

## ORIGINAL ARTICLE



# Reflections of pharmacy students on experiential education in providing health services to people with history of substance use disorders in Malaysia

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## ABSTRACT

**Introduction:** Accreditation standards for pharmacy students' education include the requirement for experiential education (EE) and acknowledge, in building life-long learning skills, the need to develop students' skills in analysing their practice-based performance. The goal of this qualitative study was to assess students' ability to reflect on their experience providing face-to-face care to patients with a history of substance use disorders (PHSUDs).

**Materials and methods:** Interviews were conducted with undergraduate pharmacy students who provided care to PHSUDs in an EE programme. An interview guide was used to explore students' experiences and their perceptions regarding the challenges they encountered, changes in their attitude towards PHSUDs and ways to improve their ability to care for PHSUDs. Data relevant to the study was extracted from interview transcripts, manually sorted and coded using Microsoft Excel and subjected to thematic analysis.

**Results:** The themes identified were 1) Increased self-confidence in face-to-face interactions with PHSUDs 2) Increased empathy towards PHSUDs 3) Reduction in stigmatised attitudes towards PHSUDs 4) Positive nature of the interactions with PHSUDs 5) Appreciation for the opportunity to apply knowledge in practice 6) Recognition of the need for improved communication skill training 7) Recognition of the need to improve training for dealing with unexpected questions and situations.

**Conclusion:** Pharmacy students demonstrated reflective skills in identifying multiple positive learning outcomes stemming from a one-day EE programme involving PHSUDs. In addition, they provided insights useful to faculty in curriculum planning.

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## Introduction

Experiential learning was defined as "the process whereby knowledge is created through the transformation of experience" (Kolb, 1984). It described a process of constructing knowledge that involves four learning modes of 'experiencing', 'reflecting', 'thinking', and 'acting' components in response to the learning situation and what is being learned (Kolb, 1999). Pharmacy students require experiential learning exposure to improve their problem solving skills beyond didactic lectures. The evaluation of actual scenario helps to boost students' confidence to apply critical thinking and social skills (Lisko & O'dell, 2010). Students must be part of a practice change and improvement process to meet the needs of society (Speedie, 2006).

The importance of experiential learning in the education of pharmacy students is illustrated by its inclusion in accreditation standards for pharmacy education in multiple countries (Accreditation Council for Pharmacy Education, 2016; Canadian Council for Accreditation of Pharmacy Programs, 2020; General Pharmaceutical Council, 2021). Those standards require students to gain experience working in multiple pharmacy practice settings and encourage reflective practice. Pharmacists must use reflection on their practice performance to improve future performance (Speedie et al., 2012).

It is important that experiential learning exposes pharmacy students to all segments of society. For example, the International Pharmaceutical Federation has encouraged professional pharmacy associations to address barriers in the provision of care for patients suffering from substance use disorders (International Pharmaceutical Federation, 2018). Substance abuse is stigmatised and, accordingly, any stigmatised views held by pharmacy students against patients with a history of substance use disorders (PHSUDs) must be addressed.

Malaysian data on pharmacy students' perceptions regarding PHSUDs is limited to one study that reported pre-conceived stigma towards PHSUDs lessened by experiential education interactions with PHSUDs (Mohd Taufek et al., 2021). That study focused on Islamic principles rather than reflective learning. The goal of this qualitative study was to assess reflective practice by Malaysian pharmacy student who provided care to PHSUDs.

## Materials and methods

This was a qualitative study employing a phenomenological approach to explore the experience of students who provided face-to-face health screening and counselling for PHSUDs. The study received ethical approval from the International Islamic University Malaysia (IIUM) Research Ethics Committee (ID No. IREC 2019-026). Eligibility

criteria for participants were pharmacy students who successfully completed the IIUM Drug Abuse course PHM 3282, volunteered to be trained in providing health screening services and consented to be interviewed. PHSUDs were patients/clients undergoing rehabilitation treatment by the Malaysian government's National Anti-Drug Agency (NADA) and the non-governmental organization Drug Intervention Community (DIC) in Kuantan district, Pahang, Malaysia.

A one-day health screening programme was conducted for 120 PHSUDs at the IIUM Faculty of Pharmacy in collaboration with NADA and DIC. The screening services delivered by students are described in Table 1. Twenty out of 69 students who met the entry criteria volunteered to provide services and were trained regarding technical methods, knowledge and counselling for monitoring blood pressure, blood glucose, cholesterol and carbon monoxide testing.

The research study was described to students who participated in the health screening programme after its completion and those who agreed to participate in the study were interviewed. One interviewer interviewed each student in a private room in the IIUM Faculty of Pharmacy between January and May 2019 at times mutually convenient to the interviewer and each student. All students were asked the same questions relating to student demographic information; students' descriptions of their experiences; and their perceptions regarding the challenges they encountered, changes in their attitude towards PHSUDs, and ways to improve their ability to care for PHSUDs.

