Table 2 describes the relationships between homecare needs and demographic profile of participants. Age was the only significant factor associated with ADL needs among participants ($p < 0.001$) such that older elderly had lower scores of ADLs than younger ones.

Age, gender, and allowance had significant associations with IADL needs among participants ($p < 0.001$). Female elderly had higher score on IADLs, whereas older age had lower score on IADLs. Elderly with no allowance had higher score on IADLs than elderly with allowance ($p < 0.001$).

Only living arrangement had a strong association with Affect Balance Score in which participants who lived with others had higher score than elderly living alone (6.01 ± 0.10 versus 4.23 ± 0.43) ($p < 0.001$).

Only allowance had a strong association with health care needs in which participants had their own allowance had higher health care needs than elderly who did not their own allowance (27.91% versus 13.45%) ($p < 0.003$).

Only number of comorbidities had a strong association with health information needs among participants in which patients with more comorbidities had higher needs compared to participants who did not have comorbidities ($p = 0.03$).

Table 2. Relationships between five aspects of homecare needs and demographic profile of participants (n=309)

Characteristics	ADL score		IADL score		ABS		Health care needs		Health information needs			
	Mean \pm SD	p	Mean \pm SD	p	Mean \pm SD	p	n	%	p	n	%	p
Reference value*	5.72 \pm 1.07	No	5.16 \pm 2.33	No	6.23 \pm 0.31	No	54	17.48	No	274	88.67	No
Age												
60-69	5.86 \pm 0.70		6.06 \pm 2.05		6.06 \pm 0.05		21	14.19		135	91.22	
70-79	5.81 \pm 0.69	0.001	4.86 \pm 2.10	0.001	5.96 \pm 0.16	0.08	19	18.27	0.28	92	88.46	0.21
≥ 80	5.15 \pm 1.93		3.35 \pm 2.27		5.35 \pm 0.12		14	24.56		47	82.46	
Gender												
Male	5.77 \pm 0.07		4.03 \pm 0.12		5.11 \pm 0.23		24	18.90		112	88.19	
Female	5.68 \pm 0.08	0.47	5.95 \pm 0.18	0.001	5.34 \pm 0.19	0.43	30	16.48	0.58	162	89.01	0.58
Allowance												
Yes	5.90 \pm 0.07		5.12 \pm 0.13		5.93 \pm 0.19		24	27.91		77	89.53	
No	5.64 \pm 0.07	0.054	5.76 \pm 0.44	0.001	6.00 \pm 0.01	0.09	30	13.45	0.003	197	88.34	0.76
Living arrangement												
Living alone	6.00 \pm 0.00		5.56 \pm 2.03		4.23 \pm 0.43		4	23.53		14	82.35	
Living with others	5.70 \pm 0.06	0.26	5.23 \pm 1.90	0.27	6.01 \pm 0.10	< 0.001	50	17.12	0.49	260	89.04	0.39
Number of comorbidities												
No comorbidities	5.8 \pm 0.44		6.2 \pm 1.64		5.28 \pm 0.23		0	0.00		0	0.00	
1 disease	5.78 \pm 0.79		5.38 \pm 2.61		5.11 \pm 0.17		8	14.04		7	12.28	
2 diseases	5.79 \pm 0.95	0.63	5.07 \pm 2.17	0.48	5.54 \pm 0.11	0.21	24	22.64	0.28	21	19.81	0.03
> 2 diseases	5.63 \pm 1.25		5.09 \pm 2.37		5.09 \pm 2.37		22	15.60		7	4.96	

*: Reference values were derived from category specific calculation shown in Appendix 1

4. Discussion

In this study, five aspects of homecare needs were evaluated including ADLs needs, IADLs need, psychological needs, health care needs and health information needs, which were found to be all dependent on a variety of factors including biological features such as age, gender and social factors such as living arrangement and allowance.

In particular, participants did not have many ADLs and IADLs limitations. Those findings were in consistent with several studies on health care needs among elderly in Vietnam (Hoang, 2012),(Bui, 2011). Age was the factor having significant associations with ADLs and IADLs needs among participants, in which as age

increased the ADLs and IADLs score reduced. A study showed that the proportion of people who are independent in basic ADLs drops from 97.6% among those over 64 years of age, to 86.7% among those above 84 years (Hoi & et al, 2011). In this study, male elderly had lower IADLs score than female ones, whereas other study showed men have higher indices for basic and instrumental ADLs (Hoi & et al, 2011).

