ORIGINAL ARTICLE

COMMUNITY PHARMACISTS' PERCEPTION ON PATIENT COUNSELING AND CONTINUING PHARMACY EDUCATION PROGRAM IN EAST MALAYSIA

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ABSTRACT

Nowadays, community pharmacist plays an important role in medication counseling, patients' side effects monitoring and drug information delivery. The need of patient counseling has become a vital part of the pharmacy practice and pharmaceutical care. Through Continuing Pharmacy Education (CPE) program, pharmacists can develop into professions in different areas including drug delivery, drug information, technology and patient education. This study was conducted to evaluate the perception of community pharmacists towards patient counseling and continuing education program in Sabah and Sarawak, East Malaysia. A cross-sectional study design utilizing questionnaires was prepared by an extensive literature review. The research was carried out in four major areas in Sarawak; Sibu, Kuching, Bintulu and Miri and in three major areas Sabah; Kota kinabalu, Sepilok, Tawau by convenience sampling method. Descriptive analysis was conducted using SPSS version 18. Perception of community pharmacists towards patients counseling and continuing education program was analysed using scaling method. A cut-off score of 25.8 was used to indicate the perception of community pharmacists. The Pharmacists scored a cut-off point of 25.8 and above were considered to have good perception. A sample of 174 community pharmacists from Sabah and Sarawak were participated in this study. All of the respondents except one had positive perception towards patient counseling and continuing education program. Overall, almost all the community pharmacists had positive perception towards patient counseling and continuing education program in Sabah and Sarawak, East Malaysia. Further research is needed to evaluate perception of community pharmacists in different states of Malaysia and explore more on continuing education program in Malaysia.

Keywords: *Community pharmacists, patient counselling, continuing pharmacy education program, Barriers*

INTRODUCTION

The roles of community pharmacist have been evolved from the traditional purposes of dispensing of prescriptions and product focused care to patient centered care which includes provision of prescribed and over-the-counter (OTC) medications counseling, patients' side effects monitoring and drug information delivery over the past 10 years.[1] Patient counseling is known as delivering medication information verbally or in written form to patients regarding their medications, diet and lifestyle modification.[2] The ultimate goal of patient oriented counseling is to enhance therapeutic outcomes based on patient's needs, improve patients' compliance and reduce complications due to non-compliance to treatment.[3]

In Malaysia, majority of pharmacists stated that drug administration and indication were the important information for patients whereas drug interaction and side-effects were the lowest rate.[1] However, over half of respondents failed to fulfill the needs of their community due to large workload, inadequate of time and knowledge.[1] Moreover, studies in Saudi Arabia, Nepal and Karnataka, South India showed that most subjects agreed about the importance of counseling but the process of counseling was not satisfactory.[3-5] The main reasons why pharmacists are not offering patient counseling were lack of time, knowledge and confidence of pharmacists, long working hours, no professional fees, doctor dispensing and poor response from patients.[3-5]

According to Accreditation Council for Pharmacy Education, Continuing Pharmacy Education (CPE) was defined as an organized education aimed to provide the continuous development of pharmacists to balance and improve their competence.[6] Through Continuing Pharmacy Education (CPE) program, pharmacists can develop into professions in different areas including drug delivery, drug information, technology and patient education.[7] Community pharmacists had different views on continuing pharmacy education (CPE) program throughout the countries. In Karnataka, South India, 90% of pharmacists who attended CPE seminar stated that the workshop was very beneficial and informative because it updated their knowledge and improved their communication skills and counseling skills through role play.[5] However, CPE program was rarely conducted in Karnataka.[5] In contrast, studies conducted in both Belgium and Egypt showed that almost half of pharmacists did not attend CPE program due to inadequate of time, uninteresting subjects, family matters, expensive cost and lack of program recognition.[8, 9]

Although many research papers have largely focused on description of the pharmacists' professionalism and outlook towards patient counseling and continuing pharmacy education program, little is known from community pharmacists in Malaysia.[3,4,5,8,9]

Therefore, this present research is conducted to evaluate the perception of community pharmacists towards patient counseling and continuing education program in East Malaysia. Furthermore, this research provides a base to formulate the role of community pharmacists as profession by improving their perception towards patient counseling and continuing pharmacy education program.

