




# PROCEEDING

## THE 2ND INTERNATIONAL CONFERENCE ON

# PHARMACY AND ADVANCED PHARMACEUTICAL SCIENCES

## Book 2:
## Clinical and Social Pharmacy

## CONTENTS

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# COMMUNITY PHARMACISTS' PERFORMANCE ON HEALTH PROMOTION AND EDUCATION SERVICES AND ITS AFFECTING FACTORS

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## ABSTRACT

Health development is executed with priority given to health promotion and disease prevention efforts beside the curative and health recovery efforts. The expected social behavior of "Healthy Indonesia 2010" is the proactive one to maintain and promote health, prevent risks for diseases, protect one from disease threats and active participate in healthy society movement. Maintaining and improving qualified, equal and accessible health services contain the meaning that one of the responsibilities of the health sector is to assure the availability of qualified, equal and accessible health services to the society. The implementation of health services is not merely in the hands of the government, but it also involves maximally the active participation of all members of the society and so pharmacist itself. The objective of this study examined factors that affect pharmacist's performance on health promotion and education services in community pharmacy. A cross-sectional study design utilizing questionnaires measuring previously validated constructs was used to examine the effect of factors on pharmacist's performance in community pharmacy in Surabaya. The 80 pharmacist's manager had participated to fulfill the questionnaires in this study. Overall, 72.5% of respondents reported that they likely had low performance in health promotion and education services. Statistically, leadership factor partially have a significant influence toward pharmacist's performance ($p<0.05$). And simultaneously the examined factors have a significant influence toward pharmacist's performance ($p<0.05$). The performance of pharmacist professional activities in health promotion and education services was very low. It means the pharmacists' role in health promotion and education to community seems abandoned. And It was influenced by leadership factor dominantly. Therefore providing advice on disease prevention, healthy lifestyle, nutrition and diet are emerging role for pharmacist. So, pharmacist as "long life learner" needs continuing education programs in order to advance their pharmaceutical care practices especially in community pharmacy.

**Key words**: performance, community pharmacist, leadership, health promotion, education

## INTRODUCTION

Health development is executed with priority given to health promotion and disease prevention efforts beside the curative and health recovery efforts. The expected social behavior of "Healthy Indonesia 2010" is the proactive one to maintain and promote health, prevent risks for diseases, protect one from disease threats and active participate in healthy society movement. Maintaining and improving qualified, equal, and accessible health services contain the meaning that one of the responsibilities of the health sector is to assure the availability of qualified, equal and accessible health services to the society. The

implementation of health services is not merely in the hands of the government, but it also involves maximally the active participation of all members of health care team and the society (Indonesian Ministry of Health, 2004a).

As a member of the health care team and health promoter, the pharmacist must participate in health screening to identify health problems and those at risk in the community, health promotion campaigns to raise awareness of health issues, and disease prevention and provide advice to individuals to help them make informed health choices (WHO,1994). Pharmacists may also contribute to health education, take part in diagnostic screening procedures and provide domiciliary pharmaceutical services (Jepson, 1996). Nowadays, there is disparity between everyday practices of performance of pharmacist in community pharmacy and the current recommendation of practices of pharmaceutical care (Athijah, 2005). This gap will affect the successfulness of pharmaceutical services.

Therefore the concept of performance is an important way to understand and answer the question why do this gaps exist. It is postulated that individual and organizational factors influence job performance (Gibson et al., 1985; McCloy et al., 1994; Muchinsky, 1993). The individual factors include various personal factors such as motivation, leadership, experience, and training. While the organizational factors such as workload, work environment, reward system, and laws.

The objective of this study examined factors that affect pharmacist's performance on health promotion and education services in community pharmacy.

## METHODOLOGY

### Data source

A cross-sectional study design utilizing questionnaires, measuring previously validated constructs was used. The setting of this study was community pharmacy in Surabaya, Indonesia. The population of this study was pharmacist manager in Surabaya, and there were 569 community pharmacies. Initially, sample size determination of this study were 77 community pharmacies using $p=0.32$; $\alpha=0.05$; $d=0.1$ and propotionally covered all Surabaya area with random sampling technique (Lemeshow, et al., 1997). Pharmacist's performance assessment based on Standard of Pharmaceutical Services in Community Pharmacy issued by Indonesian Ministry of Health in 2004.

### Variables

The independent variables of this study consist of personal factors of pharmacist to include motivation, leadership, experience, and training. The organizational factors investigated including workload, work environment, reward satisfaction and laws. The dependent variable was pharmacist's performance on health promotion and education services.

### Measures

Pharmacists were asked for the intensity of doing health promotion and education services when they present in community pharmacy. The intensity of health promotion and education activities were measured using 7-point Likert-type scale ranging from 1 (never) to 7 (always). Health promotion and education services based on Standard of Pharmaceutical Services in Community Pharmacy issued by Indonesian Ministry of Health. These items were

taken from previous studies of performance of pharmacist (Faturrohmah, et al., 2009). Regarding the independent variables, which four personal factors and four organizational factors were measured using 7-point Likert-type scale ranging from 1 (extremely disagree) to 7 (extremely agree).

