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Community Pharmacy Practice Standards as Guidelines for Pharmacists in Performing Profession in Indonesia

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Research Article

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Abstract

Objective: To design Community Pharmacy Practice Standards as guidelines for pharmacists in performing profession in Indonesia

Methods: Community Pharmacy Practice Standards were designed from 40 standard elements adopted from various provisions of the legislation and the rules of the profession, divided into five standard aspects of activities, i.e. professionalism, managerial, dispensing, pharmaceutical care, and public health service activities. As a validation step to the community pharmacy practice standards that had been developed, a survey involving community pharmacists in Indonesia was conducted by using questionnaire with five-points Likert scale ranging from 1 = strongly disagree to 5 = strongly agree at each standard elements. The questionnaire was created by using Google docs, sent directly via Facebook to 800 community pharmacists in Indonesia to be filled online.

Results: Of the 800 questionnaires distributed, 407 questionnaires were filled (50.9% response rate). The results showed that all standard elements offered got positive opinion with mean score ranging from 3.68 to 4.58, consisted of answers of strongly agree 36.02%, agree 50.22%, neutral 11.32%, disagree 1.94% and strongly disagree 0.49%. Community pharmacists opinion on the elements of community pharmacy practice standards was not affected by gender, graduation year, experiences as community pharmacists, another occupation beside community pharmacists, as owners or not owners of pharmacy, and location of pharmacy ($p>0.05$), but affected by the frequency of attendance of pharmacist and former university status ($p<0.05$)

Conclusion: Community Pharmacy Practice Standards that have got positive opinion as guidelines for pharmacists in performing profession and as an instrument that implementing various provisions of the legislation and the rules of the profession applied in Indonesia have been designed.

Keywords: *Profession, Standard, Practice, Community Pharmacy, Indonesia*

Introduction

Based on the Pharmacy Practice Activity Classification (PPAC) initiated by American Pharmacists Association[1], Community pharmacist covers wide range of works from (1) ensuring appropriate therapy and outcomes, (2) dispensing medication and devices, (3) doing health promotion and disease prevention, up to (4) giving contribution to health management systems. Indonesia with a population of around 249 million is the world's fourth most populous country after China, India, and the United States. Referring to the Indicators of Healthy Indonesia 2010[2], Indonesia needs 25 thousand community pharmacists to provide pharmacy service. Currently, the number of pharmacists registered in the Ministry of Health of Indonesia has reached more than 45 thousand people that scattered in 33 provinces. Assuming that half of the registered pharmacists are community pharmacists, evenly spread of pharmacists, and service are performed in a professional manner, the amount can be said not enough. The problem becomes different when the facts say that the uneven spread of pharmacist and pharmacy service is not performed in a professional manner. The uneven spread of pharmacists is due to the tendency of pharmacists to accumulate in urban areas, exceeds Indicators of Healthy Indonesia 2010, and led to a shortage of pharmacists in rural areas. Pharmacy service is not performed in a professional manner essentially no longer requires that the number of pharmacists in accordance to Indicators Healthy Indonesia 2010. According to Anderson[3], pharmacists spend a lot of time in doing idle, unproductive tasks requiring a low order of technical

