Knowledge level of government healthcare personnel in Labuan towards Registered Product and Notified Cosmetic

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ABSTRACT

Introduction: All pharmaceutical products in Malaysia must be registered with the Drug Control Authority (DCA) whereas cosmetics must be notified with the National Pharmaceutical Regulatory Agency (NPRA). Availability of unregistered products and unnotified cosmetics in the market are longstanding issues affecting public safety and health. It is vital that all government healthcare personnel (GHP) as the front liners are equipped with the knowledge to properly advise the public on this issue.

Objective: This study aims to determine the level of knowledge towards registered products and notified cosmetics among various groups of GHP under the Ministry of Health facilities in Labuan.

Methods: This was a cross-sectional study performed from August to November 2017 using a validated 12 question questionnaire. Respondents were divided into 4 groups (doctors/dentist, pharmacist, nurse, allied healthcare professional) and results between the groups were analysed using Chi-square analysis. Respondent's knowledge was given score and those who scored 9 marks and above were considered to have good knowledge. Those who scored 8 marks and below were considered to have poor knowledge.

Results: Only 40.2% Pharmacists have the highest score of good knowledge on registered products and notified cosmetics at 81.8% (n=18). The level of good knowledge among allied health professionals (AHP) stood at 42.9% (n=21), 36.4% of nurses (n=43) and 20% of doctors (n=6). However in total, only 40.2% (n=88) of the study population had good knowledge.

Conclusion: The level of knowledge towards registered products and notified cosmetics among doctors, pharmacist, nurses and allied health professional in Labuan is poor as only 40.2% have good knowledge. This study shows a significant association between the levels of knowledge among GHP varies between groups of profession. Pharmacist group has the highest score in knowledge in this study and thus should be another reference for the general public and patients when it comes to health-related matters. Further re-education should be conducted to improve the knowledge of GHPs in Labuan with regards to this subject.

Keywords: registered products, notified cosmetics, government healthcare personnel, pharmacy, pharmacy enforcement

INTRODUCTION

The National Survey on the Use of Medicines (NSUM) by Malaysian Consumers 2015¹², showed that 58.6% of the participants preferred to consult government doctors when experiencing health related problems. Therefore, it is vitally essential for all our government healthcare personnel to have knowledge on registered products and notified cosmetics as they are often the first line of contact when the general public has any enquiries.

All medicinal and pharmaceutical products, which include health supplements and traditional preparations must be registered with the Drug Control Authority (DCA), Ministry of Health Malaysia (MOH) before being marketed and sold to consumers¹. The availability of unregistered products and unnotified cosmetics in the market are longstanding issues affecting public safety and health. In 2016 alone, the Pharmacy Enforcement Division of Malaysia had confiscated RM54.9 million worth of unregistered products and unnotified cosmetics respectively, indicating the issue is still at large amongst the general public⁵.

According to Regulation 7(1)(A) Control of Drugs and Cosmetics Regulations 1984, “No person shall manufacture, sell, supply, import, possess or administer any product unless the product is a registered product”⁶. It is clear that only registered products are allowed in this country and everyone must follow these regulations. Moreover, all registered products undergo evaluation of the products' quality, safety and efficacy (except for traditional preparations and health supplements) to ensure safety of the public⁷.

Cosmetic products in Malaysia must also be notified with the National Pharmaceutical Regulatory Agency, Ministry of Health Malaysia (MOH) before being marketed and sold to consumers. Cosmetics include any substance or preparation intended to be placed in contact with various external parts of the human body (epidermis, hair system, nails, lips and external genital organs) or with teeth and the mucous membranes of the oral cavity, with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance and/or correcting body odours and/or protecting them or keeping them in good condition⁸. Some examples of cosmetic products include body soap, facial cleansers and creams, sunscreens, toothpaste and mouth rinse, hair shampoos and conditioners, hair dyes, perfumes and deodorants, and colour cosmetics including lipsticks, eye shadow, compact powder and nail polish.

