

The Satisfaction and Perception of Intern Pharmacists towards Their Internship Training in Ministry of Health Malaysia Facilities: A National Survey

Abida Haq Syed M. Haq^{1*}, Faridah Aryani Md. Yusof², Pui Lim Chan^{1*}, Mary Chiew Fong Chok¹, Gillian Shih Yen Phua³, Chee Jia Teoh⁴, Noorazlinda Yaacob⁵, Yusmiza Azmi¹, Nurul Afifah Osman⁶, Ahmad Farhan Paiman⁶, Siti Fauziah Abu¹, Nurul Adha Othman⁷, Salwati Abd. Kadir⁶, Kamarunnesa Mokhtar Ahmad¹

¹ Pharmaceutical Services Division, Ministry of Health Malaysia

² National Pharmaceutical Regulatory Agency, Ministry of Health Malaysia

³ Pharmacy Department, Hospital Sultanah Bahiyah, Kedah, Malaysia

⁴ Pharmacy Department, Hospital Seberang Jaya, Pulau Pinang, Malaysia

⁵ Pharmaceutical Services Division, Melaka State Health Department, Malaysia

⁶ Pharmacy Board of Malaysia, Ministry of Health Malaysia

⁷ Pharmacy Department, Hospital Sungai Buloh, Selangor, Malaysia

ABSTRACT

Keywords

Job satisfaction
Pharmacy internship
Pharmacist

Correspondence

Chan Pui Lim
Pharmaceutical Services
Division, Ministry of Health,
Lot 36, Jalan Universiti,
46350 Petaling Jaya,
Malaysia.

E-mail

puilimchan@gmail.com

Aim To assess the level of job satisfaction and perception of Provisionally Registered Pharmacists (PRP) towards the internship training provided.

Method A cross-sectional nationwide survey was conducted amongst all PRPs undergoing training between December 2015 and February 2016 to assess their level of job satisfaction and perception towards the training requirements stipulated by the Pharmacy Board of Malaysia.

Results A total of 733 PRP participated in the survey and the response rate was 95.8%. Based on the response received, 92.5% (n=678) felt that the one-year training period was just nice, 30.5% (n=223) felt that the logbooks were too complicated and 33.2% (n=241) said the targets set by the Pharmacy Board of Malaysia were too high. On a scale of 1 to 5, respondents rated 3.32 (SD 0.54) for mean score of job satisfaction. Significant factors influencing mean score of job satisfaction were perceived fairness at the work place, perceived self-competence after one year of training, preceptors' competence and pharmacy as a chosen career pathway.

Conclusion Intern pharmacists were fairly satisfied with the internship training in government facilities in Ministry of Health Malaysia. A review of the internship logbooks and the practicality of targets set by the Pharmacy Board are warranted for further improvement.

Introduction

In Malaysia, the pharmacy internship is a comprehensive post-graduation training program developed by the Pharmacy Board of Malaysia that exposes the interns to various areas of pharmacy practice in the real world setting through hands-on training modules. The one year internship program comprises of structured modules with clearly defined requirements which each pharmacist intern, also known as Provisionally Registered Pharmacists (PRPs) needs to fulfil in order to qualify for registration as a full-fledged pharmacist [1]. The PRPs are required to acquire experience from the internship program and fulfil a set of requirements in accordance with the standards set out by the Pharmacy Board of Malaysia [2].

The value and success of internship training program is very important as it is the key that defines the quality of future pharmacists serving the nation. In a quality assurance study conducted at the University Of Iowa Of College Pharmacy, students were asked to evaluate their preceptors and the practice site [3]. Preceptors are defined as excellent if they were rated on 80% or more based on the student evaluations. It was found that preceptors who served as a role model, showed interest in teaching and relating to the student as an individual were factors strongly associated with excellent preceptors [3]. These findings suggested that by identifying expectations of pharmacy students, the preceptors will have an opportunity to improve their teaching style accordingly and eventually contribute to the development of the entire training module. Hence, quality assurance studies should be carried out as a continuous effort to improve the pharmacy training and curriculum.