Elderly took part in the present study also had relative high affect balance, so they may not need psychological supports. The findings could be found in other studies. However, Vietnamese elderly these days are now facing more loneliness in their life since their children may have to work far away from home and they spare little time for emotional sharing with their parents (T. N. Nguyen & Nguyen, 2013). Living arrangement had a strong association with Affect Balance Score in which elderly living with others may have lower needs of psychological supports than elderly living alone. As elderly live alone, they have more time of thinking about their loneliness, so they may have more negative affect than positive affect and that may lead to psychological problems such as depression and anxiety.

Although elderly in the study suffered many comorbidities that indicated they have many health care needs, their home health care needs were very low. The proportion in the study was surprisingly lower than that in another study conducted in Ha Noi, in which 72.5% patients had health care needs at home (Bui (2011)). It could draw a conclusion that patients or elderly who lived in high income areas may have higher health care needs more than patients or elderly who live in low income areas. The common reasons were that they have their children take care at home and that they still have enough health to go to hospital by themselves.

There was a huge need of health information among participants. Studies showed that the need for health information seems to become more prevalent at an older age (Giacalone et al., 2007). Participants who had more co-morbid diseases had more health information needs than participants who had less co-morbid diseases. It was obviously that elderly who had more co-morbid diseases had higher needs of information since they want to gain more knowledge and information about their diseases they suffered so that they could prevent or manage them more effectively.

The study had a few limitations. The tools used in the study, namely ADL Katz tool, IADL Lawton tool, and Affect Balance Scale may not fit completely with Vietnamese study settings. The study is also cross-sectional in nature in that it may not provide a causal relationship. Finally, considering participants' age, recall bias may have occurred, but most of the questions addressed routine daily activities.

5. Conclusion

To the best of our knowledge, this was the first study investigating homecare needs among elderly in a holistic manner. Not only ADLs and IADLs needs were assessed in the study but also psychological needs, health care needs and health information needs of older adults were evaluated. Elderly in District 12 had low ADLs need, low psychological needs, low home health care needs, but high health information needs and IADLs. Factors that had potential impacts on home care needs in elderly population included older age, male, low allowance, living alone and higher number of comorbidities, which suggest that several strategies may be developed to meet homecare needs of elderly.

Since a portion of elderly had limitations on shopping and food preparation, private care services should be developed to deliver those services to elderly. Such private care services may provide care services from shopping essential supplies to food preparation at home for elderly.

A chatting service should be developed to provide private communications and information to elderly. Such services may send their staff to elder's home for chatting, taking elderly outside for relaxes or counselling elderly in psychological matters. If any psychological disorders are discovered by the staff during their tasks, those staff may contact with professional health staff working in hospitals or other health facilities to give professional psychotherapy for older patients.

For General Hospital district 12, home health care services should be developed in a near future. Home health care services should focus on providing transportation services, physical examination and treatment for elderly at home. Those services may implement as out-of-working-hour services or weekend services so that health care staffs have enough time to deliver the services effectively.

Another service that should also be implemented in General Hospital District 12 was health information provision. A hotline used as counseling channel in the hospital and served 24 hours per day is advisable. Health staffs who are responsible for health information should be general practitioners who are skillful in health consultation.

From the finding, a clear picture on homecare needs of elderly living in District 12 had been obtained. Therefore, a study recruiting elderly from different districts in the city may be conducted in the future. With that study, the author could make a comparison among districts about homecare needs so that recommendations for health authorities in the city on policies of home care needs may be devoted.

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Appendix 1. Measurement of reference values of five aspects of homecare needs

Generally, most of participants received one point for each of daily living activities. As a result, the total mean ADL score of participants was 5.72 ± 1.07 (range from 0 to 6). The percentages of participants who did not need helps from outsiders for ADL activities were very high (> 89%). Dressing and toileting had lowest needs (2.6%), while bathing had highest needs (10%). Transferring and continence had the least urgently needs, while bathing had the most urgently needs. Participants needed helps of toileting but can wait at least (1.0%), while transferring was also needed but can wait the most.

Table 3. ADL scores and ADLs needs among participants (n=309).