**Data analysis**.

Descriptive statistics, including frequencies, percentages, and means, were computed for variables using SPSS 11.5. Linear and multiple regression statistics were used to analyze the data.

## RESULTS AND DISCUSSIONS

Respondents were taken by purposive sampling technique as willingness to participate was low. Random sampling from 300 pharmacists asked by telephone, only 10% would like to participate. Questionnaires was sent to 97 pharmacists who agreed fill in the questionnaires, 80 questionnaires was returned and analyzed for this study (response rate = 82.47).

Table 1 lists the demographic characteristics of respondents. The mean(±SD) age of respondents was
41.66±10.89 years, and 80% were women. Pharmacists' education expressed as number of years since first graduated with mean(±SD) was 14.91±10.01years. Respondents experience is reported with mean(±SD) of number of years work in community pharmacy was 11.85±9.97 years. And there were 37.5% pharmacists had another job beside as a manager in community pharmacy. Respondents had high willingness to participate in the future research and correspond about the result of research, 71.30% and 83.80% respectively.

Table 2 describe profile of performance of community pharmacist on health promotion and education. Percentages of each actitivy with low performance were more than 50%. And overall, 72.5% of respondents reported that they likely had low performance in health promotion and education services. This results show that pharmacists' performance is very low and emerge to improve on health promotion and education services. Therefore, pharmacist can take part in health promotion campaigns, locally and nationally, on a wide range of health-related topics, and particularly on drug-related topics (e.g., rational use of drugs, alcohol abuse, tobacco use, discouragement of drug use during pregnancy, organic solvent abuse, poison prevention) or topics concerned with other health problems (diarrhoeal diseases, tuberculosis, leprosy, HIV-infection/AIDS) and family planning. They may also take part in the education of local community groups in health promotion, and in campaigns on disease prevention, such as the Expanded Programme on Immunization, and malaria and blindness programmes (WHO, 1993).

Regarding which contributing factors that affect the pharmacist's performance on health promotion and education services in community pharmacy. Table 3 show the result of t-test for individual factors of pharmacist consist of motivation, leadership, experience, and training that affect to health promotion and education performance of pharmacist. Significant influence partially were found between leadership with the performance ($p<0.05$). The performance of pharmacist did not affected by motivation, training, and experience significantly. Table 4 describe the result of t-test for organizational factors consist of workload, work environment, reward satisfaction and laws that affect to health promotion

and education performance of pharmacist. None of organizational factors had significant influence partially toward the pharmacist's performance ($p>0.05$). From the examined factors in this study, leadership were dominant factor that affect pharmacist performance on health promotion and education services ($p<0.05$) (Table 5).

Multiple regression statistic (ANOVA) show that simultaneously individual factors had significant influence toward pharmacist's performance on health promotion and education services in community pharmacy ($p<0.05$) but not for organizational factors ($p>0.05$) (Table 6 and 7). Simultaneously the investigated factors together both individual and organizational factors have a significant influence toward pharmacist's performance on health promotion and education services in community pharmacy ($p<0.05$).

This result show that leadership is needed to close the immense gap between our vision and how most pharmacists practice their profession. In all sectors of practice, most pharmacists still spend most of their time on order processing and product handling functions—functions that could be conducted well with less direct pharmacist engagement through the intelligent design and use of systems, technology, and technical workers (Zellmer, 2008). Achieving a high-performance pharmacy practice requires leaders committed to a clear vision for excellent practice. These pharmacy leaders must continuously enhance their team's commitment to that vision, using recognized benchmarks of best practice to extend pharmacy's influence across the continuum of care. Having better pharmacy leaders results in better patient care, improved medication safety, and enhanced pharmacy productivity, all of which usually lead to better medication use within health systems (Zilz, 2004). There are various ways to develop leadership qualities, including: learning from challenges, attending training programmes, performing job performance, and learning through relationships with others (Duggan,et al., 2007). Continuing education for pharmacists should be undertaken and supported to ensure maintenance of pharmacists'capacity to respond the changing health needs of the public (WHO,1994).

## CONCLUSION

The performance of pharmacist professional activities in health promotion and education services was very low. It means the pharmacists' role in health promotion and education to community seems abandoned. And It was influenced by leadership factor dominantly. Therefore providing advice on disease prevention, healthy lifestyle, nutrition and diet are emerging role for pharmacist. So, pharmacist as "long life learner" needs to develop leadership qualities, such as through continuing education programs in order to ensure maintenance of pharmacists'capacity to respond the changing health needs of the public.

## LIMITATIONS

A limitation of this study was the use of a cross-sectional mail survey, which does not allow us to ascertain if pharmacists' performance translate into actual higher or lower performance. Another limitations of this study were self reported by the pharmacists itself with the purposive sampling technique. In order to generalized purpose these limitations must be evaluated or eliminate in future study.

