CONSUMER EXPECTATION ON SERVICE QUALITY PROVIDE BY PHARMACIST IN SELF MEDICATION PRACTICES AND ITS ASSOCIATED FACTORS IN BANDUNG, INDONESIA

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Abstract. Self-medication is the use of medicines for therapeutic intent without a clinician's advice or prescription. The National Socioeconomic Survey for Indonesia in 2009 found the percentage of the Indonesians engaging in self-medication is increasing. The objectives of this study were to assess consumers' expectations regarding service quality provide by pharmacist in self-medication practices and determine the factors associated with self-medication in Bandung, Indonesia. We conduct a cross-sectional survey at eight randomly selected community pharmacies during July-November 2012 and purposely sampled 1,200 costumers purchasing medication at those sites. Subjects reported they understood the information about the medicines given by the pharmacist but still wanted more information and time to consult with the pharmacist about their medicines. Factors associated with self-medication were younger age, male gender, greater education and lower income. The intervention is needed to improve appropriate self-medication.

Keywords: pharmacist, expectations, self-medication, Bandung, Indonesia

INTRODUCTION

Self-medication refers to the use of medicines with therapeutic intent without clinicians's advice or prescription. It has also been defined as the use of nonprescription medicines by people on their own initiative (International Pharmaceutical Federation, 1999). A previous study of self-medication revealed this practice is fairly common, especially in economically deprived communities (Kayalvizhi and Senapathi, 2010). Based on the National Socioeconomic Survey in 2009 the percentage of the Indonesian population that engaged in self-medication was 66%, which was an increase from 57.7% reported in 2001. Modern (synthetic) medicine is the first choice for self-medication in Indonesia, compared to traditional medicine (Suryawati, 1997; Indonesian Pharmacists Association, 2014). The increase in the use of self-medication is influenced by several variables, including socioeconomic factors, lifestyle changes, accessibility, demographics, epidemiological factors, the availability of new medicinal products, health reform and environmental factors (WHO, 1998).

Self-medication has both positive and negative aspects (Geissler *et al*, 2000; Hughes *et al*, 2001). Several studies have

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found inappropriate self-medication may result in wastage of resources, increases in the resistance of pathogens, and can increase the risk of serious health hazards, such as adverse reactions, prolonged suffering and medicine dependence (Hughes *et al*, 2001). However, if done appropriately, self-medication can readily relieve acute medical problems, save time spent waiting to see a doctor, save money and save lives in acute cases (James *et al*, 2006). The WHO (1995) stated appropriate self-medication can help prevent and treat diseases that do not require medical consultation and provides a cheaper alternative for treating common illnesses. However, the need to accompany self-medication with appropriate health information is also important. Self-medication involves the use of medicines that have the potential to do good as well as cause harm. Therefore pharmacists play an important role in self-medication practices.

Health professionals have raised concerns about the potential irrational use of medicines through self-medication (Filho *et al*, 2004). To prevent this irrational use, self-medication must be done appropriately and with the right medicine information from pharmacists. In this study, we determined consumer expectations of community pharmacists and factors associated with self-medication in Bandung City, Indonesia.

MATERIALS AND METHODS

We conducted a cross-sectional survey at eight community pharmacies in Bandung City, Indonesia during July-November 2012. Subjects were chosen using simple random sampling. The population size of Bandung City was 2.5 million in 2013 (Bandung Department of Statistics, 2013). Assuming a prevalence rate for self-medication of 66%, a minimum sample size of 958 would provide a precision of 3% at a 95% confidence level. Data were collected from more than 1,200 consumers who engaged in self-medication. Inclusion criteria were consumers who went to purchase medication at a studied pharmacy, were aged >15 years and were willing to complete a questionnaire.

