



The Different Levels of Understanding among Indonesians on Home Care Services for Stroke Patients

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ABSTRACT

Treating patients after a stroke requires long-term home care, but it is not accessible by all Indonesians. Therefore, this study examined stroke patients' understanding of home care and its factors. A comparative design with a survey approach was employed, and the respondents were from Western (n=193) and Eastern Indonesia (n=193). The data were analyzed using the Pearson Chi-square test with a significant level of 5% and three categories of knowledge level. Indonesians have a good understanding 67.3% on home care. Furthermore, Western Indonesians were more well-informed compared to Eastern Indonesians. However, a significant relationship between the level of understanding in these two regions was associated with education, gender, and exposure to information about home care ($p < 0.05$). This inequality influenced their knowledge about home care services ($p = 0.000$) since the information is not well-distributed. These findings imply that the distribution of information about home care is not evenly shared throughout Indonesia. This is against the contention where home care is a significant health service to reach remote communities. It is suggested that the available media can be used to socialize home care services to Eastern Indonesian region.

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ABSTRACT

Pengobatan pasien pasca stroke memerlukan waktu perawatan di rumah yang cukup lama, namun tidak semua penduduk Indonesia mampu melakukannya. Untuk itulah, penelitian ini bertujuan untuk menganalisis pemahaman pasien stroke terhadap konsep home care dan faktor-faktor yang mempengaruhinya. Penelitian merupakan studi komparatif dengan pendekatan survey, dengan responden dari penduduk Indonesia Barat (n=193 responden) dan Indonesia Timur (n=193 responden). Data dianalisis dengan Pearson Chi-Square dengan tingkat signifikansi 5% dan dikelompokkan dalam tiga kategori tingkat pengetahuan. Hasil menunjukkan bahwa sebanyak 67,3% penduduk Indonesia pemahamannya terhadap home care adalah baik. Lebih jauh lagi, penduduk Indonesia Barat terbukti lebih paham tentang home care dibanding Indonesia Timur. Pengetahuan tentang home care berkorelasi secara signifikan dengan tingkat pendidikan, jenis kelamin, dan paparan informasi tentang home care ($p < 0,05$). Perbedaan tingkat pengetahuan antara dua wilayah Indonesia ini ($p = 0,000$) terjadi karena informasi tidak tersampaikan dengan baik. Penelitian ini berimplikasi bahwa distribusi informasi tentang home care belum diberikan kepada seluruh warga Indonesia. Hal ini sangat berdampak signifikan mengingat home care adalah jenis pelayanan kesehatan yang mampu menjangkau wilayah terpencil. Disarankan bahwa keberadaan media dapat digunakan untuk mensosialisasikan tentang layanan home care bagi wilayah Indonesia Timur.

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INTRODUCTION

Home-based health services or home care are emerging as care issues in Indonesia and globally, involving formal and informal officers (Genet et al., 2012). In Indonesia, the home care program started in 1974, focusing on providing nutritious food for the elderly. These services have been piloted in 33 provinces by the Ministry of Social Affairs under Care Services for the Elderly (Direktorat Pelayanan Sosial Lanjut Usia, 2014). Home care is designed for acute and chronic illnesses, such as post-stroke conditions. Currently, 73% of deaths are caused by non-communicable diseases, where 35% are due to heart and blood vessel disease, and eighty percent of these deaths occur in middle and low-income countries (WHO, 2018).

Data on stroke cases in East Nusa Tenggara in 2017 was 899 people and was increased to 2,295 in 2018. Meanwhile, stroke patients in Sikka district, East Nusa Tenggara between 2015-2017 were 468 from 315,477 residents, with an average of 20 patients per month and a tendency to be younger (<34 years). In contrast, the prevalence of stroke sufferers in the Special Region of Yogyakarta ranked the second-highest at 14% after East Kalimantan (14.7%) (Kementerian Kesehatan Republik Indonesia, 2018).

In today's society, home health care services play an essential role in allowing the elderly and frail to receive therapy in the comfort of their homes in a welcoming setting (Porzio et al., 2020b). A study in Iran showed that a shortage of geriatric home nurses causes rapid infection transmission, lack of access to quarantine and effective prophylaxis, and other infections of patients and caregivers. These expert nurses can have a variety of responsibilities to prevent disease-related complications (Barasteh et al., 2020). Recent evidence suggests that home care facilities offered triage methods to patients' conditions by telephone, home visits, and healthcare professionals. Patient acceptance was high since triage over the phone was viewed as an additional aspect of their care and attention (Porzio et al., 2020a).

