Pharmacy Graduates' Experience and Perception On Geriatric Pharmacy Experiential Learning/Clerkship

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ABSTRACT

Experiential learning is a method used by a pharmacy school to enhance the pharmacy student’s interest on the subject materials, empowering learning satisfaction, increases understanding and retention of the course materials, develops the desire and ability to be continuous learners, improve communication and interpersonal skills, problem solving and also the analytical and critical thinking skills of students. However, it is important to explore the student’s experience and perception regarding the experiential learning in ensuring optimum learning outcomes. This study aims to identify the University of Cyberjaya (UOC) Bachelor of Pharmacy (BPharm) graduates’ experience and perception towards geriatric pharmacy experiential learning/clerkship. Only 52.6% (80/152) responded to the online survey despite multiple reminders sent. The respondents in this study were between the age from 22 to 33 years and almost half (42.5%) of the respondents were from were from batch number 7. This study also found that respondents have an overall good experience towards geriatric pharmacy clerkship especially on time access to the ward (69.0%) but <50.0% found the duration of clerkship was adequate. Besides that, preceptors in charged were found accessible (63.0%) and helping in finding evidence-based cases (66.0%). Furthermore, there was statistically significant difference in mean experience scores between graduates’ batches (p = 0.014). Other than that, this study also found that the respondents have an overall positive perception towards geriatric pharmacy clerkship. They perceived the pharmacist in geriatric ward to have prestige (62.0%) and respected (84.0%). The respondents also perceived the geriatric patients to have multiple of ailments (94.0%). However, there is no statistically significant difference in mean perception scores between various sub-groups of demographics. Apart from that, there is moderate (r = 0.26-0.50) positive statistically significant correlation between experience and perception (r = +0.331, p = 0.011). This study concluded that the respondents have an overall good experience alongside with positive perception towards geriatric pharmacy experiential learning/clerkship. However, future similar online study on students instead of graduates and survey with better response rate are required to confirm and provide a clearer picture of the results highlighted.

Keywords: Clerkship, geriatric pharmacy, experiential learning
1. INTRODUCTION

Experiential learning is vastly applied in the healthcare professional curricula. Yet, little is known to validate either the objectives are achieved as per se. The students’ feedback in terms of their experience and perception are needed as an input to help improving the curricula.

The experience and perception could be influenced by the education setting such as quality of teaching, structure of learning activities and opportunities for clinical practices (Gerbase, 2009). However, it has been reported that they might encounter unpleasant experience that most likely contributed due to their lack of knowledge of their specific role in the new environment (Poncelet & O’Brien, 2008). In addition, the transitioning from academic environment to the new clinical environment itself is a stressful experience (Iyer et al., 2014).

It is crucial that each institution analyses and standardizes their teaching structure for students to ensure that it is a productive and a satisfying experience for both the preceptor and the student (Hendaus et al., 2016). Other than that, it is also important for educational planners to consider how educational experiences correspond with the prior learning and developmental phase that learners are approaching in their professional role (Maple et al., 1998).

UOC, previously known as Cyberjaya University College of Medical Sciences (CUCMS), started one of the first geriatric clerkship for undergraduate students in 2015. Geriatrics pharmacy clerkship in UOC was conducted in a duration of 1 week. During the clerkship, students were expected to observe and appreciate the role of clinical pharmacist in a multidisciplinary team approach to provide effective drug and non-drug therapy to geriatrics patients. Students were also required to clerk 2 patients’ cases in a pair and present the cases verbally to the hospital preceptors and the lecturers using a standard power-point format of a clinical case presentation.

This clerkship was aiming to provide the students with experience in providing clinical pharmacy service to geriatric patients. Specifically, students were expected to demonstrate ethical conduct in all activities related to the practice in geriatric pharmacy. Besides, students were expected to demonstrate appropriate behavioural and apply cognitive techniques in interactions with geriatric patients, their families, their caregivers and health care professionals. They were also should be able to identify and resolve pharmaceutical care issues prevalent in geriatric populations. The issues discovered and follow-up recommendations for pharmaceutical care problems must be later on documented. Lastly, students were expected to incorporate assessment of self-medication into the multidisciplinary care plan.

2. OBJECTIVES

The objective of this study was to study the experience and perception of UOC Bachelor of Pharmacy (BPharm) graduates in geriatric experiential learning/clerkship.