This study aims to determine the level of knowledge towards registered products and notified cosmetics among various groups of government healthcare personnel under the Ministry of Health facilities in Labuan. This study group was chosen due to logistical reasons as the author is a staff under the Labuan State Health Department, Ministry of Health, which has to direct access to the government healthcare personnel. This was the first effort to conduct such research within Malaysia.

METHODS

Design and study population

A cross sectional study was performed on government healthcare personnel under the Labuan State Health Department, which also included Rural Health Clinics (*Klinik Desa*), Community Clinics (previously known as 1Malaysia Clinic), Health Clinics and Labuan Hospital, from August to November 2017. The inclusion criteria included all healthcare personnel that are available during the conduct of the study. Personnel who were absent or on leave during the conduct of the study were excluded. Based on a population of roughly 500 GHP (information provided by the Human Resource Section, Labuan State Health Department), the sample size was calculated using Raosoft sample size calculator (margin of error = 5%, confidence level =

95%, response distribution = 50%) which yielded the minimum sample size of 218 participants.⁹ Healthcare personnel without a healthcare related diploma/degree are excluded from this study.

Instrumentation

Questionnaires were distributed to GHP via the respective Deputy State Health Directors. This validated questionnaire consists of 12 questions in Malay language and was originally designed by Sabah State Pharmacy Enforcement Branch. [Questions 1 to 11 will test on knowledge of registered products whereas Question 12 will test on knowledge of notified cosmetics (refer to Appendix 1)]. There was also a question asking whether the GHP had prior exposure to information on registered products and cosmetics. The respondents' will be divided into four groups; doctors/dentist, pharmacist, nurse, allied healthcare professional (e.g. nutritionist and dietitian).

Those who scored 9 marks and above were considered to have good knowledge on registered products and notified cosmetics. Those who scored 8 marks and below were considered to have poor knowledge. This grading scale was decided upon discussion with officers from Labuan Pharmacy Enforcement Branch as the officers felt that as healthcare personnel whom are educating the public on health related issues on a daily basis, they should be able to answer most, if not all the questions correctly, and a high score of 9 out of 12 was decided to gauge good knowledge.

Statistical Analysis

Data was entered into Microsoft Excel and Chi Square analysis was performed using IBM Statistical Package for the Social Sciences (SPSS) version 19. Socio-demographic data and categorical data were presented as frequencies and percentages. A *p*-value of <0.05 was considered as statistically significant.

Ethical Approval

Ethical approval for this study was obtained from the Medical Research and Ethics Committee (MREC), Ministry of Health Malaysia (NMRR-17-541-34803 (IIR)).

RESULTS

Socio-demographic characteristics

Questionnaires were distributed to 14 facilities involved in this study and 219 were returned. The highest respondents from government healthcare personnel were mostly nurses (53.9%, n=118) and most of the participants fall within the age group of 26-30 years old (39.7%, n=87). There were more female participants (88%, n=193) and there were slightly more diploma holders compared to degree holders (57.1%, n=125) [Table 1].

Table 1. Socio-demographic characteristics among study population presented in percentages

Characteristics	All (%) n = 219
Gender	
Male	26 (11.9%)
Female	193 (88.1%)
Education level	
Diploma	125 (57.1%)
Degree	94 (42.9%)
Age	
20-25	18 (8.2%)
26-30	87 (39.7%)
31-35	49 (22.4%)
36-40	27 (12.3%)
40-45	14 (6.4%)
> 46	22 (10%)
Undisclosed	2 (0.9%)
Occupation	
Doctor/Dentist	30 (13.7%)
Pharmacist	22 (10%)
Nurse	118 (53.9%)
Allied Healthcare Professional	49 (22.4%)

Knowledge scores

From the study, 40.2% (n=88) of the study population had good knowledge towards registered products and notified cosmetics [Table 2], despite 89.5% (n=196) stating that they have received prior information with regards to the topic at hand [Table 3]. Individually, pharmacists have the highest score of good knowledge at 81.8% (n=18). The level of good knowledge among allied health professionals (AHP) stood at 42.9% (n=21), 36.4% of nurses (n=43) and 20% of doctors (n=6). Chi-square analysis demonstrates that the level of knowledge among government healthcare personnel are significantly different ($p < 0.001$).