Studies on the concept of home care are still under discussion. A study in one of the provinces in the west of Indonesia on the level of knowledge of 60 nursing students about home care was good with a score of 85%. Furthermore, most students had a high work interest as home care nurses of 41.7 % $p = 0.000$. Understanding this concept strongly influenced a home care nurse (Adelia & Chayati, 2020). Another study in Norway stated that patients and families should cooperate with the nurses and physicians to create a sense of trust and security before and during home care (Danielsen et al., 2018). In conclusion, basic knowledge of home care plays an essential role in accepting the service, but studies from different regions have not been identified. Therefore, this study aims to examine the level of knowledge of Indonesians about home care services as proof of their readiness to receive the programs

METHOD

Participant characteristics and research design

A cross-sectional survey study was conducted among stroke patients in Yogyakarta and East Nusa Tenggara provinces. The stroke patients in Sleman Regency, Yogyakarta province were 13,650, and 468 in Sikka Regency, East Nusa Tenggara Province. Therefore, the calculation of the sample size for the population was 184 people for each

region, which is a total sample size of at least 368 people to maximize the response rate within the target group. The inclusion criteria were defined as patients with stroke based on data from the Puskesmas or hospital, adults, and communicating orally and writing. In addition, the survey collected basic demographic information, such as age, gender, Indonesian region, level of education, and experience of getting information about home care, and data on home care knowledge.

Data collection tool

Data collection was conducted using a questionnaire with a Gutman scale of yes or no answer. The home care comprehension questionnaire consists of 20 questions divided into five categories: (1) the concept of home care (5 items), (2) the goal of home care (4 items), (3) officers and their roles (5 things), (4) home care advantages (4 items), and (5) home care activities (2 items). In addition, content validity and reliability test with a score of 1.00 and 0.8 were used to determine the questionnaire's validity. These findings suggest that the instrument is used.

Data collection

From March to August 2020, Sleman and Bantul, Yogyakarta province stroke patients representing the western part with those from Sikka Regency, and East Nusa Tenggara Province representing the eastern part were invited to participate in a cross-sectional survey. All of the participating patients had previously offered traditional face-to-face interviews, but they were forced to switch to some type of online data collection during the epidemic. A site coordinator from each region was responsible for sending standardized questionnaires to the patients' distribution list. Subsequently, all study data were obtained anonymously, and the participation was completely voluntary. Informed consent was obtained from all human adult participants.

Data Analysis

Microsoft Excel was used to manage descriptive quantitative data, while IBM SPSS Statistics was used to conduct the analyses (Version 15). Data were analyzed using descriptive statistics and the level of knowledge was categorized into three-level, good when the correct score is 76-100, fair when the correct score is 57-75%, and poor when the correct score $\leq 56\%$. The frequency distribution and percentages were used to describe the sample. The Pearson Chi-square test was performed to obtain the difference in knowledge about home care between the two groups, Eastern and Western Indonesian area.

RESULTS AND DISCUSSION

Sample characteristics

Participants predominantly identified as Eastern Indonesians (50.4%), male (61.6%), adult age (43.6%), elementary school (28.2%), and never got information about home care (69%). Moreover, the level of knowledge was significantly different between the western and the eastern part of Indonesia ($p=0,000$) (see Table 1).

Table 1.
Respondents' Characteristics (n=383)

Variable	Frequency	(%)	p-value
Indonesia Region			
West	190	49,6	0,000
East	193	50,4	
Sex			
Male	236	61,6	0,005
Female	147	38,4	
Age			
Young adult (20-39 y.o)	89	23,2	0,873
Adult (40-59 y.o)	167	43,6	
Elderly (60-89 y.o)	127	33,2	
Education			
Postgraduate program	2	0,2	0,000
Graduate program	10	2,6	
Undergraduate program	62	16,1	
Diploma	5	1,3	
Senior high school	103	26,9	
Junior high school	86	22,5	
Elementary school	108	28,2	
Unschooling	7	1,8	
Information about home care			
Yes	119	31,1	0,000
No	264	69	

The analysis of gender, education, roles, information about home care, and age with knowledge variables in each region of Indonesia (east and west) are in Table 2.

It showed that knowledge of home care in Eastern and Western Indonesia had a significant relation to gender, level of education, family task, and exposure to home care ($p < 0,05$). In contrast, age did not affect knowledge about home care. For Western Indonesians, over 90% of all factors correlated with the level of knowledge. However, more than 50% of Eastern people had a low level of knowledge

according to all factors including age, sex, level of education, and information exposure.

Home-based care encompasses a wide range of services delivered to patients in their homes, including caregiving and personal care, specialized services, such as nursing and therapy, home-based primary care, and hospital-at-home (Landers et al., 2016). Nurses stated that biological and psychosocial client factors should be considered when forecasting homecare needs. These include age, socioeconomic status, ADL functioning, area of living, etc (van den Bulck et al., 2019).

A person's knowledge about home care can be influenced by education, experience, and age, which will underlie a person's behavior and act (Torano & Parante, 2019). The level of knowledge in different areas is influenced by progress and developments in accessing information. Furthermore, the gap in infrastructure in East and West Indonesia affects the data to generate knowledge (Juditha, 2014). A study in Malaysia found that many people still do not understand stroke. Therefore, the public knowledge about stroke was low since it included 35% of respondents who understood the danger signs of stroke, 29% who understood the risk factors, and stroke management with a score below 45%. However, none of the respondents understood the availability of treatment in the emergency department and the importance of rehabilitation as part of the management (Deen et al., 2014). Lack of knowledge also triggered an increase in stroke cases in the UK (Ryan, 2013). Ryan's white and black racial groups showed that the increase in patients was more common in the black race (Ryan, 2013). Bellizzi's study determined that African and Asian Americans in the 75-79 age group had lower physical health status than non-Hispanic and Hispanic Whites in the same age category. Comorbidities were more in the minority group with older age (Bellizzi et al., 2012).