METHODOLOGY

Data collection

The study was done for a period of 6 months starting from June 2014 to November 2014. This was a cross-sectional study which used a self-administered questionnaire among the community pharmacists in Sabah and Sarawak. Data collection was conducted by a combination of face to face and mailing methods in four major cities of Sarawak and three major cities of Sabah. For mailing method, a covered letter on the objective of the study, a questionnaire and a postage-paid return package were delivered to the pharmacists. 200 questionnaires were distributed and 174 completed questionnaires were collected back.

Sampling

Convenience sampling was done. The sample size was determined using RAOSOFT calculator by using 95% confidence level with 0.05 statistical significance. Study information sheet was shown and concern (either verbal or written) was obtained prior to the study. The community pharmacies' lists were obtained from Malaysian Pharmaceutical Society for sample selection. The minimum sample size required was 132. A total of 200 community pharmacists were approached. 174 of them responded with completed questionnaire. The response rate was 87%.

Questionnaire

Questionnaire was prepared by an extensive literature search. This questionnaire consisted of total 22 questions. Among these, 4 questions were related to the demographic details of community pharmacists, 4 were related to the working details of community pharmacists. 13 items were scored on four-point (1-4) Likert scale with anchor words (Strongly agree to strongly disagree) and was categorized as; Perception of community pharmacists towards patient counseling (6 items), Perception of community pharmacists towards continuing education program (7 items). Last 1 question was left as open ended question where the participant can mention the barriers in patient counseling and strategies to overcome those barriers.

Reliability and Validity of questionnaire

Questionnaire was tested for reliability of internal consistency. For this 20 community pharmacists in four different places of Sabah and Sarawak were used. The Cronbach's alpha value was 0.72. Based on these findings from the pilot testing, minor modification on the questionnaire was made. The data from pilot testing were not included in the final analysis. The questionnaire was face validated by content experts.

Participants

Participants were asked to fill up the questionnaire. Demographic and other characteristics data of the community pharmacists were collected which include Gender, Age, Years of experience, Race, Number of customers per day, Number of pharmacists in a pharmacy, and their working hours. Participants were asked on their perception towards patient counseling including key points of counseling, common questions, problems and ways to overcome. Besides that, participants were asked on their opinion regarding continuing education program in Sarawak, Malaysia.

Data analysis

Descriptive data analysis was used and performed using SPSS version 18. Pharmacists' responses were presented as frequencies and percentages. Perception of community pharmacist towards patients counseling and continuing pharmacy education program was analysed through scaling method. A cut-off score of 25.8 was used to indicate the perception of community pharmacists. The cut-off score was calculated based on 'decision-making in Likert scale' method.[12] The Pharmacists scored a cut-off point of 25.8 and above were considered to have good perception.

RESULTS

Study population

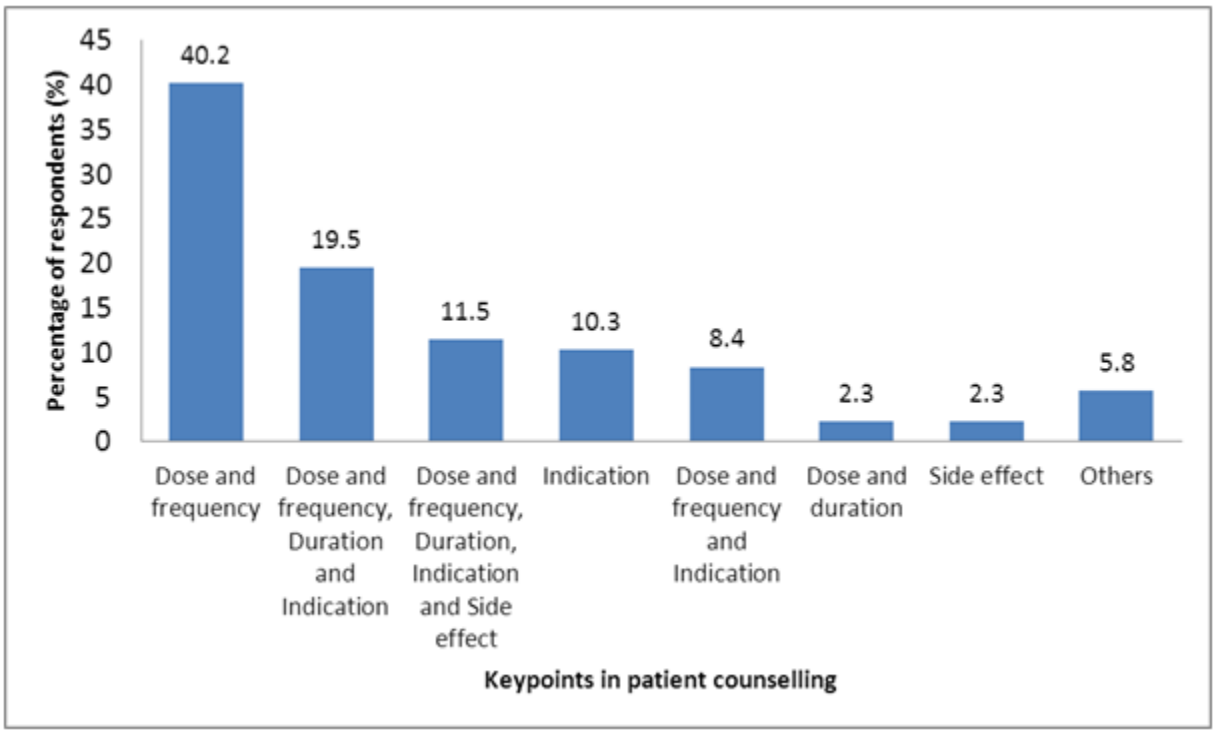
A total of 174 community pharmacists completed the questionnaire. There were about equal number of male (46.0%) and female (54.0%) respondents, and most were Chinese pharmacists (97.7%). Approximately half of the respondents were in the age group of 25 to 35 years old (48.3%) and majority of them practice experience of above 10 years (52.9%). More than half of the respondents reported their working hour per day was 8-10 hours and 86.2% of them were worked alone as a pharmacist in their pharmacy. According to the findings, 156 out of 174 community pharmacists saw more than 30 customers per day. The