A validated pre-developed questionnaire could not be identified; therefore, a new questionnaire was developed based on Indonesia's Good Pharmacy Practice (GPP) guidelines (Ministry of Health and Indonesian Pharmacists Association, 2011). The design of this study was approved by The Faculty of Pharmacy, Universitas Padjadjaran and all participating pharmacies. The self-administered questionnaire was then distributed to the selected subjects after the purpose of the study was explained to them and written informed consent was obtained. The questionnaire consisted of 18 questions divided into two parts: demographic data and their expectations about service quality provided by pharmacists for self-medication. Consumers' expectations regarding service quality provide by the pharmacist were evaluated using 4 items based on the subjects experiences with self-medication: require more information, require more time to consult with the pharmacist, difficult to understand the information given by the pharmacist, and pharmacists could answer questions about medicines. Subject opinions were classified using a three-point Likert scale: agree, neutral, and disagree. The questionnaire was commented on, and revised by experts and pilot-tested before implementation in the main study. The survey data were analyzed using descriptive statistics and summarized using numbers and percentages. A chi-square test was used to

Table 1
Demographic characteristics of study subjects, N = 1,200.

Variable	n (%)	p-value[a]
Age (years)		
≤ 25	433 (36.1)	0.00
26-40	387 (32.2)	
41-55	313 (26.1)	
56-70	62 (5.2)	
>70	5 (0.4)	
Gender		0.02
Male	616 (51)	
Female	584 (49)	
Education level		0.00
Primary school	28 (2.4)	
Junior high school	43 (3.6)	
High school	435 (36.4)	
Diploma/bachelor	617 (51.6)	
Master	71 (6.0)	
Occupation		0.07
Civil servants	200 (16.7)	
Entrepreneurs	159 (13.3)	
Private employees	415 (34.6)	
Students	256 (21.4)	
Others	169 (14.0)	
Income (IDR)[b]		0.00
≤1,000,000	173 (14.7)	
1,000,000-3,000,000	591 (50.0)	
3,000,000-5,000,000	324 (27.4)	
5,000,001-10,000,000	75 (6.4)	
>10,000,000	18 (1.5)	

[a]Association with self-medication practice based on chi-square test. [b]USD1 = IDR13,018.26.

determine associations among variables. A p-value < 0.05 was considered statistically significant. Statistical analyses were performed using SPSS®, version 20 (IBM, Armonk, NY).

RESULTS

The sample consisted 1,200 subjects, 616 (51%) males and 584 (49%) females. A total of 433 (36.1%) were aged < 25 years. Fifty-one point six percent of subjects were undergraduate students. Thirty-four point six percent of workers were private employees. Fifty percent of subjects had an average monthly income of 1,000,000-3,000,000 Indonesian Rupees. Table 1 shows a summary of the demographic characteristics of the subjects.

Fig 1 shows the subject opinions about pharmacists' service with self-medication. Eighty-six point eight percent of subject felt they needed more information about the medicines they purchased and 47.9% felt they needed more consultation time with the pharmacist. There was a significant association between younger

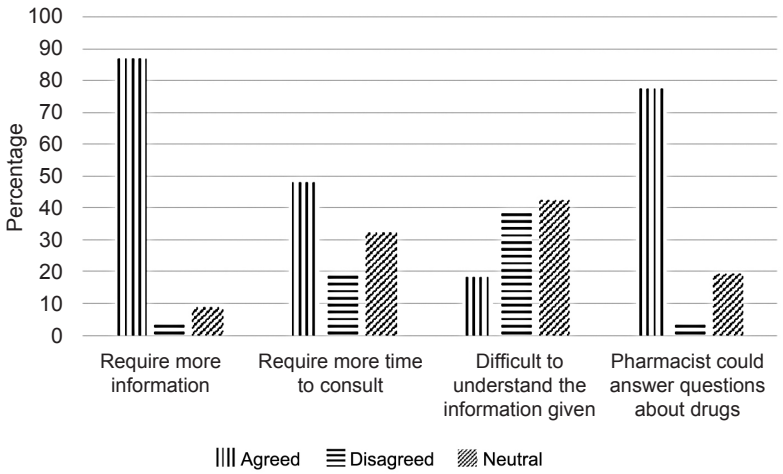

Fig 1–Subjects expectation during self-medication.

age (p<0.05), male gender (p<0.05), higher education level (p<0.05) and lower income (p<0.05) and the practice of self-medication (Table 1).