An earlier study conducted in the Northern Region of Malaysia found that the factors affecting job satisfaction among PRPs towards the internship program were perceived fairness at work, place of work, ethnicity and preceptor competency [4]. However, among the registered pharmacists, the level of job satisfaction was associated with organization or environmental culture, support from the top management and equal distribution of job scope [5]. Poor level of job satisfaction was found to discourage the retention of pharmacists in governmental institutions. The contributing factors for poor job satisfaction

were bad workplace politics, lack of recognition at work and by the public, unequal job distribution and monetary issues [5]. In general, regardless of whether they were interns or registered pharmacists, job satisfaction was shown to be influenced by the recognition and feedback from supervisors, supervision received, the quality of interpersonal relationships and the degree of satisfaction towards the work or the task itself [6].

Management of internship training is crucial in improving the quality of patient care and achieving optimum health benefits. The number of registered pharmacists in Malaysia has grown from 4,999 in year 2005 to 12,294 in the year 2014; which is almost 2.5 times [7]. In recent years, the number of pharmacy graduates that enter workforce on an annual basis has burdened the capacity of MOH facilities to absorb them for internship [8]. Consequently, the rapid increment in the number of pharmacy graduates per year also increases the workload of Pharmacy Board to monitor and ensure compliance of the internship training with agreed quality standards [8].

The graduates that enter the workforce between year 2015 and 2016 consist of an age group called millennials. Millennials exhibit different attitudes towards employment, sales and marketing, which are challenges many conventional strategies and approaches. Studies that describes the job satisfaction and perception of millennials towards the pharmacy internship training were sparse. As no nationwide research has been conducted till date, the current study is a timely research to explore their level of job satisfaction and perception towards the internship training in the MOH facilities.

With this in mind, there is a demand gap for the Pharmacy Board of Malaysia to gather feedback from the PRPs as the current internship training modules has been in place for several years but has never been comprehensively evaluated. As no nationwide research has been conducted to date, this study aims to assess the job satisfaction and perception of PRPs towards the internship training program as an extension from the previous study conducted in the Northern region [4]. The specific objectives include identifying factors that influence the job satisfaction level and to evaluate whether their

universities had prepared them for internship training.

Method

A nationwide cross-sectional study using a self-administered questionnaire was conducted in all government facilities providing PRP internship training (65 hospitals) in Malaysia. The questionnaire form - developed based on the previous study but was subsequently modified based on literature reviews [4] conducted by the investigators - was then validated through a pilot study in three training centers among PRPs who had undergone the internship training for at least 6 months.

Statements on job satisfaction were adapted from Brayfield and Rothe’s satisfaction scale [10]. There were 26 statements related to job satisfaction, perceived fairness in workplace, perception towards self-competence after one year of training, perception towards preceptor’s competence and salary. Respondents were asked to evaluate each item using a 5-point Likert scale (5=strongly agree, 4=agree, 3=neutral, 2=disagree, 1=strongly disagree). They were also asked to evaluate the training period, log books, targets set in the log books and adequacy of the facilities in nine pharmacy services. Respondents who had not been attached in a given pharmacy service were asked not to evaluate that particular pharmacy service. The nine pharmacy services included out-patient pharmacy, in-patient pharmacy, ward pharmacy, drug and poison information services, clinical pharmacokinetic services, parenteral nutrition services, inventory control and store management, chemotherapy drug reconstitution services and manufacturing and repacking services.

At the end of every section, respondents were asked to give general comments about the training received, attachment at every pharmacy services and working extended hours or shift. The comments were evaluated by categorizing them into positive, negative or mixed views. Mixed views were comments that mentioned both positive and negative views about the internship training.