This study was designed to determine the graduates’ experience during geriatric pharmacy experiential learning/clerkship. To determine the graduates’ perception on geriatric pharmacy experiential learning/clerkship. Besides that, to determine difference in mean experience and mean perception score among various sub-groups based on the demographics respectively. To correlate between graduates’ experience and perception in geriatric experiential learning/clerkship.

3. METHODOLOGY

This study was a cross-sectional study using ‘adopt and adapt’ validated questionnaire. The online questionnaire was distributed via e-mail and instant messaging group chat which included the link to the questionnaire google forms. The sampling technique or method used was purposive sampling. The respondents are UOC BPharm graduates. All UOC BPharm graduates who graduated in 2015, 2016 and 2017 were invited to participate in this study. The respondents were approached via e-mail received from respective batches’ class representative and social media platforms such as instant messenger group chat, and Facebook®. They were screened through inclusion and exclusion criteria.

Inclusion criteria:

- All UOC BPharm graduates who graduated in 2015, 2016 and 2017.
Exclusion criteria:

- Refusal to participate.
- Incomplete questionnaires

The data was collected from August until October 2017. Prior to the actual data collection process, a pilot study was done. Ethical aspect of the study has been reviewed and approved by UOC Research Ethics Review Committee (CRERC).

3.1 Survey instrument.

The questionnaire was prepared through adopt and adapt method. The prepared questionnaire was piloted on 10 respondents. The purpose of this pilot study was to verify the applicability of the questions provided and ensuring its comprehensiveness through face validity. Based on the components monitored during this study which are difficulty, relevancy, suitability and acceptability some changes have been made. Most of the respondents agreed with the choices of words are hard to understand. Thus, some words have been changed into their synonyms that are more commonly used. This questionnaire used English as language and it was a self-administered online questionnaire. The questionnaire was divided into 3 sections; Section A, Section B and Section C. Validated questionnaire was used throughout the data collection process.

Reliability test using Cronbach’s Alpha was done on both section B and C to determine the instrument reliability and results were as shown in Table 1.

| Table 1. Reliability test results of Cronbach’s Alpha |
|-----------------|-----------------|-----------------|
| **Section**     | **Cronbach’s Alpha** | **Number of Items** |
| B               | 0.70             | 6               |
| C               | 0.88             | 14              |

The results demonstrated that all item can be used for data collection. Tavakol et al., (2011) reported that many different studies considered the acceptable values of alpha to be between 0.70 and 0.95.

Section A: Demographic Data

i. Age

ii. Gender

iii. Ethnicity

iv. Batch number

v. Current highest level of education

Section B: BPharm Graduates’ Experience on Geriatric Clerkship

This section consists of 6 items addressing graduates’ experience on geriatric clerkship. All the 6 items were adopted from previous study of Hendaus et al., (2016). The answers for the questions were based on 5-point Likert-style-graded response options. Ranging from 1 (Strongly Agree), 2 (Agree), 0 (Neutral), 3 (Disagree) and 4 (Strongly Disagree). The frequency value of each question was obtained and expressed as percentage.

Section C: BPharm Graduates’ Perception on Geriatric Clerkship

This section consists of 14 items with two primary domains adopted from Lamba et al., (2015). Those are graduates’ perception on pharmacist in charge in geriatric department/wards and students’ perception on geriatric patients in the geriatric ward. The answers for the questions were based on 5-point Likert-style-
graded response options. Ranging from 1 (Strongly Agree), 2 (Agree), 0 (Neutral), 3 (Disagree) and 4 (Strongly Disagree). The frequency value of each question was obtained and expressed as percentage. 

The scoring for perception was adopted from (Coban & Yurdagul, 2014) and as presented in Table 2.

Table 2. Scoring for perception on geriatric pharmacy clerkship (Coban & Yurdagul, 2014)

<table>
<thead>
<tr>
<th>Percentage Score</th>
<th>Level of Perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-59%</td>
<td>Positive</td>
</tr>
<tr>
<td>60-100%</td>
<td>Negative</td>
</tr>
</tbody>
</table>

3.2 Outcome measures
The outcome measures for this study were graduates’ experience and perception on geriatric pharmacy experiential learning/ clerkship. Other outcomes measures include significant difference between graduates’ demographic data with perception and experience towards geriatric pharmacy experiential learning/ clerkship and correlation between experience perception and on geriatric pharmacy experiential learning/ clerkship.