ADL items	Independent(1)		Dependent(0)		Levels for needs					
					Urgently needed		Needed but can wait		Not needed	
	n	%	n	%	n	%	n	%	n	%
Bathing	289	93.5	20	6.5	9	2.9	22	7.1	278	90.0
Dressing	288	93.2	21	6.8	3	1.0	5	1.6	301	97.4
Toileting	292	94.5	17	5.5	5	1.6	3	1.0	301	97.4
Transferring	299	96.8	10	3.2	0	0.0	25	8.1	284	91.9
Continence	301	97.4	8	2.6	0	0.0	24	7.7	285	92.3
Feeding	298	96.4	11	3.6	2	0.6	7	2.3	300	97.1

Among instrumental daily living activities, housekeeping was the most independent activities (90.7%), while shopping was the least independent activity (61.2%). The total mean IADL score of participants was 5.16 ± 2.33 (range from 0 to 8). Unlike ADLs score, a large portion of participants (> 51%) have high needs for all IADL activities. Participants had the most urgently needs on using telephone (21.7%), while handling finances was the least urgently needs (12.9%).

Table 4. IADL scores and IADLs needs among participants (n=309)

IADL items	Independent (1)		Dependent (0)		Level for needs					
					Urgently needed		Needed but can wait		Not needed	
	n	%	n	%	n	%	n	%	n	%
Use Telephone	247	79.9	62	20.1	67	21.7	31	10.0	211	68.3
Shopping	189	61.2	120	38.8	46	14.9	114	36.9	149	48.2
Food preparation	121	66.5	61	33.5	52	16.8	108	35.0	149	48.2
Housekeeping	165	90.7	17	9.3	46	14.9	108	34.9	155	50.2
Laundry	150	82.4	32	17.6	46	14.9	108	34.9	155	50.2
Mode of Transportation	245	79.3	64	20.7	46	14.9	68	22.2	195	36.9
Responsibility for own Medications	231	74.7	78	25.2	46	14.9	56	18.1	207	67.0
Ability to Handle Finances	247	79.9	62	20.1	40	12.9	130	42.1	139	45.0

The mean of Affect Balance score was 6.23 ± 0.31 (range from 0 to 10). For positive affects, the mean scores was 2.12 ± 0.21 (range from 0 to 5). Only 62 (20.06%) participants felt particularly excited or interested in something and 83 (26.86%) felt pleased about having accomplished something. Other positive affects were poorly perceived by elderly. For negative affects, the mean score was 3.67 ± 0.54 (range from 0 to 5). A large part of participants felt bored and very lonely (50.48% and 30.10%). Other negative affects were relatively low perceived by participants.

Table 5. Psychological needs among participants (n=309)

Affect items	Yes		No	
	n	%	n	%
Feeling particularly excited or interested in something	62	20.06	247	79.94
Proud because someone complimented you on something you had done	29	9.38	280	90.62
Pleased about having accomplished something	83	26.86	226	73.14
On top of the world	10	3.23	299	96.77
That things were going your way	22	7.12	287	92.88
Positive effect score (Mean ± SD[range])	2.12 ± 0.21 (0-5)			
Feel so restless that you couldn't sit long in a chair	46	14.89	263	85.11
Very lonely or remote from other people	93	30.10	216	69.90
Feel bored	156	50.48	153	49.52
Depressed or very unhappy	23	7.44	286	92.56
Upset because someone criticized you	30	9.71	279	90.29
Negative effect score (Mean ± SD[range])	3.67 ± 0.54 (0-5)			
The Affect Balance Score (Mean ± SD[range])	6.23 ± 0.31 (0-10)			

Among participants, only 54 persons (17.48%) had home health care needs. The most needed health care service from participants was transportation to hospital (88.89%), followed by monitoring the general health (59.26%) and doctor's visits for diagnosis and treat illnesses (52.70%).

Table 6. Health care needs among participants (n=309)

Health care	Frequency	%
Want to be cared by health-care professionals at home		
Yes	54	17.48
No	255	82.52
Kinds of healthcare services want to be delivered (n=54)		
Transportation to hospital for treatment illnesses	48	88.89
Monitoring the general health of the patient	32	59.26
Doctor visits for diagnosis and treat the illnesses	29	52.70
Pain control	21	38.89
Nursing at home	13	24.07
Dietary assessments	10	18.52
Dietary guidance	10	18.52
Acupuncture	9	16.67
Rehabilitation	6	11.11
Intravenous therapy	4	7.4
Blood sampling	3	5.56
Urine sampling	3	5.56
Administering medication	1	1.85

There were 88.67% of participants had needs of information about health care issues. Of those, 221 (80.66%) participants needed information about diseases preventive measures, followed by information about chronic diseases and drug usage (66.42% and 56.57%, respectively).

Table 7. Health information needs among participants (n=309)

Health information	Frequency	%
Needs of information about health care issues		
Yes	274	88.67
No	35	11.33
Kinds of health information (n=274)		
Diseases preventive measures	221	80.66
Chronic diseases	182	66.42
Drug usage	155	56.57
Pain control	126	45.99