skill, which could be more economically provided by supportive personnel. Similarly in Saudi Arabia, community pharmacies by law must be owned and managed by pharmacists, but in reality, they are not. Ownership is concerned with risk taking, independence, personal self-satisfaction as well as the desire for making money and the willingness to play an important role in the community's life[4]. In Indonesia, community pharmacists only spend a little time on both professional works and non-professional works in their daily activities. The concept of community pharmacy practice is not well develops, a typical kind of practice can be best described as a medical store. Often, medical stores are supervised by non-professional and unqualified personnel with limited knowledge of drugs [5]. According to Ahaditomo, chairman of the national professional body period 2000-2005, community pharmacy practice in Indonesia as a practice does not comply with the legislation and the rules of profession [6]. According to Bahfen, expert staff of health minister in medico legal field, before the year 2004, Indonesia has a problem in the setting of Pharmacy Practice, because there are no standards that need to be implemented[7]. To improve the quality of pharmacy practice across the country, the International Pharmaceutical Federation (FIP) has published standards for quality of pharmacy services as guidelines for Good Pharmacy Practice[8]. Especially for developing countries, good pharmacy practice in developing countries has been published [9]. Over the last few decades, pharmacy organizations and academic training programmes around the world have promoted pharmaceutical care as a philosophy and standard of provision of care for patients [10]. Then, in 2004 the Ministry of Health in collaboration with the national professional body composed Community Pharmacy Practice Standards, as practice guidelines for pharmacy practice [11]. However, the problem of community pharmacy practice has not been resolved. Research on the profile of community pharmacy practice after 5 years of Community Pharmacy Practice Standards set concluded that community pharmacy practice is still carried out as represented in previous years. Drugs administered as a commodity that seems without risk to users, prescription drugs sold without a prescription and be done by anyone [12]. Driven by the urgent need for an implementing regulation, particularly regarding the requisite of expertise and authority for the implementation of pharmaceutical jobs, the government established Government Regulation No.51 on Pharmacy Practice [13]. And in the same year, the government enacted regulation No.36 about Health replacing regulation No.23 of 1992[14], and the national professional body has set Indonesian pharmacist Code of Ethics [15]. It is necessary to realign some more comprehensive Community Pharmacy Practice Standards, to accommodate standards elements contained in the legislation and the new code of ethics. This study aimed to develop community pharmacy practice standards as guidelines for pharmacists in performing profession in Indonesia, as well as an instrument to implement various provisions of the legislation and the rules of the profession that applies, with the involvement of community pharmacists' opinion as validation step.

Material and Method

Community pharmacy practice standards were composed of 40 standard elements adopted from various provisions of the legislation and the rules of the profession, grouped into five aspects of the standards: Professionalism, Managerial, Dispensing, Pharmaceutical Care, and Public Health Services. As a validation step, a survey asking community pharmacists' opinion in Indonesia was conducted, and their participated voluntarily. The data consists of the characteristics and opinions of respondents to the constituent elements of the standard is expressed through a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The mean scores above 3.5 for each element standard was expressed as a positive opinion, and the mean scores that equal to or less than 3.5 expressed as negative opinion[16]. Instruments were made by using Google docs' questionnaire and sent to 800 addresses Facebook to be filled online. Validity and reliability of the instrument questionnaire was conducted on 50 first data entry. Data were collected from March 22 until May 12, 2012 and were analysed by using the Statistical Package for Social Sciences (SPSS 17.0, Chicago, IL). The influence of respondents' opinions about the characteristics of the standard practice was determined using the Mann-Whitney U test.

Results

Validity test and reliability test of questionnaire instrument. The result of all questionnaire items declared valid ($p < 0.05$). In reliability test, questionnaire instrument declared reliable, the internal reliability score for forty questions was $0.956 > 0.6$.

Characteristics of respondents

Of the 800 questionnaires sent, a total of 407 questionnaires were filled (50.9 % response rate). The respondents came from 27 provinces of 33 provinces and alumnus of 20 higher education of pharmacy of 28 higher education of pharmacy administrator of pharmacist professional education program in Indonesia. The overall results characteristics of respondents can be seen in Table 1.

Tabel 1. Characteristics of respondents

Characteristics	N	(%)
Gender		
Male	230	56.51
Female	175	43.00
No data	2	0.49
Year of graduation		
> 2006	166	40.79
≤ 2006	241	59.21
No data	-	0

Another occupation		
No	141	34.64
Yes	245	60.20
No data	21	5.16
Experience		
≤ 5 years	263	64.62
> 5 years	97	23.83
No data	47	11.55
Pharmacist status		
Owner	78	19.17
Not owner	306	75.18
No data	23	5.65
Frequency of attendance		
Everyday	222	54.55
Not everyday	155	38.08
No data	30	7.37
Location of pharmacy		
Java island		
Outside Java island	171	42.01
No data	198	48.65
	38	9.34
University Status		
Public	323	79.36
Private	31	7.62
No data	53	13.02

Respondents' opinion for elements of practice standards

Out of 40-questions, twelve questions were asked to judge the respondents opinion about aspect standard of professionalism activities, twelve questions were about aspect standard of managerial activities, six questions were about aspect standard of dispensing activities, eight questions were about aspect standard of pharmaceutical care activities, and two questions were about aspect standard of public health service activities. The survey results showed that pharmacists opinion on the standard elements of practice offered were variable from strongly agree 37.15%, agree 49.69%, neutral 10.86%, disagree 1.85% to strongly disagree 0.46%. Using the mean of the respondents' rate which varied from 1 (strongly disagree) to 5 (strongly agree), obtained ranging mean score from 3.68 to 4.58. Thus, all standard elements of practice got mean score above 3.5 or got positive opinion. In detail, respondents' opinion on the standard elements of practice can be seen in Table 2.