characteristics of study population were summarized in Table 1.

Table 1: Demographic details of community pharmacists (n=174)

Demographics	Frequency	Percentage (%)
Gender		
Male	80	46.0
Female	94	54.0
Age		
Below 25	2	1.1
25-35	84	48.3
36-45	50	28.7
Above 45	38	21.8
Experience in years		
Below 2	8	4.6
2-5	34	19.5
6-10	40	23.0
Above 10	92	52.9
Race		
Malay	2	1.1
Chinese	170	97.7
Others	2	1.1

Figure 1: key points used by community pharmacists in patients counseling



Community pharmacists' perceptions regarding patient counseling

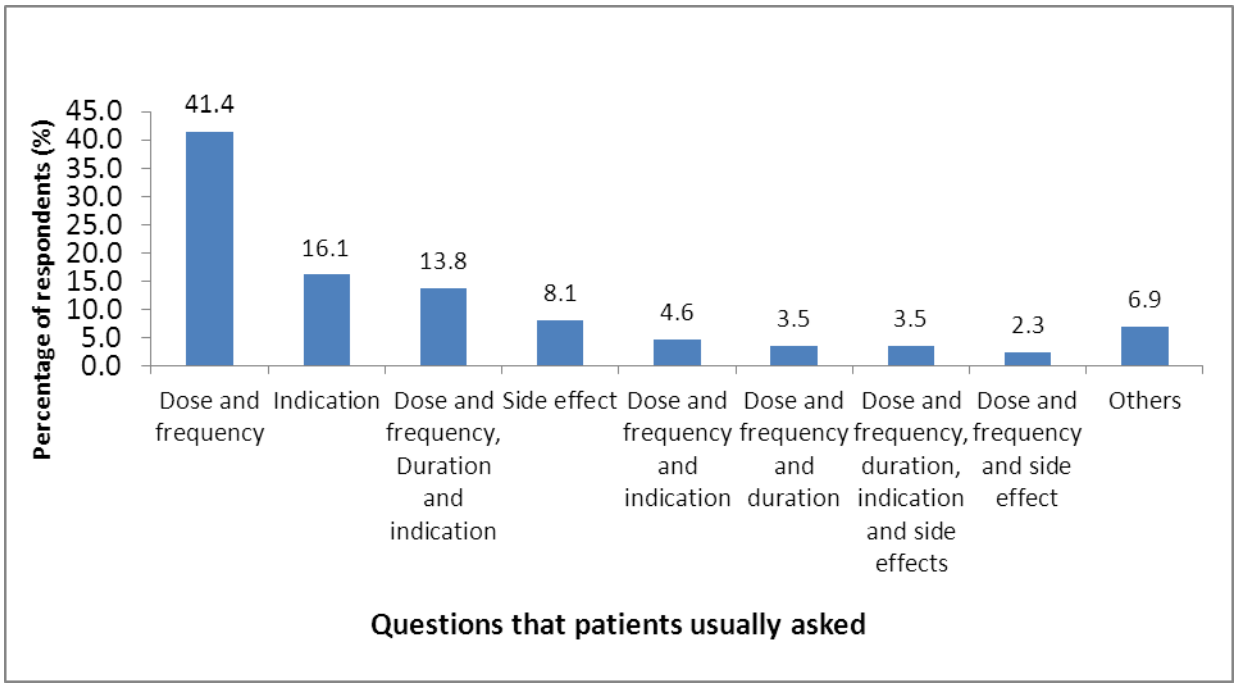
All of the respondents except one had positive perception towards patient counseling and continuing education program. Table: 2 shows that almost half of the respondents took 1-5 minutes for dispensing a prescription (47.1%), followed by 5-10 minutes (37.9%). Nine percentages of them took more than 10 minutes and five percentages of them took less than 1 minute.