The total duration of the interviews was 264 minutes and ranged from 21 minutes to 37 minutes per student. The variation in length was attributable to differences between the responses of individual students and the need for additional questions to clarify students' responses. All participants preferred to communicate in Malay and the interviews were audio-taped, transcribed verbatim and translated into English. The transcripts were compared several times across both languages and checked by two other researchers to ensure the meanings were interpreted accurately. The steps taken were guided by the need for translators to share the culture and the experiences of the students interviewed and be familiar with the context of the interviews to ensure accuracy in translating conceptual equivalence and interpretive insights (Regmi, Naidoo, & Pilkington, 2010; Clark et al., 2017). Field notes were made during the interview with all the participants. The names of participants were kept anonymous for privacy protection.

A thematic analysis of the transcripts was undertaken using inductive approach to identify, analyse and report recurring themes relevant to the study (Braune & Clarke, 2006; Fereday & Muir-Cochrane, 2006). Data (relevant phrases, sentences, etc.) were copied from each transcript

to a Microsoft Excel 2016 spreadsheet and manually sorted to facilitate the identification and coding of recurring themes. That process was conducted independently by three researchers and differences in the identification and coding of themes were resolved through discussion and referring to the field notes. Summarizing the data was done by manually scrutinising and generalising the data sets as they were relatively small.

There is no established ideal sample size when using thematic analysis. Most qualitative studies use the concept of saturation, the point at which no new information or themes are observed in the data. (Guest, Bunce & Johnson, 2006; Willig, 2013; Fugard & Potts, 2015).

Table 1: Activities during the health programme

Activity	Description
a. Blood pressure (BP) screening (OMRON Automatic blood pressure monitor HEM-7121)	Students conducted screening of blood pressure using BP monitor to PHSUDs and counselled regarding healthy lifestyles.
a. Blood glucose test (ACCU-CHEK® Performa Blood glucose Meter and lancing device No. 100608828, ACCU-CHEK® Performa test strips 06454003)	Students did blood glucose test using the test strip for glucometer and counsel PHSUDs regarding target blood glucose range.
c. Blood cholesterol test (CARDIOCHECK® P.A., PTS PANELS® cholesterol test strips C907)	Students measured the blood cholesterol using cholesterol measuring kit for PHSUDs and counselled regarding healthy lifestyles.
d. Carbon monoxide (CO) test (piCOTM SMOKERLYZER® CP715879)	Using smokelyzer kit, students conducted measurements to detect the level of CO, interpreted the level to PHSUDs and assess nicotine dependence using Fagerstrom Test. Students provided counselling and information to

PHSUDs regarding the facilities (public/private sectors) that are available to receive quit smoking services.

## Results

Ten students consented to participate in the study and a thematic analysis using inductive approach was conducted on all ten transcripts. Saturation was deemed to have been reached when no new themes were identified from the final three analyses. The demographic characteristics of the interview participants are presented in Table 2. All participants were young adult females in the final year of their IIUM pharmacy programme.

Table 2: Demographic characteristics of participants

Characteristics	Number (n =10)
a. Age (years) 23-25	10
b. Gender Female	10
c. Marital status Single	10
d. Race Malay	10
e. Education Undergraduate final year	10

Table 3 lists the seven major themes identified by the thematic analysis and are illustrated by quotations from the transcripts. The themes identified were 1) Increased self-confidence in face-to-face interactions with PHSUDs 2) Increased empathy towards PHSUDs 3) Reduction in stigmatized attitudes towards PHSUDs 4) Positive nature of the interactions with PHSUDs 5) Appreciation for the opportunity to apply knowledge in practice 6) Recognition of the need for improved communication skill training 7) Recognition of the need to improve training for dealing with unexpected questions and situations. Quotations from each participant are identified by the participant number (S1-S10).

Table 3: Themes identified from the transcripts

<b>Increased self-confidence in face-to-face interactions with PHSUDs: Reported by all students.</b>
<p>“in self-confidence, it improved, when the first person came, I was quite nervous to deal with them because I didn’t know how to talk to them but after I talked to them, they gave quite good response, and because they wanted to be helped” (S2)</p> <p>“it boosts my confidence as well... I feel like I want to do it again” (S4)</p> <p>“I felt confident providing counselling to them based on my knowledge...when we went to hospital, we only interviewed patients and were not able to counsel them, at the community pharmacy usually pharmacists helped so we did not manage to develop our confidence directly with patients, this time the confidence can be developed when we do it ourselves” (S9)</p>
<b>Increased empathy towards PHSUDs: Reported by 8 out of 10 students.</b>
<p>“Because when we understand about how the drugs affect them, it changes our thought on them” (S2)</p> <p>“I respect them because they tried hard to improve their life” (S3)</p> <p>“They feel the stigma so that’s why they did not get the access to health services...we as a health care practitioner must not discriminate. This programme gives us more understanding and feel more empathy to this population” (S7)</p> <p>“After taking this course (Drug Abuse PHM 3282) and involve with the patients, we understand the patients’ situation and the needs to be treated” (S8)</p>
<b>Reduction in stigmatised attitudes towards PHSUDs: Reported by nine out of 10 students.</b>
<p>“At first, I was quite scared because I thought maybe some of them could become aggressive...but throughout the programme everything was OK...I had stigma...but when I had direct contact with them, I can understand better about them” (S1)</p> <p>“I had this stigma on why we should spend a large amount of money in helping them...however I can see that it is a disease that affects their physiology. So, we must help them.... might be some of them had HIV... it was not like scared but to be more careful” (S2)</p> <p>“I was not sure about how to talk to them...but when I started to do it, I felt OK...and improved my stigma a bit...we need to involve ourselves more in this programme...there were some of my friends who didn’t want to participate because people who will attend are drug users” (S4)</p> <p>“Previously I thought that it was quite scary if they attack us during the services but after learning from this programme we understand about the actual conditions and I did not have any bad thoughts anymore” (S8)</p>

