PREVALENCE AND SUPPORTIVE FACTORS OF GERIATRIC SELF MEDICATION IN PHARMACIES GUNUNGKIDUL REGENCY AT MAY-JULY 2012

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Abstract

Background. The increased of geriatric population is increased along with life expectation. Geriatric population is identical with the decline of physiological functions that can cause various diseases.

Objective. This study aim to investigate self medication in geriatrics requires special care from the pharmacist.

Methods. This study was observational study carried out by survey. Subjects of this study were geriatric patients aged 60 years or more who did self medication in pharmacies which involved in this study. The pharmacies used were representing the northern, eastern, southern, western, and central area in Gunungkidul regency. Data was collected in May-July 2012 using questionnaire. The percentage of geriatric self medication prevalence was formulated by comparing between the number of geriatrics who did self medication with the overall population who did self medication. Supportive factors of geriatric self medication were analyzed with chi square test with 95% confidence level, followed by binary logistic test to determine the most supportive factors.

Outcome measured. Supportive factors : monthly income, distance of residence from the nearest health services, and the types of illness

Results. There were 154 respondents of this study. The prevalence of geriatric patient who did self medication was 10,11%. The chi square test's result that monthly income, distance of residence from the nearest health services, and the types of illness were supportive factors of geriatric patient self medication in pharmacies Gunungkidul regency (p <0.05) and binary logistic test's result that distance of residence from the nearest health services was the most supportive factors (p<0,05) with OR value was 6,727 (confident interval 95%: 1,163-38,911).

Conclusion. The geriatric who did self medication were affected by supportive factors

Keywords : geriatric, self medication prevalence, supportive factors

INTRODUCTION

WHO declares that elderly in indonesia will reach 11,34 % in 2020 (Anonim, 2009). Increased life expectancy will affect the growing of geriatric population. It is not directly and epidemiology contributes to degenerative diseases, chronic diseases and non-communicable diseases, including can not be cured and need more time recovery diseases. This condition Influences on the increase of health service needs (Megawati, 2004).

Geriatric population is a population that has experienced a decline of physiological functions. With the decline in physiological function, the process of absorption, distribution, metabolism and excretion of drugs will also change (Prest, 2003). Kuntjoro states (2002), there are four characteristics that can be categorized as a Geriatric patients and Psikogeriatri:

a. Body functional limitation associated with the increasing of age.

b. Accumulation of degeneratif deseases.

c. Elderly are psichosocially in crisis if : there is dependence on others (need others' services), isolate themselves from social activities.

d. The things that can cause impaired balance (homeostasis) so it brings geriatric towards damage / decrease (deterioration) which are mainly progressive especially sudden psychological aspects, such as confusion, panic and depression.

Previous research in Jakarta states that the public interest do self medication in pharmacy is increasing, the majority of drug selection served by assistant pharmacists (95%) and by pharmacists (5%) (Purwati et al., 2004). Self medication according to the WHO definition is the selection and use of modern medicine, herbal or traditional medicine by an individual to cope with the disease or symptoms of diseases (WHO, 1998). Self medication is considered by the World Health Organization (WHO) to be an international health policy, because self medication not only reduce the burden on health care costs but also to increase patient compliance and improve treatment outcome (You *et al*, 2011).

According to the newest data of Department of Social Province DIY 2010, the total of elderly in Province DIY is 29.724 people, while 11.565 people (38,88%) are in Gunungkidul regency (Anonim, 2011). The aim of this reseach is to know prevalency and supporting factors of geriatric patient self medication in pharmacies Gunungkidul regency.

RESEARCH METHODOLOGY

Research design : research design used is observational with survey method. The data are taken as prospective in 3 months, started on May 2012. Evaluation is conducted based on questionnaire on May to July 2012.

Research population: the population of this research is 60 years old and above of geriatric patients in Gunungkidul regency who come to the pharmacies Gunungkidul regency to buy medicine without doctor prescription on May to July 2012.

Research Subject: the sample of this research is geriatric patient in Gunungkidul regency who come to pharmacies Gunungkidul regency to buy medicine without doctor prescription on May to July 2012 with criteria inclusion and exclusion. Inclusion criteria is that geriatrics who are able to fill the questionnaire correctly while exclusion criteria is geriatrics who are not able to fill the questionnaire of this research.