The questionnaire was summarized into four main parts i.e: Section A: Demographic profile of respondents; Section B: General perception and satisfaction towards internship training; Section C: Perception towards training rotations in each pharmacy unit; and Section D: Information on working extended hours. In

December 2015, the questionnaires were distributed to the study population which comprised of 765 eligible PRPs undergoing training in the 65 hospitals. PRPs with less than 6 months of internship training were excluded from the study. Sampling calculation was not employed as universal sampling was used. Each questionnaire was assigned a unique identification number before it was distributed to the PRPs to ensure anonymity of respondents to the investigators during analysis and interpretation. Completed questionnaires were collected by liaison officers in every state and sealed in an envelope before they were delivered to the investigators through registered mail.

Demographic variables were analyzed using descriptive statistics and summarized as frequency and percentages. Data from Likert scale was analyzed using means and standard deviations. Factors affecting job satisfaction were determined using Simple Linear Regression and Multiple Linear Regression. Mean score of job satisfaction was analyzed using ANOVA for dichotomous variables, otherwise ANCOVA analysis was used. Significant level was set at $p < 0.05$ for all statistical tests performed.

Table 1: Characteristics of Provisionally Registered Pharmacists (n=733)

| Characteristic | n (%) | Mean (SD) |
|------------------------|------------|--------------|
| Age | | 25.20 (1.19) |
| Gender | | |
| Male | 176 (24.1) | |
| Female | 556 (75.9) | |
| Ethnic | | |
| Malay | 418 (57.0) | |
| Chinese | 235 (32.1) | |
| Indian | 64 (8.7) | |
| Others | 16 (2.2) | |
| Marital status (n=732) | | |
| Single | 631 (86.2) | |
| Married | 101 (13.8) | |
| Graduated from | | |
| Local Public | 506 (69.0) | |

| | | |
|----------------------------------|------------|--|
| Universities | | |
| Local Private Universities | 161 (22.0) | |
| Foreign universities | 66 (9.0) | |
| Place of choice (n=731) | | |
| Yes | 505 (69.1) | |
| No | 226 (30.9) | |
| Training Facilities | | |
| National Referral Hospital (1) | 26 (3.5) | |
| State Hospital (14) | 270 (36.8) | |
| Hospital with specialist (36) | 388 (52.9) | |
| Hospital without specialist (11) | 42 (5.7) | |
| Ministry of Education (2) | 7 (1.0) | |
| Adequacy of facilities (n=727) | | |
| Adequate | 547 (75.2) | |
| Not adequate | 180 (24.8) | |

All data analyses were conducted using Statistical Package for Social Science, Version 20.0 (IBM).

The study was registered with the National Medical Research Register (NMRR-15-1803-27837) and obtained approval from the Medical Research Ethics Committee (MREC), National Institute of Health Malaysia.

Results

The response rate was 95.8% (n=733) and non-respondents were those who did not give consent (n=21), were on maternity leave

(n=6), long medical leave (n=3) or resigned from service (n=2) (Figure 1). Majority of the respondents were Malay (57.0%), female (75.9%) with a mean age of 25.2 ± 1.19 years (see Table 1). More than half of the respondents (69.0%) were graduated from local public universities and received their training in hospitals with specialists (52.9%). Findings from respondents' evaluation about the internship training period, log books, targets set in the log books and adequacy of the facilities of the overall internship training and attachment at every pharmacy services were presented in Table 2.

Mean score of job satisfaction was found to be 3.32 ± 0.55 , mean score for perceived fairness in workplace was 3.04 ± 0.74 , perception towards self-competence level after one year training was 3.70 ± 0.57 , perception towards preceptor's competence was 3.72 ± 0.59 and salary was 3.52 ± 0.80 . Respondents rated mean score of 4.03 ± 0.75 when they were asked to rate the statement "being a pharmacist is my chosen career path". They rated mean score of 3.33 ± 0.92 for the statement "my university has fully prepared me to the internship training". Higher percentage of graduates from local public universities rated agree (42.3%, n=214) and strongly agree (9.5%, n=48) that their universities had prepared them for internship training than graduates from local private universities (31.1%, n=50 rated agree and 4.3%, n=7 rated strongly agree) and from foreign universities (19.7%, n=13 rated agree and 6.1%, n=4 rated strongly agree).