Table 2
Knowledge relationship based on gender, age, education, information about home care in East and West Indonesia

Variable	Knowledge East Indonesia			Knowledge West Indonesia		
	Good	Enough	Low	Good	Enough	Low
Sex						
Male	49	18	64	99	4	2
Female	31	13	18	79	4	2
Total	80	31	82	178	8	4
P-value	0,032*			0,000*		
Age						
Young adult (20-39 y.o)	17	5	20	44	2	1
Adult (40-59 y.o)	33	17	36	76	3	1
Elderly (60-89 y.o)	30	9	26	58	3	2
Total	80	31	82	178	8	4
P-value	0,680			0,946		
Education						
Graduate program	3	0	0	4	0	0
Undergraduate program	6	0	0	1	0	0
Senior high school	16	5	27	23	1	0
Junior high school	22	5	25	24	4	0
Elementary school	33	21	30	31	1	2
Total	80	31	82	375	6	2
P value	0,003*			0,000*		
Information about home care						
Yes	6	1	0	108	3	1
No	74	30	82	70	5	3
Total	80	31	82	178	8	4
P-value	0,038*			0,000*		

significant at level α 5%

A person's level of knowledge will increase in line with increasing age due to maturity from thinking or working to affect cognitive processes and maturation (Suwaryo & Yuwono, 2017). Changes in physical and psychological aspects with increasing age can also affect knowledge (Lusi et al., 2014) since the best level of expertise is at the productive period (Suwaryo & Yuwono, 2017). Furthermore, previous knowledge, personal, environment, and intrinsic motivation can shape one's understanding of extended learning (Kapur, 2015).

The study showed that females have better knowledge than males because, in East Indonesia, women have higher responsibilities and activities, increasing their experience, leading to a high level of knowledge. Papua in the Kamoro and Muyu areas hold a reasonably dominant role and task in their communities. They are responsible for more incredible activities than men; therefore, they have intelligence and a better level of knowledge than men (Solaiman, 2018). In contrast to West Indonesia, both sexes are dominated by a high level of knowledge because there is no disparity in obtaining knowledge and information. The study is in line with a previous study that stated gender had no relationship with the level of knowledge (Suwaryo & Yuwono, 2017). They have differences in perceiving information to increase knowledge. However, this condition does not cause a difference in the level of learning or cognition (Suwaryo & Yuwono, 2017). A significant relationship shows that women and men can learn, understand, analyze and implement the information. In the era of digitalization, all information and teaching facilities are accessible through tutorials. Also, education level is related to a person's level of knowledge (Rejo & Anggraeni, 2018). Therefore, a low level of education will affect a person's level of knowledge, reduce the ability to understand new phenomena, and determine attitudes to deal with these phenomena (Lusi et al., 2014). Subsequently, a low level of education will cause a person to have difficulty understanding the information conveyed and affect the knowledge of the information (Pitaloka et al., 2018).

Insufficient information will affect a person's low level of knowledge regarding home care (Faizal et al., 2018). The relationship between information and knowledge emphasizes understanding as a continuous process. Information cannot be considered unrelated to knowledge because it is part of relationships realized by humans. Furthermore, they always refer to an ongoing relationship between newly acquired information and static knowledge when newly received (Atkinson, 2016). Some people exposed to mass media supported by obtaining information can accelerate the acquisition process and increase knowledge (Lusi et al., 2014).

Information is a meaningful structured collection of data conveyed by one person (Ati et al., 2014). The ability to obtain health information on the treatment of stroke affects a person's knowledge of how to behave. Care behavior in patients at home determines the success of therapy and efforts to prevent complications and recurrence of stroke due to treatment with a long duration. Therefore, it is crucial to know about stroke in patients and families.

Knowledge and understanding of health will increase a better perspective on the concept of health and illness, which can affect appearance, way of life, and efforts to improve health status. For example, personal knowledge about stroke increases health behavior and adherence to treatment, while high family knowledge can motivate specific care behavior at home.

LIMITATION OF THE STUDY

Eventhough the study was conducted in Western and East Indonesian, not all population in two part of Indonesia were involved, so generalitation of the study result may not be accepted. Further study needed to do survey nationally.

CONCLUSIONS AND SUGGESTIONS

Overall, most Indonesians understand home care, and apart from being dominated by proper knowledge, many had a low level of knowledge in East Indonesia. The good understanding level was influenced by education level, gender, and exposure to information on home care; while, age is not related to the knowledge on home care. Therefore, these results showed the importance of socializing home care to all Indonesian through various educational media.

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This study has been approved by the ethic committee Universitas "Aisyiyah Yogyakarta with ethical approval number 1451/KEP-UNIS/II/2020.

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Conflict of Interest Statement

The authors declared that there was no conflict of interest.

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