3.3 Statistical analysis
All data was summarized using Microsoft Excel and be used to generate relevant figures. Data was analysed using Statistical Package for Social Sciences (SPSS) Version 23.0. The statistical significance was set at p < 0.05. All descriptive data was expressed as percentage. Skewness and Kurtosis value were assessed to determine the data normality of experience and perception. The difference between graduates’ mean experience and perception scoring towards geriatric pharmacy experiential learning/ clerkship with their demographic data were analysed using Mann-Whitney Test and Kruskal-Wallis Test. Correlation between graduates’ experience and perception was analysed using Spearman’s Rank Coefficient Test.
4. RESULTS AND DISCUSSIONS

The online survey was sent to a total of 253 UOC BPharm graduates through Facebook®, group chat and email. Despite multiple reminders sent, only 80 respondents managed to complete the questionnaires, giving a total response rate of 52.6% (80/152). The response rate was considered acceptable as low response rate is a common finding for studies applying online questionnaires (Sandars & Walsh, 2009; De Faoite et al., 2013). Richardson (2005) cited in his study 50.0% is regarded as an acceptable number in social research survey postal.

4.1 Demographic data

4.1.1 Age. The average age (± SD) of the respondents was 25.21 ± 1.907 years old with the age of respondents ranging from 22 to 33 years old.

$n = 80$

![Figure 1. Distribution of respondents according to age.](image)

In this study, most of the respondents were 25 and 26 years of age and majority of them were from batch number 7 graduating from class of 2015 ($n = 34$). Respondents with the age of 29 years, 32 years and 33 years were represented the least percentage in the overall study which was 1.3% ($n = 1$) respectively. The difference in the number of respondents from each batch may possibly be due to lack of interest in the topic of survey. It also could possibly because of they had left the university for quite some time, thus cannot recall properly their experience. The highlight of the topic is one of the important factors that contributing to the response rate (Cook et al., 2000; Edwards et al., 2002; Sheehan, 2003; Yammarino, Skinner, & Childers, 1991). On the other hand, relatively low Internet coverage and the increasing use of spamming filters (Fan et al., 2010) also influence the response rate as the respondents are less likely to have access to the survey.

4.1.2 Gender. Based on the collected data, majority of the respondents ($n = 58$) were females.

![Pie chart showing gender distribution](image)
As shown in the figure, there was a large difference between the proportion of female and male respondents in which the females (n = 58) outnumbered the males (n = 22). The result is similar to most of the studies conducted online in which the number of female who participated is more than twice as many as the male did (Lefever et al, 2007). This also supporting findings in 2010 whereby the majority of pharmacy undergraduate students is mostly female (70.0%) (Loo et al., 2017). These data support and rationalize the fraction of gender involved with this study.

4.1.3 Ethnicity. Three-quarter of the respondents were Malay (n = 64). The least number of respondents consists of the Iranun, Kedayan, Melanau and the international student (Persian).

The distribution of respondents according to ethnicity in this study reflected the Malaysian population in 2016, in which Malay race contributes to the highest percentage of population compared to the other ethnicities (Department of Statistics Malaysia).

4.1.4 Batch number. Out of the total number of respondents in batch number 7 (rx7) (103 graduates) almost one-fourth of them participated in this study and they had contributed the highest percentage of respondents in this study (n =34).
Overall response from every batch was < 50.0%. This was because most of the graduates have already enrolled for their provisionally-registered pharmacist (PRP) trainings, and some may be undergoing their duties as fully-registered pharmacists (FRPs). Thus, the responsibilities they are having as an employee might occupy most of their time.

4.1.5 *Current highest level of education.* the distribution of the respondents according to their current highest level of education. As shown below, <2.0% of them is a Master’s degree holder.

![Figure 5. Distribution of respondents according to current highest level of education.](image)

This was because most of them are occupied with PRP training meanwhile few of them are still pursuing their postgraduate studies. According to the Registration of Pharmacist Act (Amendment) 2003, one that provisionally registered must acquire experience immediately upon being provisionally registered. It must be done in any premises accredited and approved by the Pharmacy Board Malaysia. There are 4 main areas for the training that consists of private or government hospitals, industrial pharmacy, research and development and community pharmacy. Apart from that, PRP training can also be done in the university setting alongside completing their Masters.

4.2 *UOC BPharm graduates’ experience during geriatric pharmacy experiential learning clerkship*

The experience section consists of 6 questions addressing the time allocation, the preceptor in charged and the exposure in the setting.

In this study, it was found 69.0% of the respondents either agreed or strongly agreed that they were provided with sufficient time to access the geriatric ward. This result shows the respondents were permitted and given ample time to access the geriatric ward for the purpose of clerkship.