In the research:

The research is conducted at pharmacies Gunungkidul regency and uses sampling area technique. The data of Health Department year 2011 shows that there are 22 in pharmacies Gunungkidul regency. The total sample minimum pharmacy is taken by using formula + $\sqrt{n}$ + 1 ($\sqrt{22}$ + 1= 6 pharmacies). Choosing research subject as respondent in this research is decided by sampling purposive with the geriatric

Table I. Prevalence of self medication geriatric patients in pharmacies Gunungkidul regency

| Region | Patients with self medication | | Prevalence (%) |
	Geriatric	All patients	
Northern	9	365	2,47
Eastern	4	720	0,60
Southern	6	1379	0,44
Western	15	776	1,93
Central	120	2566	4,67
Total			10,11

criteria above 60 years old people who come to the pharmacies to conduct self medication and they agree become the subject of this research.

The data taken are data from the complete questionnaire filled by the research subjects at the pharmacies. Questionnaires are distributed continually on May to July 2012 to all of pharmacies in this research. Self medication prevalence of geriatric patient is shown in percentage. Statistic test uses SPSS 16.0 program for Windows. Supportive factors of geriatric patients self medication in Gunungkidul regency were analyzed with chi square test with 95% confidence level.

Research Obstacle

The obstacles this study are not all pharmacies located in Gunungkidul are willing to participate in this research and not all of geriatric patients who come to self medication are willing to be the subjects in this study so that the sample may not have been able to represent the actual population size.

RESULT AND DISCUSSION

The result of this research shows the prevalence of self medication geriatric patients in pharmacies Gunungkidul regency is 10.11% (presented in Table 1). The data were obtained from nine pharmacies that meet the sampling area; the northern, eastern, southern, western, and central to the inclusion and exclusion criteria. Compared with other regions, the central

regency has the highest percentage, it is 4.67%. The high of self medication prevalence of geriatric patients in the central regency is due to the number of samples used pharmacies in the central regency more than other regency. Middle regency which is the capital of Gunungkidul is urban areas, where the practicality and the speed become everyday lifestyle including the efforts of curing the disease.

The total of geriatric patients who participated in this study is 154 respondents. Geriatric patients who do self medication in pharmacies Gunungkidul regency was 44.59% (presented in Table II). The results are similar to studies conducted Vacas,. Et al (2009) in primary health care (PHC) center Spain, it is known that 31.2% of patients on independent treatment, where pharmacies are the most common sources for getting medications (49.3%).

This is understandable because the drug is one of human rights, the provision of essential medicines is an obligation for the government and health care institutions, both public and private (Anonim, 2008). Provision of essential drugs in health services such as pharmacies will provide easy access to their own medical needs or self medication.

In this study as much as 96.75% of the respondents expressed the drug information by officers while performing their own treatment. In addition as many as 96.75% respondents expressed the needs for information on the independent medication treatment. The

Table II. Self medication in pharmacies Gunungkidul regency

Self medication	number	percentage (%)
Option for getting medications if sick		
Self medication	70	44,59
Other health services	87	55,41
Self medication frequency per month		
Not sure / if sick	17	10,76
1x/ month	59	37,34
2x/ month	47	29,75
1-2x/ month	4	2,53
3x/ month	9	5,70
2-3x/ month	2	1,27
>3x/ month	9	5,70
Availability of drug information when self medication		
Yes	149	96,75
No	2	1,30
Need of drug information on self medication		
Yes	149	96,75
No	3	1,95
Satisfaction with the self medication		
Satisfied	149	96,20
Not satisfied	2	1,27

existence of drug information by pharmacists is expected to increase patients' knowledge about drugs so that patients are able to use drugs rationally to maximize therapy and minimize side effects. Research conducted by Satibi and Oetari (2001) shows that the medicine information affects the selection of and the use of caught medicine in the independent treatment in the Godean regency . Amoako EP et al (2003) in his study concludes that geriatric may not be aware of the risks associated with poor concurrent use of pain medications, alcohol, high blood pressure medications, and the regular use of caffeine.

As 96.20% of the patients in this study express satisfaction with independent medical care. This is understandable because it will facilitate the acquisition of OTC drug (over the counter-drug) availability and drug cost savings.