The mean score for job satisfaction was 3.44 ± 0.09 among PRPs who graduated from local private universities which was significantly higher ($p=0.011$) as compared to graduates from local public universities (3.29 ± 0.05). The most significant factors associated with mean score of job satisfaction were identified as perceived fairness at the work place, perceived self-competence after one year of training, preceptors' competence and being a pharmacist as their chosen career path.

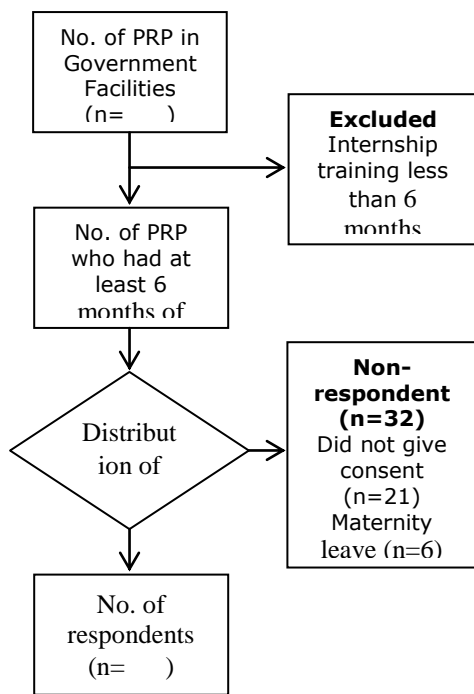


Figure 1: Sampling method employed in this study. PRP: Provisional Registered Pharmacist

Discussion

One of major functions of the Pharmacy Board of Malaysia is to monitor the compliance of institutions of higher learning with the Guidelines on Approval and Recognition of Pharmacy Degree Program to ensure the quality of pharmacy graduates. Higher learning institutions offering pharmacy education should not only provide academic knowledge but should prepare its graduates for the general practice of pharmacy in both theoretical and practical skills in their pharmacy program. The current study showed that half (51.8%, n=262) of intern pharmacists who graduated from local public universities agreed and strongly agreed that their universities had fully prepared them for internship training as compared to 35.4% of PRP graduates from local private universities and 25.8% of PRP graduates from foreign universities. These observations may be due to the learning method or syllabus of local public universities

being designed to suit the requirements of the internship training in MOH facilities. Further study is required to identify the reasons why graduates from non-public universities felt they were not adequately prepared for internship training. Identifying the gaps in pharmacy education is essential for the Pharmacy Board of Malaysia to design new regulatory/monitoring guidelines to ensure better quality of pharmacy graduates.

Most of the respondents (92.5%) in the current study rated that the training period of one year as adequate. More than sixty percent (n=500) claimed that the log books were neither too simple nor too complicated and 66.5% (n=482) rated the targets set in the logbooks as 'just nice'. However, it quite alarming that 33.2% (n=241) of respondents rated the targets set in the logbooks as being too high. Out of the nine pharmacy services, targets set in the logbook for ward pharmacy had the highest percentage (44.4%) of respondents rating it as 'too high' followed by the out-patient pharmacy (24.5%). Training in the ward pharmacy can be challenging because the targets set in logbooks thoroughly assessed the intern pharmacists' ability to translate clinical knowledge into practice. The training is a comprehensive assessment of therapeutic knowledge, problem-solving skills and pharmacotherapy management and these are the fundamental competencies of becoming a clinical pharmacist [11]. Intern pharmacists who aspire to become clinical pharmacists have to build their competencies by obtaining new therapeutic information - through continuing professional education - to combine with prior knowledge base in order to practice evidence based medicine in daily practice. Many intern pharmacists can be easily discouraged when they realize how much they do not know during their training especially in the ward pharmacy [9]. Hence, this explains the high percentage of respondents rating the log book and the training duration in the ward pharmacy as being too complicated (26.6%, n=184) and too short (14.0%, n=97) respectively.