However, <50.0% of the respondents agreed that a duration of 1 week was adequate for their exposure towards inpatient geriatric cases. The result demonstrated that the respondents found the duration of clerkship was insufficient for their exposure into geriatrics patients’ cases. A longer period would provide them with more variety of cases to be observed and studied. This trend was in contrast to a study done by Hendaus *et al.*, (2016) whereby 70.0% of the respondents found their duration of clerkship was adequate. This could be due to different duration of clerkship was indicated in the previous study as they were provided with 3 weeks of clerkship. This result also might contribute to whereby only 55.0% of the respondents agreed and strongly agreed they had been given exposure to multi-professional teams. Turner *et al.* (2014) and Hauer *et al.* (2012) believed more volume and duration of clinical exposure can increase their amount of experience alongside understanding their role in clinical environment.
In terms of the preceptor in charge, 63.0% of the respondents agreed and strongly agreed the attending pharmacist are easily accessible and available to them. Furthermore, 66.0% of them also agreed and strongly agreed the pharmacist helped them to search geriatrics patients’ cases. Both results are similar to study reported by Kassam et al. (2013). However, this finding was contrary to result obtained by Hendaus et al. (2016) which only 30.0% of the respondents agreed with the statement. The difference may due to as mentioned by Hendaus et al. (2016), although it is well known teaching is one of the responsibilities of the preceptors assigned to the students, it is difficult to arrange their busy clinical service while simultaneously providing a good teaching quality. This indicating the university had selected good preceptors to be in charge with the students.

More than 80.0% of the respondents found that the geriatric ward environment was safe and friendly. They were experiencing this kind of environment might be due to this clerkship was not their first time encountering a clerkship and geriatric patient is rarely known with aggressiveness. Thus, they are more familiarize with the setting and were not overwhelmed with the situation (Poncelet et al., 2008). Furthermore, Jones et al. (2006) and Berridge et al. (2007) mentioned friendly environment helped to ease with the anxiety and unpleasant experience together with facilitating a smooth transition from medical school to internship.
Table 3. Distribution of respondents according to experience towards geriatric pharmacy clerkship

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>n =80</th>
<th>No. of respondents (Percentage, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Adequate time was provided to access the geriatric ward.</td>
<td>SA 12 (15.0%)</td>
<td>A 43 (54.0%)</td>
</tr>
<tr>
<td>2. The attending pharmacists are easily accessible and available to the pharmacy students during attachments.</td>
<td>SA 16 (20.0%)</td>
<td>A 33 (41.0%)</td>
</tr>
<tr>
<td>3. The pharmacist helped to search and practice evidence-based cases.</td>
<td>SA 7 (8.0%)</td>
<td>A 46 (58.0%)</td>
</tr>
<tr>
<td>4. Exposure to multi-professional teams were given during my clerkship.</td>
<td>SA 8 (10.0%)</td>
<td>A 36 (45.0%)</td>
</tr>
<tr>
<td>5. A week of geriatric clerkship is enough exposure to inpatient geriatric cases.</td>
<td>SA 8 (10.0%)</td>
<td>A 29 (36.0%)</td>
</tr>
<tr>
<td>6. The geriatric ward is a safe and friendly environment.</td>
<td>SA 20 (25.0%)</td>
<td>A 47 (59.0%)</td>
</tr>
</tbody>
</table>

Note: SA = Strongly Agree; A = Agree; N = Neutral; DA = Disagree; SDA = Strongly disagree

4.3 UOC BPharm graduates’ perception on geriatric pharmacy experiential learning/clerkship

This section of the study was addressing the respondent’s perception on the pharmacist in charged in geriatric ward and the geriatric patients during the clerkship.

The finding in this study is similar to another study conducted by Lamba et al., (2015). Both studies reported the respondents have a positive perception on the respective personnel in charged in the ward during their clerkship. Their experience with the respective personnel during clerkship can potentially influence their perception either positively or negatively (Makama et al., 2010). As suggested by Remmen et al., (2000) positive responses related to feedback and supervision were mostly associated with their satisfaction that may indicate that student’s strong opinions were strongly based on interpersonal experiences with the clinical staffs.

In this study, the respondent mostly agreed or strongly agreed that pharmacists in charged in geriatric ward have a prestige and respected by others. This trend is consistent with study done by Martin et al., (2005). As they suggested that the students may respect medical specialties that required more training. Besides that, 38.0% of the respondents had disagreed compared to only 1.0% agreed and strongly agreed that the income of pharmacist in geriatric department was less than others. This is because the salary for pharmacist irrespective to the department they attached in the government sector is allocated based on their government servant grade.