Table 2 Tabulated responses to questionnaire

Occupation	Good Understanding
Doctor/Dentist (n=30)	6 (20.0%)
Pharmacist (n=22)	18 (81.8%)
Nurse (n=118)	43 (36.4%)
Allied Health Professional (n=49)	21 (42.9%)
Total	88 (40.2%)

0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.84. Therefore, the assumptions are fulfilled. The Pearson Chi Square analysis value is 21.784 with a degree of freedom of 3. The p-value is less than 0.001 thus this study is statistically significant.

Table 3: Prior Exposure to information on registered products and notified cosmetics

Occupation	Prior exposure to information on registered products & notified cosmetics
Doctor/Dentist (n=30)	29 (13.2%)
Pharmacist (n=22)	22 (10.0%)
Nurse (n=118)	100 (45.7%)
Allied Health Professional (n=49)	45 (20.5%)
Total	196 (89.5%)

DISCUSSION

There is a high prevalence of usage of traditional and complementary medicine in Malaysia in which many these products remain unregistered and had been confiscated by Pharmacy Enforcement officers¹¹. When the public has any doubts or any enquiries with regards to this topic, the government healthcare personnel are usually the one first person they will get professional health advice from as they are the front-liners for healthcare in Malaysia¹².

Despite 89.5% (n=196) of the participants answering that they have received or were exposed before to information related to registered products and cosmetics, only 40.2% (n=88) have managed to score 9 questions or more correctly to be classified as having good knowledge at hand.

Out of the 40.2%, pharmacists (81.8%, n=18) have the highest knowledge compared to other groups. As their main role is to counsel patients on medication use as well as a huge involvement in the Ministry of Health's "Know Your Medicine" campaign, it is understandable that their knowledge is the highest¹¹. The "Know Your Medicine" campaign is a pharmacist led program which aims to educate patients on the 5R concepts, namely the right patient, right medicines, right dose, right route of administration and the right time of administration. Therefore, it was expected that more pharmacists, if not all, would have scored 'good knowledge' in the questionnaire as they were already well trained on this subject matter.

Doctors and dentists (20%, n = 6) have the poorest knowledge amongst all the participants. There may be several factors contributing to this, such as having a lack of time to answer the questionnaire properly, or perhaps they do not understand the magnitude of the issue at hand. The other two groups only fared slightly better.

Perhaps, further continuous professional development, such as organising more workshops to improve the knowledge of Labuan's GHP, should be recommended to enhance and improve the existing knowledge of all GHPs from the Ministry of Health in Labuan towards registered products and notified cosmetics.

There were some limitations to our study. First, this was a none-randomised survey which was conducted in a non-controlled environment. The participants may refer to materials through various leaflets or brochures, research the answers online or even discuss the questions amongst peers. The investigators expected that the performance of the participants would be better with this limitation in place, but the final poor results were surprising. The scale that was used to grade the knowledge of the GHP was not based on any study and thus, may not be scientifically accurate to determine the GHP's exact knowledge levels. Finally, while the study population had met the requirements of the sample size, some of the individual divided groups of separate healthcare personnel (e.g. doctors/dentist) may be too small to represent the actual population.

Therefore, the results from this study is only valid to the study sample and must not be generalized to a larger population.

CONCLUSION

In this study, the level of knowledge towards registered products and notified cosmetics among doctors, pharmacist, nurses and allied health professional in Labuan is poor as only 40.2% among the study population have good knowledge. This study shows a significant association between the levels of knowledge among GHP varies between groups of profession. Pharmacist group has the highest score in knowledge in this study and thus should be another reference for the general public and patients when it comes to health-related matters. Further re-education should be conducted to improve the knowledge of GHPs in Labuan with regards to this subject.

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CONFLICT OF INTEREST

The author has none to declare.

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