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| Table 1. Demographic and Professional Characteristic of Surveyed Respondents (n=80) | |
|---|---|
| **Characteristics** | **Values** |
| Age (years), mean±SD | 41.66 ± 10.89 |
| %Women | 80 |
| %Men | 20 |
| No.years since first graduated as pharmacist, mean±SD | 14.91 ± 10.01 |
| No. years work in community pharmacy setting, mean±SD | 11.85 ± 9.97 |
| Work in another place, % | |
| No | 62.50 |
| Yes | 37.50 |
| Position, % | |
| Manager and owner | 32.50 |
| Manager | 67.50 |
| Work with one or more other staff members, % | |
| Other pharmacists | 7.50 |
| Technicians | 98.75 |
| Clerks | 100 |
| Number of staff members, mean±SD | 5.55 ± 4.48 |
| Number of working hours in a week, mean±SD | 27.56 ± 22.15 |
| Number of prescription personally dispensed, mean±SD | 8.03 ± 8.19 |
| Number of patients personally served, mean±SD | 15.87 ± 13.36 |
| Willingness to participate in the future research,% | |
| Yes | 71.30 |
| No | 25.00 |
| Willingness to correspondence about the result of research,% | |
| Yes | 83.80 |
| No | 12.50 |

*Maximum sample size (spesific numbers of respondents to each item varied because of nonresponses).
*No. = number

| Table 2. Profile of Performance of Community Pharmacist on Health Promotion and Education Services | | |
|---|---|---|
| **Activities** | **Performance, n (%)** | |
| | **High** | **Low** |
| - Dissemination drug use information to community | 23 (29) | 57 (71) |
| - Interacting actively with other health provider | 27 (34) | 53 (66) |
| - Educating patient about self medication | 39 (49) | 41 (51) |
| - Participating in continuing pharmacist education | 22 (28) | 58 (72) |
| - Giving home care to patient especially with chronic diseases | 2 (3) | 78 (97) |
| **Overall** | 22 (27.5) | 58 (72.5) |

** Those who reported that they were likely never do these activities were labeled as "low" and those who responded that they were likely always do these activities were labeled "high".*

| Table 3. Association of individual factors with health promotion and education performance of pharmacist | | |
|---|---|---|
| **Individual Factors** | **Mean ± SD** | **t statistics** |
| Motivation | 6.04±0.934 | 0.200 |
| Training | 5.28±1.551 | 0.490 |
| Leadership | 5.88±1.084 | 0.006 |
| Experience | 5.66±0.954 | 0.684 |

| Table 4. Association of organizational factors with health promotion and education performance of pharmacist | | |
|---|---|---|
| **Organizational Factors** | **Mean ± SD** | **t statistics** |
| Workload | 5.53±1.136 | 0.735 |
| Workclimate | 6.02±0.881 | 0.230 |
| Reward | 5.60±1.176 | 0.662 |
| Laws | 6.31±0.805 | 0.432 |

| Table 5. Association of individual and organizational factors with health promotion and education performance of pharmacist | | |
|---|---|---|
| **Organizational Factors** | **Mean ± SD** | **t statistics** |
| Motivation | 6.04±0.934 | 0.264 |
| Training | 5.28±1.551 | 0.520 |
| Leadership | 5.88±1.084 | 0.022 |
| Experience | 5.66±0.954 | 0.652 |
| Workload | 5.53±1.136 | 0.726 |
| Workclimate | 6.02±0.881 | 0.739 |
| Reward | 5.60±1.176 | 0.839 |
| Laws | 6.31±0.805 | 0.974 |

**Table 6. Result of F-test (simultan regression) for individual factors to health promotion and education performance of pharmacist**

| ANOVA(b) | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 41,469 | 4 | 10,367 | 4,363 | ,003(a) |
| | Residual | 178,218 | 75 | 2,376 | | |
| | Total | 219,687 | 79 | | | |

a Predictors: (Constant), Laws, Training, Workclimate, Experience, Workload, Motivation, Reward, Leadership

b Dependent Variable: Health promotion and education

**Table 7. Result of F-test (simultan regression) for organizational factors to health promotion and education performance of pharmacist**

| ANOVA(b) | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 22,589 | 4 | 5,647 | 2,149 | ,083(a) |
| | Residual | 197,098 | 75 | 2,628 | | |
| | Total | 219,687 | 79 | | | |

a Predictors: (Constant), Laws, Training, Workclimate, Experience, Workload, Motivation, Reward, Leadership
b Dependent Variable: Health promotion and education

**Table 8. Result of F-test (simultan regression) for individual and organizational factors to health promotion and education performance of pharmacist**

| ANOVA(b) | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 42,163 | 8 | 5,270 | 2,108 | ,046(a) |
| | Residual | 177,524 | 71 | 2,500 | | |
| | Total | 219,687 | 79 | | | |

a Predictors: (Constant), Laws, Training, Workclimate, Experience, Workload, Motivation, Reward, Leadership
b Dependent Variable: Health promotion and education