In terms of geriatric patient’s condition, 94.0% of the respondents agreed and strongly agreed that geriatric patients have variety of ailments. This finding echoed study done by Poi et al., (2004) that this age group of population are more likely than others to suffer multiple chronic degenerative disease. Furthermore, this perception can also influence their perception on geriatric patients often need critical care as agreed by 40.0% of the respondents. This shows that the respondents are well aware of the geriatric patient’s condition.
Other than that, the respondents had divided perception on geriatric patients regarding compliant to their follow-ups. The compliant issue has been a clinical concern since 1970s Jin et al., (2008) and a qualitative study done by Taber et al., (2015) identified factors contributing to compliant issues are the patients has low perceived of the symptom severity, low trust in doctors, practical barrier such as money and transportation and prior negative experience. Thus, some of the respondents perceived there is compliance issue while some does not as compliance issue does not only addresses to the geriatric patient but all other age group too.
Table 4. Distribution of respondents according to perception towards geriatric pharmacy clerkship

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>n=80</th>
<th>No. of respondents (Percentage, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>1. Have prestige in the local community.</td>
<td>13 (16.0%)</td>
<td>37 (46.0%)</td>
</tr>
<tr>
<td>2. Are respected by other healthcare personnel.</td>
<td>22 (28.0%)</td>
<td>45 (56.0%)</td>
</tr>
<tr>
<td>3. Make less income relative to other healthcare personnel.</td>
<td>2 (3.0%)</td>
<td>7 (9.0%)</td>
</tr>
<tr>
<td>4. Have a predictable work schedule.</td>
<td>0 (0.0%)</td>
<td>28 (35.0%)</td>
</tr>
<tr>
<td>5. Will have job security in the future.</td>
<td>10 (13.0%)</td>
<td>32 (40.0%)</td>
</tr>
<tr>
<td>6. Are generally satisfied with their career of choice.</td>
<td>10 (13.0%)</td>
<td>41 (51.0%)</td>
</tr>
<tr>
<td>7. Are compassionate providers.</td>
<td>21 (26.0%)</td>
<td>45 (56.0%)</td>
</tr>
<tr>
<td>8. Have adequate patient contact.</td>
<td>22 (28.0%)</td>
<td>41 (51.0%)</td>
</tr>
<tr>
<td>9. Deal with patient behavioral problems.</td>
<td>10 (13.0%)</td>
<td>45 (56.0%)</td>
</tr>
<tr>
<td>10. Are susceptible to exhaustion.</td>
<td>5 (6.0%)</td>
<td>33 (41.0%)</td>
</tr>
<tr>
<td>11. Have a variety of ailments.</td>
<td>10 (13.0%)</td>
<td>38 (48.0%)</td>
</tr>
<tr>
<td>12. Often need critical (ICU level) care.</td>
<td>3 (4.0%)</td>
<td>27 (34.0%)</td>
</tr>
<tr>
<td>13. Experience improved symptoms while in the ward.</td>
<td>20 (25.0%)</td>
<td>35 (44.0%)</td>
</tr>
</tbody>
</table>

Note: SA = Strongly Agree; A = Agree; N = Neutral; DA = Disagree; SDA = Strongly disagree

4.3 Difference in mean experience score among various sub-groups based on the demographics
This study found that there was only statistically significant difference in mean experience scores among different batches of graduates. Normality test done had shown the experience was not normally distributed in this study. Hence, Mann-Whitney Test and Kruskal-Wallis Test were used.

4.3.1 Batch number. Kruskal-Wallis Test was conducted to identify difference in mean experience score between graduates’ batch.

This study found that there was statistically significant difference in the mean experience scores between the graduates’ batches. This may possibly be due to attaching in different hospitals and different preceptors were encountered by the respondents during the clerkship. Thus, the experience gained was varied.
Table 5. Comparison of mean experience score between graduates’ batch (n = 80)

<table>
<thead>
<tr>
<th>Experience</th>
<th>Batch Number</th>
<th>Median (± IQR)</th>
<th>$X^2$ statistic (df)$^b$</th>
<th>p-value$^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RX 7 n = 34</td>
<td>1.333 (0.71)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RX 8 n = 13</td>
<td>1.667 (0.33)</td>
<td>8.573 (2)</td>
<td>0.014</td>
</tr>
<tr>
<td></td>
<td>RX 9 n = 33</td>
<td>1.833 (0.33)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^b$ Kruskal-Wallis Test

This study found that there was statistically significant difference in the mean experience scores between the the graduates’ batches. This may possibly be due to attaching in different hospitals and different preceptors were encountered by the respondents during the clerkship. Thus, the experience gained was varied.