Tabel 2. Respondents' mean scores opinion for elements of practice standard

Aspects Standard of Professionalism Activities

Standard Elements	Description of Standard Elements Activities	mean scores (SD)
1. Accountability in fulfilling the oath / pledge of pharmacist	In performing the devotion profession, pharmacist always hold fast to the oath / pledge pharmacist	4.51 (0.62)
2. Pharmacist services	Pharmacist services performed every day at the pharmacy opening hours, have at least one pharmacist companion	4.17 (0.76)
3. Accountability in fulfilling the Code of Ethics of Indonesian Pharmacist	In act and make decisions, pharmacist guided by the principles of the Code of Ethics of Indonesian Pharmacist	4.39 (0.61)
4. Work commitment	Pharmacist is committed to work according to standard pharmaceutical practice	4.38 (0.63)
5. Independent	Pharmacist independent in performing pharmacy practice, without the intervention of another person	4.17 (0.89)
6. Treatment to patients	Pharmacist interact with patients, treat them with respect regardless of their socioeconomic background	4.58 (0.58)
7. Professional relationship with physicians	Pharmacist build a professional relationship with the physician to manage the best therapy for patients	4.34 (0.68)
8. Consultation with another pharmacist	Pharmacist consultation and cooperation with the other pharmacist or pharmacy	4.25 (0.67)
9. Medication error	Pharmacist follow up the events of medication errors	4.06 (0.68)
10. Constructive critism	Pharmacist provide suggestion boxes to respond to constructive criticism from people who use his/her services	4.11 (0.72)
11. Lifelong learning	Pharmacist attending a seminar / training organized by professional organization /high school of pharmacy	4.37 (0.62)
12.Self-assess of their competence and professional activity	Pharmacist regularly self-assess his/her professional competence and activity	3.90 (0.77)
Respondents' mean scores for aspect standard of professionalism activities		4.27 (0.71)

Aspects Standard of Managerial Activities

Standard Elements	Description of Standard Elements Activities	mean scores (SD)
1. Quality of work	Completion of all work in the pharmacy, be guided by standard operating procedures	4.19 (0.65)
2. Meeting the needs of patients	In case the goods are not available , meeting the needs of patients sought elsewhere at no extra cost	3.78 (0.95)
3. Continued profession developement	Pharmacist gets the facilities from the pharmacy in continued profession development program	4.21 (0.75)
4. Access to information	Pharmacist gets facilities from pharmacy to access internet and literatures to create a more efficient practices	4.25 (0.78)
5. Management of pharmaceutical preparations	Management of pharmaceutical preparations through good planning and supported by stock card and notebook of run out goods	4.43 (0.60)
6. Quality of pharmaceutical preparations	Procurement of pharmaceutical preparations through official channels in corresponding to legislation	4.56 (0.59)
7. Storage of pharmaceutical preparations	Storage of pharmaceutical preparations is supported by equipped facilities: refrigerator, storage rack that meets the requirements of the conditions of the room with a predetermined temperature, and laid out to facilitate the search	4.46 (0.61)
8. Expired / damaged drugs	Mark drugs that will and will expire in one year and separate drugs that have expired / damaged	4.50 (0.57)
9. Layout of pharmacy's environment	Layout of pharmacy's environment is in accordance with the function area / room that reflects the professional setting	4.28 (0.64)
10. Counseling area	Counseling area is enclosed / separate from other activities	3.94 (0.90)
11. Waiting room	Have a comfortable waiting room	4.29 (0.67)
12. Rewards	Pharmacist receive compensation according to applicable regulations, plus appropriate profit incentive	4.27 (0.83)
Respondents' mean scores for aspect standar of managerial activities		4.26 (0.75)