DISCUSSION

As the primary dispensers of medicines, pharmacists are responsible for providing information about the purchased medication. The quality of pharmacist labeling, time spent educating the patient and communication skills of the pharmacist can affect patient compliance rates (Garjani *et al*, 2009). The majority of subjects in our study reported they understood the information about the medicines given by the pharmacist but still wanted more information about their medicines. Even a proper prescription does not guarantee the drugs will be used properly, especially if inadequate information about the medicine is given (le Grand *et al*, 1999). Pharmacist provided medicine information is important to prevent medication use errors, especially for consumers who engage in self-medication.

Subjects in our study felt they needed more time to consult with the pharmacist. A previous study from Bandung City revealed the average dispensing time by a community pharmacist was 62 seconds (range 3-435 seconds) (Abdulah *et al*, 2014), which is above the recommended 60 seconds (El Mahalli *et al*, 2012). It is important to clarify the role of pharmacists for customers through consumer education (You *et al*, 2011). Pharmacists should be easily available to consumers who engage in self-medication. A pharmacist plays an important role in self-medication because they interact directly with the consumer when choosing a drug.

Most of the subjects in our study who engaged in self-medication had a relatively high educational background (51.6% with a diploma or bachelors degree); this may also reflect the reuse of self-medication for future conditions (Hassali *et al*, 1995). Our findings are similar to a study by the World Self-Medication Industry (WSMI), which reported the prevalence of self-medication use was higher among those with higher education levels (WHO, 1995). In our study, self-medication was also significantly associated with gender (p<0.05) and consumer education level (p<0.05). More male consumers engaged in self-medication than females, in contrast with the finding of a previous study (Figueiras *et al*, 2000). The higher socioeconomic status of men in Indonesia with their higher earning power and higher educational level may be reasons for this finding. However, women are more likely than men to report health conditions in

Indonesia but less likely to treat the symptoms or conditions with medication. Studies have shown gender based differences in communication and health-seeking behavior (Obermeyer *et al*, 2004).

The higher prevalence of self-medication among younger subjects in our study (36.1% of subjects were aged ≤ 25 years) could be due to higher educational level or increased awareness of medicines (Nair *et al*, 2013). In our study, there was a significant association between younger age and self-medication practice ($p<0.05$). Medicine information and counselling services for youth should focus on self-medication practices to prevent irrational use of medicines.

Pharmacists are important for building a responsible self-medication practice. Unfortunately, some pharmacies do not always have a pharmacist on duty when a consumer needs them. One study found 95% of people who engage in self-medication were served by pharmacist assistant (Purwanti *et al*, 2004). Most community pharmacies in Indonesia do not comply with legislation and the rules of the pharmacy profession (Ahaditomo, 2002). This suggest a lack of awareness by community pharmacists of what their roles are. Consumer expectations regarding the role of community pharmacists, especially in quality of service provide by pharmacist, need to be communicated to pharmacist in Bandung City, Indonesia.

There were several limitations of this study. First, this study was limited by the relatively small number of questions in the questionnaire (18), our description of self-medication practices in the questionnaire might not be adequate. The questionnaire could have provided more detailed information about requirements for self-medication. A second weakness of our study was we used a self-reported questionnaire, which could have led to under reporting of self-medication practices. The last limitation in our study is it cannot obtain the odds ratio for specific demographics factor associated with self-medication. These limitations, do not affect the validity of the results regarding the parameters assessed. The relatively large sample size may have balanced out some of the limitations.

In our study, most respondents stated they required more information and more time to consult with the pharmacists about their medicine. Community pharmacists need to provide medicine information to patients. Consumer expectations are important to consider when making policy recommendations for community pharmacy practice standards in Bandung City, Indonesia.

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