4.4 Difference in mean perception score among various sub-groups based on the demographics

This study found that there was no statistically significant difference in mean perception score among various sub-groups based on the demographic data. Normality test done had shown the perception was not normally distributed in this study. Hence, Mann-Whitney Test and Kruskal-Wallis Test were used.

4.5 Correlation between experience and perception of UOC BPharm graduates in geriatric pharmacy experiential learning/clerkship

Normality test done had shown the experience and perception’s level were not normally distributed in this study. Hence, Spearman’s Rank Coefficient Test was conducted to determine the correlation between experience and perception’s level in geriatric pharmacy experiential learning/clerkship.

Figure 6. Scatter plot of correlation between experience and perception
Table 6. Correlation between experience and perception.

<table>
<thead>
<tr>
<th>Experience</th>
<th>Correlation coefficient, r</th>
<th>Perceived</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>+0.331</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0.011*</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>80</td>
</tr>
</tbody>
</table>

*Spearman’s Rank Coefficient Test

The result shows that there was a statistically significant positive moderate correlation between experience and perception (r = 0.26-0.50). This shows that perception moderately increases as the experience increases.

This result was similar with the study conducted by Wahab et al., (2017) whereby the year of experience has a positive moderate correlation with self-perceived confidence in geriatric pharmacotherapy. It must be emphasized that the population of study is different from this study nevertheless it shows one’s experience does not strongly influence one’s perception.

High degree of variability in clerkship experience can be a contributing factor in the direction and impact of the perception (Malloy et al., 2008). A study done by Elnicki et al., (2005) on 4 behavior correlated with perceptions of effective teaching behaviors during clerkship are inspiring confidence in knowledge and skills, explaining decisions, respects for students and providing role model. All of those behaviors were experienced by the students during the clerkship and influencing their perception as outcome.

4. LIMITATION

There were few limitations in this study that need to be emphasized and concerned as they may directly or indirectly impacting the study. Improvements on those limitations will provide a better understanding on the graduates’ experience and perception towards geriatric pharmacy experiential learning/clerkship.

First and foremost is the potential of recall bias during answering the questionnaires. This could have resulted in respondents answering the questions based on their vague memories of the clerkship instead of based on the real situations. External factors also must be considered as they play role on the way respondents perceived the subjects addressed. For example, exposure received in a working environment as a pharmacist may has changed their perspective differently from, they had during their study time. Hence, present of response bias.

Another limitation of this study was the small number of sample size. This is mainly contributed by the online survey method. Therefore, it is not possible to give the real picture of the graduates’ experience and perception during the clerkship. Results cannot be generalized to all the pharmacy graduates from UOC.

4. CONCLUSIONS

Through this study, an overview of graduates’ experience and perception towards geriatric pharmacy experiential learning/clerkship was able to be identified.

Finding from this study found that graduates had a good experience during the clerkship. They were given ample time for ward access but not in terms of the period of clerkship which they felt the duration of clerkship was insufficient. Apart from that, this study also found the preceptor in charged was accessible to the graduates’ during the clerkship and were helpful in finding evidence-based cases. However, it was found that there was lack of exposure towards multi-professional healthcare team.

Besides that, the overall perception of the graduates toward the clerkship was also found positive. The graduates perceived the pharmacist in charged in the geriatric ward as prestigious and respected by other
healthcare profession. This study also found that the graduates perceived the geriatric patients have multiple of ailments and the geriatric ward as a safe and friendly environment.

Thus, with the findings highlighted in this study there are some areas the can be improved and maintained by the educational planner of Faculty of Pharmacy in UOC. Ensuring the students manage to optimise all the opportunities given during the clerkship.

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5. REFERENCES


DEPARTMENT OF STATISTICS MALAYSIA 14 July 2017 viewed 10 December 2017


www.turkjphysiotherrehabil.org


Loo, J. S., Lim, S. W., Ng, Y. K., & Tiong, J. J. (2017). Pharmacy students in private institutions of higher education: motivating factors when studying pharmacy and influences on university choice. *International Journal of Pharmacy Practice*.