Aspects Standard of Dispensing Activities

Standard Elements	Description of Standard Elements Activities	mean scores (SD)
1. Prescription administration requirement	Assessment of prescription administration requirement	4.19 (0.63)
2. Economic aspect of drugs	Pharmacist takes into account the economic aspect of drugs	4.13 (0.64)
3. Limitation of the patient's ability to pay	Pharmacist provides an alternative option for meeting the needs of patients according to their ability to pay	4.50 (0.59)
4. Submission of high alert drugs	Submission of high alert drugs only by prescription	4.00 (0.81)
5. Handing over prescription drugs	Handing over a prescription drug is made by the pharmacist	4.08 (0.81)
6. Explanation and drug information	Explanation and drug information carried by the pharmacist	4.44 (0.61)
Respondents' mean scores for aspect standard of dispensing activities		4.22 (0.71)

Aspects Standard of Pharmaceutical Care ctivities

Standard Elements	Description of Standard Elements Activities	mean scores (SD)
1. Counseling	Pharmacist conduct counseling to patients	4.34 (0.67)
2. Communication with prescribing doctor	Pharmacist communicates with patient therapy-related doctor if necessary	3.68 (0.86)
3. Pharmaceutical suitablility	Pharmacist takes into account the pharmaceutical suitability	4.14 (0.67)
4. Clinical considerations	Pharmacist conduct clinical considerations	4.07 (0.69)
5. Patient's medication record	Pharmacist makes patient's medication record	3.93 (0.81)
6. Monitoring of drug use	Pharmacist performs monitoring of drug use	3.91 (0.80)
7. Selection of medication without prescription	Pharmacist choose the most appropriate medication without prescription to patient	4.29 (0.64)
8. Referral of patients to doctor	Pharmacist refer the patient to a doctor for treatment of health problems outside his/her competence	4.04 (0.76)
Respondents' mean scores for aspect standard of pharmaceutical care activities		4.05 (0.77)

Aspects Standard of Public Health Service Activities

Standard Elements	Description of Standard Elements Activities	mean scores (SD)
1. Provision of health information for public	Pharmacist provide health information for the public	4.29 (0.65)
2. Activities to improve public health	Community health improvement activities conducted through information dissemination: dissemination of leaflets / brochures or posters, and public service activities: counseling and activites alike	4.06 (0.78)
Respondents' mean scores for aspect standard of public health service activities		4.17 (0.72)

Furthermore, Figure 1 below is the distribution (%) of all respondents' opinion to the standard elements of community pharmacy practice.

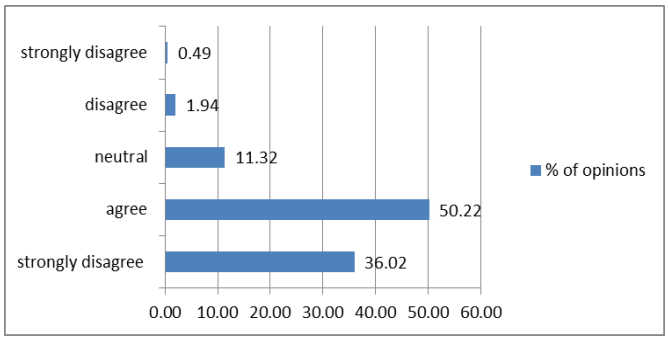

Figure 1. The distribution (%) of all respondents' opinion to the standard elements of community pharmacy practice

It can be seen that 36.02% of respondents were strongly agree and 50.22% of respondents agreed, remaining neutral, disagree, and strongly disagree. Furthermore, Figure 2 below is the mean scores of respondents' opinion on each aspect of the activity standards and standards of practice.

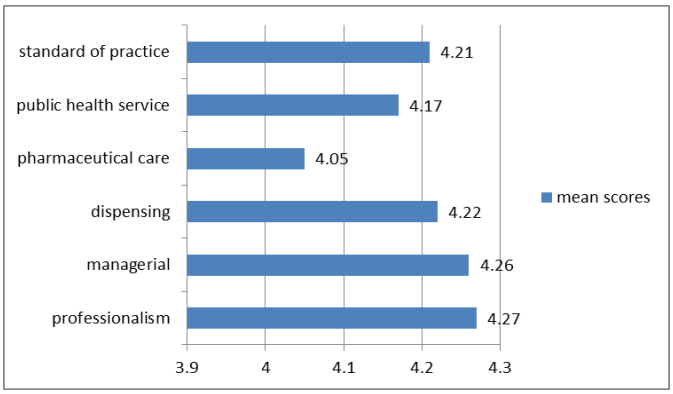

Figure 2. The mean scores of respondents' opinion on each aspect of the activity standards and standards of practice.