Figure 1 shows that there were various views among the community pharmacists regarding the key points in counseling patients. Approximately 40% of them counseled patients mainly on dose and frequency followed by all three key point including dose and frequency, duration and

indication (19.5%). 11.5% of them mentioned on all the three key points plus side effect of the medication and 10.3% of them counseled mainly on indication of the medication only.

Figure 2 represents the perception of community pharmacists was varied towards questions that patients usually asked during patient counseling. The majority rated questions on dose and frequency highest (41.4%), followed by indication (16.1%). 13.8% of them rated that patients usually asked all three questions including dose and frequency, duration and indication, and 8.1% of them chose side effect as the most common question that patients asked.

Figure 2: Questions usually asked by patients to the community pharmacists



Barriers in patient counseling

One third of the respondents felt that lack of time was the major barrier faced while counseling patients, followed by lack of patient's interest (28.7%), and lack of knowledge (17.2%). 8.1% of respondents specified that they faced language barrier during patients counseling. (Table: 2)

Strategies to overcome barriers to patient counseling

The top four strategies which suggested by pharmacists to overcome barriers on patient counseling were promoting public education (27.6%), increasing the number of pharmacists (23.0%), attending continuing education program (19.5%) and providing private space for counseling (17.2%). (Table: 3)

Community pharmacists' perceptions towards continuing education program

Approximately half of the respondents were 'sometimes' interested in attending continuing education program, followed by 'often' interested in attending CPE program (41.4%) Seven percentages of them were 'rarely' interested in attending CPE program whereas 2.3% of them were not interested in attending CPE program at all.

Figure 3 presents that more than 85% of the respondents 'strongly agree or agree' that continuing education program can improve their knowledge, give current updates and improve their career.

Table 2: Barriers in counseling patients (n=174)

Problems	Frequencies	Percentage (%)
Lack of time	58	33.3
Lack of patient's interest	50	28.7
Lack of knowledge	30	17.2
Lack of time and patient's interest	16	9.2
Language barrier	14	8.1
Lack of time and knowledge	4	2.3
Lack of pharmacist's interest	2	1.2

DISCUSSION

Community pharmacists' perceptions towards patient counseling

Although the study revealed that all respondents except one had positive perception towards patients counseling and continuing education program, majority of the pharmacists rated 'dose and frequency' as the key point in counseling the patients which is similar to the study conducted by A. Sarrif.[1] The reason might be due to lack of patients' knowledge towards drug administration since most of the patients usually asked on 'dose and frequency' during drug counseling. This result is also supported by a study conducted by Poudel et al. in Nepal where the query regarding to 'dose and frequency' of medication was common due to patients' confusion when more than one drug were prescribed.[3] However, the query related to cost was the highest rate in Nepal due to the economic crisis.[3]

Barriers in patient counseling

Lack of time was the most common problem faced by community pharmacists in counselling patients, which was mainly due to lack of number of pharmacists in Malaysia. According to the ministry's statistics, there were only 1,834 Community Pharmacies throughout Malaysia and were still lack of pharmacies in rural areas and inequitable distribution.[10] besides that, lack of patient's interest and lack of knowledge were the next common barriers that limited their involvement in patient counselling. These results are in agreement with other studies done in other countries, showing that the main reasons of pharmacists for not offering patient counselling were lack of time, knowledge and confidence of pharmacists and poor response from patients.[3-5] Moreover, a few pharmacists had experienced language barrier with patients because most of the patients in East Malaysia speak in Iban and other Sarawakian dialect.