Table 2: Perceptions of Provisionally Registered Pharmacists towards the Internship Training

| State ment | Re sp on d | O ve ra ll in te rn | O P D | IP D | W ar d Ph ar m ac | DI S | T D M | T P N | S t o r e M | C D R | M F G |
|---------------|---------------------|---------------------------------------|-------------|---------|-------------------------------------|---------|-------------|-------------|----------------------------|-------------|-------------|
| | | | | | | | | | | | |

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| | | ship training * | | | | y | | | | a n a g e m e n t | | | |
|-------------------------------|------------------|-----------------|-----------|-----------|-----------|----------|---------|----------|---------|-------------------|---------|---------|--|
| | | (n=729) | (n=725) | (n=693) | (n=555) | (n=652) | (n=539) | (n=610) | (n=515) | (n=626) | (n=555) | (n=626) | |
| | | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | | |
| Training period of attachment | To short | 41 (5.6) | 9 (1.2) | 41 (5.7) | 97 (14.0) | 13 (2.2) | 6 (0.9) | 3 (0.7) | 3 (0.5) | 3 (0.7) | 1 (0.2) | | |
| | Jus t n i c e | 67 (92.5) | 58 (80.8) | 65 (90.8) | 53 (77.5) | 5 (9.3) | 5 (8.9) | 4 (9.1) | 5 (8.8) | 4 (9.1) | 4 (7.4) | | |
| | To o l o n g | 13 (1.8) | 13 (18.0) | 26 (36) | 59 (85) | 2 (4.7) | 1 (1.7) | 9 (21.3) | 5 (9.4) | 7 (14.3) | 8 (13) | | |
| Log books | To o s i m p l e | 8 (1.1) | 2 (0.3) | 2 (0.3) | 2 (0.3) | 0 (0) | 3 (5) | 3 (7) | 1 (2.8) | 3 (6) | 1 (3) | | |
| | Jus | 50 | 59 | 59 | 50 | 4 | 5 | 4 | 5 | 4 | 6 | | |

| | t n i c e | 0 (68.4) | 6 (81.9) | 9 (82.6) | 6 (73.1) | 8 (92) | 9 (94) | 8 (84) | 7 (73) | 9 (90) | 0 (0.4) |
|------------------------------|----------------------------|-----------|-----------|-----------|-----------|---------|---------|---------|----------|---------|---------|
| | | (8.4) | (1.9) | (2.6) | (3.1) | (2) | (1) | (1) | (1) | (1) | (1) |
| | | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) | n(%) |
| Targets set in the log books | To o c o m p l i c a t e d | 22 (30.5) | 13 (17.9) | 12 (16.6) | 18 (26.6) | 1 (1.7) | 5 (8.3) | 5 (9.8) | 1 (1.3) | 2 (2.6) | 5 (6.8) |
| | To o l o w | 2 (0.3) | 3 (0.4) | 0 (0) | 2 (0.3) | 2 (0.3) | 3 (0.5) | 1 (0.2) | 8 (11.3) | 3 (4) | 1 (1.6) |
| | Jus t n i c e | 48 (66.5) | 54 (75.1) | 57 (79.7) | 38 (55.3) | 4 (6.7) | 5 (8.8) | 4 (8.7) | 5 (9.5) | 4 (9.1) | 6 (9.7) |
| | To o h i g h | 24 (33.2) | 17 (24.5) | 14 (20.3) | 30 (44.4) | 1 (1.7) | 8 (13) | 6 (13) | 2 (3) | 3 (4) | 8 (13) |