Results of analysis using the chi square test shows that there are 3 factors that support self medication significantly of geriatric patients (p <0.05), such as the amount of income each month, distance of residence from the nearest health services, and types of illness (presented in Table III).

The Public Health Action Support Team (PHAST) in 2011 proposed the health aspects that can be considered in four things: 1). Effectiveness, related to the health benefits measured through improved health, 2). Efficiency, associated with the cost and the health benefits, 3). Acceptability, related to social acceptance, psychological and ethical about the way people are treated in health, 4). Equity, related to the fair distribution of health among individuals or groups.

Table III. Results of analysis using the chi square test of supporting factorsself medication geriatric patients in pharmacies Gunungkidul regency

supporting factors self medication geriatric patients		Number of respondents		p-value
		self medication	Other health services	
Sex	Male	43	56	0,809
	Female	25	30	
Job	Entrepreneur	48	49	0,099
	Does not work	18	33	
Amount of monthly income	<1.000.000	7	4	0,035*
	>= 1.000.000	8	21	
Distance of residence from the nearest health services	<= 1Km	26	52	0,003*
	>1 Km	33	23	
Insurance ownership	ASKES/Jamkes	14	21	0,296
	No	52	58	
Types of illness	Chronic	39	70	0,001*
	Not Chronic	29	16	
Amount of illness	1 illness	62	75	0,285
	>1 illness	5	11	
Originally financing medication if sick	self/family	62	73	0,403
	company /ASKES	6	12	
Completeness facilities of pharmacies	complete	65	83	0,209
	not complete	2	0	
Provision of information by the pharmacist	Yes	66	83	0,333
	No	0	2	
Need of drug information on self medication	Important	66	83	0,918
	Not Important	1	2	
Satisfaction with the service of self medication at the pharmacy	Satisfied	66	83	0,918
	Not satisfied	1	1	

Self medication is one of treatment option that can reduce the cost burden on health services as disclosed by You et al, (2011), this is in accordance with the PHAST which include efficiency as assessed health aspects. Independent health cost can not be separated from the income of an individual, in this case the geriatric patients. It shows that income is one factor supporting self medication. Through this research it can be concluded that the amount of monthly income can significantly affects s self medication of geriatric in pharmacies Gunungkidul regency. Another study conducted by Atmoko and Indria (2009) states that the cost of expensive treatment gives positive effects to the consumer decision to do self medication.

Geriatric patients who have more than a kilometer to the nearest health facilities are more often do self medication in pharmacy because of the pharmacy is considered closer to making it easier and faster to get the medicine. Decreased physiological conditions that ultimately decrease the geriatric patient's physical condition will cause their limited space, so the distance of pharmacy where they do self medication

relatively close to their house will be very supportive of the actions of undertaken self medication of geriatric patients if they are sick.

Types of illness factors significantly influence geriatric self medication in pharmacies Gunungkidul regency. Types of illnesses suffered by elderly patients who do self medication are degenerative diseases such as hypertension, gout, rheumatism, and so on. The degenerative diseases requiring long-term medication and under a doctor's supervision as prone to complications and require monitoring of drug side effects that may occur as infrequently do not need a lot of medication at the same time.

The use of drugs in degenerative diseases can not be separated from the drugs included in the list of mandatory drug pharmacy, which can be submitted without a prescription at pharmacies with medication administration records only on the basis of the doctor's treatment replicates (Kemenkes, 1999). Christiane, et al., (2008) states that there are 30% of advers drug reactions that cause elderly patients hospitalized due to NSAID.

The role of the pharmacist at the time self medication is needed in terms of drug selection and dosage appropriate circumstances to the geriatric patients. Provision of clear information regarding the efficacy, rules of use, security, drug side effects, drug interactions, and storage. The purpose of giving information is to make sure patients are able to use the drugs properly so the goal of treatment can be achieved.

CONCLUSION

It can be concluded that:

1. Self medication prevalence of geriatrics in pharmacies Gunungkidul regency is on May to July 2012 is 10, 11%.

2. Supporting factors that support geriatric Patient to do Self medication in in pharmacies Gunungkidul regency is monthly income, distance of residence from the nearest health services, and the types of illness (p <0,05).

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