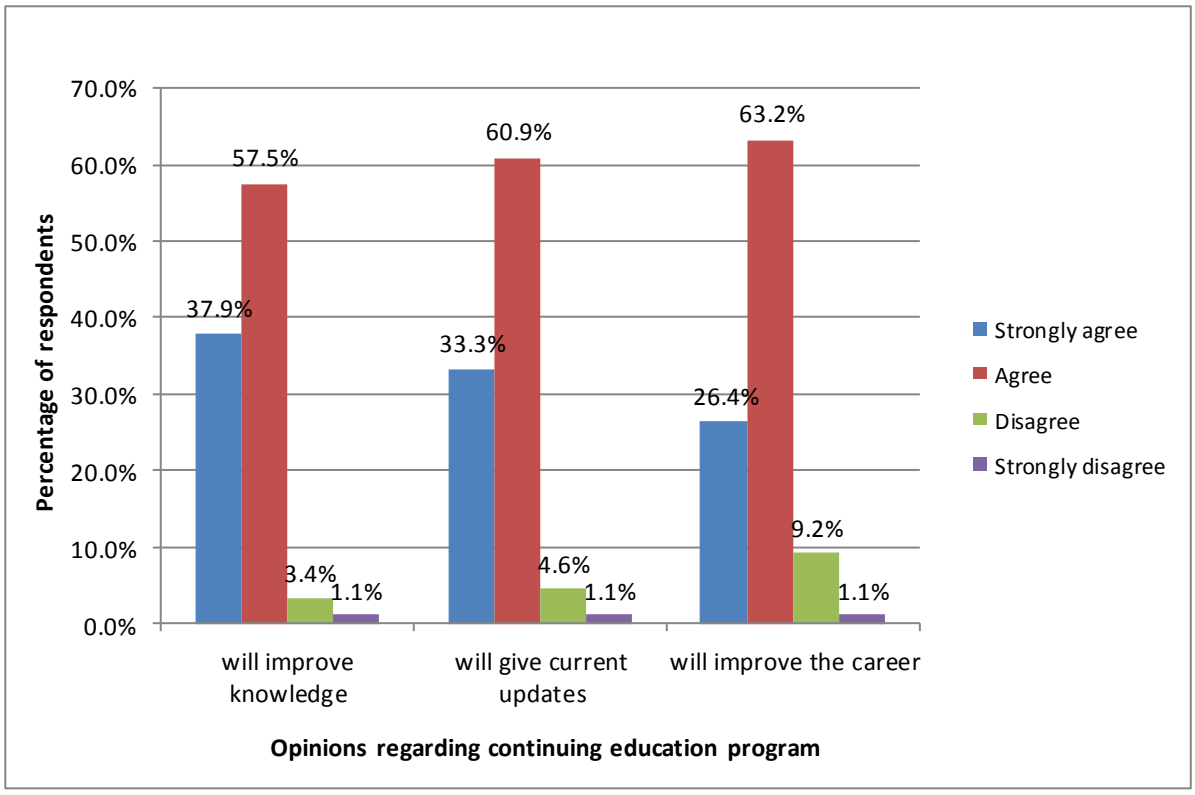
Table 3: Strategies to overcome barriers to patient counseling

Strategies	Frequencies	Percentage (%)
By promoting public education	48	27.6
By increasing number of pharmacist	40	23.0
By attending continuing education program	34	19.5
By providing private space for counseling	30	17.2
By increasing number of pharmacist and providing private space for counseling	6	3.5
By attending continuing education program and providing private space for counseling	6	3.5
By increasing number of pharmacist and attending continuing education program	4	2.3
Others	6	3.5

Strategies to overcome barriers to patient counseling

The strategy that was perceived by pharmacists as the best solution to overcome barrier to the problems were, to promote public education regarding their medical conditions. Public education might change the patients' mind set and improve communication skills with the patients and thus overcome barriers such as lack of patient's interest and language barriers. Moreover, another common solution suggested by pharmacists to overcome the barriers was to increase the number of pharmacists as lack of time was the major problem faced by majority of the pharmacists. Some of pharmacists suggested on attending continuing education program to overcome their lack of knowledge.