Recognizing the huge gap between clinical experience and targets sets in the logbooks, this study suggests that preceptors in the ward pharmacy play an important role. The preceptors in the ward need to re examine their work process in guiding intern pharmacists towards achieving the targets set in the module. An intern pharmacist's job satisfaction and quality of internship training is

important as it has direct impact on his/her work performance and ultimately on the provision of pharmaceutical care in the hospital setting. A study published in 2007 showed that out of 405 registered pharmacists in Malaysia, majority (75.8%) of them had moderate level of job satisfaction when they were asked to rate whether they had low, moderate or high job satisfaction level [12]. Job satisfaction among the fully registered pharmacists was found to be positively correlated with age, job-position held and monthly wages of the respondents [12]. In another survey conducted among intern pharmacists in the Northern region of Malaysia, job satisfaction was measured using 5-point Likert scale questionnaire [4]. The mean score of job satisfaction found in that study was 3.27 (SD 0.86) while the current nationwide study had a mean score 3.32 (SD 0.54) which is consistent with the previous findings.

A recent study by Manan MM et al further demonstrated that age and length of services were associated with job satisfaction among fully registered pharmacists [9]. However, factors affecting job satisfaction among intern pharmacists were different; intern pharmacists in Malaysia feel that if they are treated fairly in the workplace, they would be satisfied with their jobs [4]. Similarly, the current study among intern pharmacists also revealed that job satisfaction was significantly associated with perceived fairness at the workplace, perceived self-competence after one-year training, perception on preceptors' competency and pharmacy as a chosen career pathway.

Intern pharmacists expect the internship training to be a platform for them to improve their personal skills and knowledge. In the United States and several other countries, pharmacy internship is a part of the undergraduate degree program whereas in Malaysia, when the pharmacy graduates undertake the internship training in

government facilities, they are considered as employees and part of the workforce under the Ministry of Health Malaysia. Therefore, apart from achieving the targets set by the Pharmacy Board of Malaysia within a stipulated time, intern pharmacists have to work extended hours, assume on-call duties and participate in continuous professional education programs. To ensure a fair and equal working environment, the heads of the training centres have the responsibility to create a working environment that allows the

pharmacist to realize his or her fullest potential and contribute towards achieving the organization's goals. Studies have shown fairness and consistency for all employees will motivate the workers, elevate their job satisfaction and their productivity towards a positive direction [13].

This study is not without limitations. The content of questionnaire was validated in a very small sample. Preceptors in all training centers were assumed to be equally competent without considering their extra professional or academic qualifications and experience. All training centers were assumed to provide a similar level of training for the PRPs and having comparable facilities. Some intern pharmacists could have undergone training in certain pharmacy services only and were unable to provide full response to the entire questionnaire in the survey. Apart from all the variables examined in this study, some possible confounding factors that might influence job satisfaction were unable to be controlled in this study. The confounding factors include stress, conflict with co-workers or bosses, interpersonal problems and a person's capability to cope with heavy workload. A study by Quandt WG (1982) even suggested that factors such as unchallenging role and function might increase job dissatisfaction and finally lead to stress and burnout [12,14]. Hence, the findings in this study must be interpreted with caution.

Conclusion

The Provisionally Registered Pharmacists surveyed in this nationwide study were found to be generally satisfied with the internship training in government health facilities but there were areas of concern which need to be addressed. This study suggests there is a need to review the content of the logbooks and the practicality of targets set by the Pharmacy Board in the various modules. To improve the quality of internship training, preceptors should be competent to guide the intern pharmacists in a fair and equal working environment. Thus, competency of preceptors will need to be evaluated in future in order to provide better training for the intern pharmacists. A further study amongst PRPs who have completed the one year internship training should also be conducted to give a more complete assessment on the program. As PRPs can also undergo training in non-governmental settings, in future it would be very beneficial to conduct a similar study in these settings as well.

Acknowledgements

We would like to thank the Director General of Health Malaysia for his permission to publish this article. The authors would also like to acknowledge Mohd Yunus Shaari, Fuziah Abdul Rashid and Hanisah Shafie from the Pharmacy Board of Malaysia for their opinions and contribution in this research.

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