It can be seen that the mean scores of standard of pharmaceutical care activity (4.05) was the lowest of the mean scores of other aspects of the standards, and far below the mean standard practice scores (4.21).

Through the Mann-Whitney U test, it was known that respondents' opinion about the standard of practice were not influenced by the characteristics of gender, graduation year, experiences as community Pharmacists, another accupation beside community pharmacists, as owners or not owners of pharmacy, and location of pharmacy ($p>0.05$), but influenced by frequency of attendance of pharmacist and former university status ($p<0.05$).

Discussion

Referring to Table 2 it can be seen that the majority of 40 standard elements gained mean scores above 4 (agree), except 6 standard elements gained mean scores below 4 but above 3.5, which still means obtain a positive opinion. The standard six standard elements are 1 of professionalism aspects related to commitment to always do a self-evaluation, 2 of the managerial aspects related to the nature of altruism that is meeting the needs of the patient without taking extra benefits and necessity provision of counseling areas as a mean of implementation of the patient-oriented service, and 3 of pharmaceutical care aspects related to the necessity of pharmacists to establish communication with physicians, to make patient's medication record, and to monitor the use of drugs by patients. The six elements are important parts of the 4 things that required by WHO[17] and FIP[8] for the implementation of good pharmacy practice, and pharmacist act as the implementation of patient-oriented services. The tendency of respondents gave low scores against the six elements may still felt bizzare, or not applied as a necessity in practice, and it is sure that extra works are needed in the form of energy, mind, and cost. In time, people will begin to be more educated and aware of the drugs, the sixth element will be the key demand of society that must be met. Furthermore, it is known that the mean scores of pharmaceutical care activities aspect (4.05) is the lowest of all, and far below the mean scores of the standard of practice (4.21). The low mean scores indicate that pharmaceutical services are still tend to be product-oriented, not shifted to the patient-oriented yet. This is consistent with the results of research by conducted Cordina, et al[18], where respondents gave high scores to the activities related to the management and dispensing pharmacies, indicating that they feel relatively comfortable and competent to perform activities associated with many traditional functions, and not fully convinced that the activity of pharmaceutical care is the responsibility of the pharmacist.

Furthermore, it was known that respondents' opinion about standard practice were influenced by the frequency of attendance of pharmacist ($p<0.05$). The commitment of pharmacist to be present every day is a commitment that should be possessed by a professional pharmacist to actualize patient-oriented pharmacy services. According to Anderson[3] one of the threats that cause deprofessionalization is that pharmacists have lost contact with their patients. Respondents' opinion about standard practice were also influenced by former university status ($p <0.05$). Pharmacy colleges in Indonesia are growing very rapidly, composed of public and private universities. Of the 11 public universities 10 (90.9%) of them hold

pharmacist professional study program, of the 10 public universities hold pharmacist professional study program, 8 (80%) accredited A and 2 (20%) have not been accredited. And of the 52 private universities, only 18 (34.6%) of them hold pharmacist professional study program, of 18 private colleges that hold pharmacist professional study program, 4 (22.2%) accredited A, 8 (44.4%) accredited B, 1 (5.6 %) accredited C, and 5 (27.8%) have not been accredited[19], [20]. It reflects that public universities that hold pharmacist professional study program have better quality in holding pharmacist professional study program than that of private universities. Then, it becomes very natural that respondents from public universities provide a more positive opinion on the standard aspects of professionalism activities than respondents from private universities.

Conclusion

Community Pharmacy Practice Standards that have got positive opinion as guidelines for pharmacists in performing profession and as an instrument that implementing various provisions of the legislation and the rules of the profession applied in Indonesia have been designed. The standards consisted of 40 standard elements, divided into five standard aspects of activities: professionalism, managerial, dispensing, pharmaceutical care, and public health service activities. The fundamental problem of Community Pharmacy Practice in Indonesia is the lack of genuine efforts to implement various provisions of the legislation and the rules of the profession, it is expected that the Community Pharmacy Practice Standards also can be used as an instrument or a model for implementing various provisions of the legislation and the rules of the profession that applies in Indonesia.

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AUTHORS' CONTRIBUTIONS

Authors contributed equally to all aspects of the study.

PEER REVIEW

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CONFLICTS OF INTEREST

The authors declare that they have no competing interests.