Figure 3: Opinions of community pharmacists regarding continuing education program



Community pharmacists' perceptions towards continuing education program

Most of the pharmacists were strongly agreed or agreed that continuing pharmacy education (CPE) program could help in improving their knowledge, giving the current updates and improving their career. However, almost half of the respondents were sometimes interested in attending CPE programs because compulsory CPE program had yet to be extended to the private sector in Malaysia.[11] In addition, this result can be supported by previous studies done by other countries as; inadequate of time, uninteresting subjects, no budgets and family matters were the main barriers for pharmacists in attending CPE program.[8,9] Thus, over 90% of the respondents strongly agreed or agreed that continuing education programs should be conducted in East Malaysia rather than in capital of Malaysia because it can reduce the problems above. In contrast to published studies, community pharmacists in East Malaysia had better perception towards CPE programs as only 2.3% of respondents were not interested in CPE programs whereas almost half of the respondents in both Egypt and Belgium did not attend any CPE programs.[8,9]

Limitations

This study may not generalize the data for all community pharmacists in East Malaysia as only selected cities were included. Hence, the findings may not reflect the perception of the entire community pharmacists in East Malaysia. Also this study did not target on, their opinions towards continuing education program in Malaysia and the barriers for not participating in CPE program. Further research is needed to evaluate perception of community pharmacists in different states of Malaysia, and thus to extrapolate our findings.

CONCLUSIONS

This study found that, overall community pharmacists in East Malaysia had positive perception towards patients counselling and continuing pharmacy education program. It is

crucial for pharmacists to promote public education on health conditions. However, it can increase patients' knowledge and interest on their own medical conditions. More number of community pharmacists is needed in East Malaysia which can reduce the barriers in counselling, and CPE programs should be conducted often for community pharmacists in East Malaysia.

ACKNOWLEDGEMENT

This study was supported by the International Medical University grant (B01/10-Res (13)2013). The authors would like to thank the Post graduate studies for research, International Medical University.

ETHICAL APPROVAL

This study was approved by the International Medical University Join-Committee for the research and ethics committee.

REFERENCES

1. Sarriff A. A survey of patient-orientated services in community pharmacy practice in Malaysia. *Journal Clinical Pharmacy and Therapeutics*. 1994; 19(1):57-60.

2. Palaian S, Chhetri A, Prabhu et al. Role of pharmacist in counseling diabetes patients. *The Internet Journal of Pharmacology*. 2005; 4(1).

3. Poudel A, Khanal S, Alam et al. Perception of nepalese community pharmacists towards patient counseling and continuing pharmacy education program: A multicentric study. *Journal of Clinical and Diagnostic Research*. 2009; 3:1408-1413.

4. Al-Hassan MI. Attitude of community pharmacists towards patient counseling in saudi arabia. *The Internet Journal of Pharmacology*. 2011; 9(2).

5. Adepu R, Nagavi BG. Attitudes and behaviors of practicing community pharmacists towards patient counselling. *Indian Journal Pharmaceutical Sciences*. 2009; 71(3):285-289.

6. Accreditation Council for Pharmacy Education. ACPE definition of continuing education for the profession of pharmacy. [Internet]. 2007. [cited 11 July 2013]. Available from: https://www.acpeaccredit.org/pdf/CE_Definition_Pharmacy_Final_1006-2007.pdf

7. Sie-Sing W. Pharmacy practice in Malaysia. *Malaysian Journal of Pharmacy*. 2001; 1:2-8.

8. Driesen A, Leemans L, Baert et al. Flemish community pharmacists' motivation and views related to continuing education. *Pharmaceutical World Sciences*. 2005; 27(6):447-452.

9. Mohamed I. Assessment of Egyptian pharmacists' attitude, behaviors, and preferences related to continuing education. *International Journal Clinical Pharmacy*. 2012; 34(2):358-363.

10. Health Ministry mulls incentives for opening community pharmacies. Borneo post [Internet]. 2013. [cited 2013 Oct 16]. Available from: http://www.theborneopost.com/2013/02/25/health-ministry-mulls-incentives-for-opening-community-pharmacies/#ixzz2iqKX3sgl

11. Malaysian Pharmaceutical Society. CPD for renewal of annual retention certificate (question and answer) [Internet].2013. [cited 2013 Oct 16]. Available from: http://www.mps.org.my/newsmaster.cfm?&menuid=37&action=view&retrieveid=3565

12. Ankur B. Methods for decision-making in survey questionnaires based on likert scale. *Journal of Asian Scientific Research*, 2013, 3(1):35-38.