### Positive nature of the interactions with PHSUDs: Reported by all students.

“we told them that their cholesterol level was high, they asked us what they should do to control it, they seemed like more motivated during health screening” (S2)

“the positive part was when they were excited to know more about the information, I showed all the pamphlets, booklets, diagrams that we had. They also shared their experiences” (S3)

“The acceptance was very good...they were not aggressive, I felt comfortable meeting different people with different behaviour... there was a client who told many stories...we didn’t even ask... but he told us from A to Z...about his experiences...how many cigarettes he smoked before...now he has reduced the number of cigarettes” (S5)

“Their acceptance was very good because when we did the tests, they were all queuing up and even when we finished the session, they still wanted to do it...they were really happy with our services, they really wanted to know about their glucose and cholesterol level...their blood pressure” (S7)

“It was interesting to interact with ex-drug users because I have never done it before, I did some counselling on healthy diet, they accepted our recommendation” (S10)

### Appreciation for the opportunity to apply knowledge in practice: Reported by all students.

we told them that their cholesterol level was high, they asked us what they should do to control it, they seemed like more motivated during health screening” (S2)

“the positive part was when they were excited to know more about the information, I showed all the pamphlets, booklets, diagrams that we had. They also shared their experiences” (S3)

“the way how to assess the desire to quit smoking...the Fagerstrom test...before this I didn’t know people who want to quit smoking need to take which medication...after the health screening when we assess their condition, then OK we can suggest...if the condition is like this, what do we want to give...for how long...when can we start...because we cannot immediately start...needs to see their condition as well” (S5)

“We started to explain the physiology part because patient asked about how could smoking and blood pressure lead to stroke so we explained how the heart, blood and brain are connected, and patient understood and said that he never knew about this before, some patients were very curious to know about health information, so we had to spend 30 minutes for counselling” (S8)

### Recognition of the need for improved communication skill training: Reported by all students.

“some of them were shy...sometimes I accidentally used medical terms” (S1)

“when a patient came, I accidentally greeted them differently...not according to their culture or religion...I was not cautious enough about this...” (S3)

“when I talked to them not all of them had eye contact with me...we don’t really know how to talk to them...some of them just wanted to chat about other things...may be when talking too fast with too much information it is difficult for them to understand” (S4)

“because drug is a sensitive issue, so how to, the best way of communication with these people” (S6)

“they were not really friendly, were quiet...so the communication was a bit challenging” (S7)

“It helps us trying our best to communicate with the patient, we asked the lecturers if it was OK to ask certain questions, that we need to be careful on our wording and sentences, to check if there is any sensitive issues such as related to family members...for example can I ask about previous medication, why did they take it, but need to check their responses too whether it is appropriate to continue asking about certain questions or not” (S8)

“I think students need to know what to ask...to avoid sensitive questions when patients told us their personal stories...my friend also asked me to exchange ideas about how to counsel the patients because we have never done it before, so we were not sure how, so we discussed with each other...how to make sure the patients understood the information” (S9)

### Recognition of the need to improve training for dealing with unexpected questions and situations: Reported by eight out of ten students.

“There were questions that we did not know how to answer so we asked lecturers to help” (S1)

“they asked about questions which were unfamiliar to me...there was also a patient showed us the MTAC (Medication Therapy Adherence Clinic) booklet...but I have not yet learned about MTAC, so I just browsed through it without a thorough understanding” (S3)

“I did the smoking cessation part...the tool required correct technique otherwise we couldn’t get the results...previously I knew about Fagerstrom test, but I didn’t read further...so I wanted to ask the patient, but I had not much ideas...and how we can encourage them to reduce smoking habit” (S5)

## Discussion

The study demonstrated the value of experiential education in revealing students’ reflective learning skills. For example, the students’ comments regarding increased

empathy, reduced stigma, the positive nature of their interactions with PHSUDs and appreciation for the opportunity to apply knowledge in practice suggest they proved to themselves they were performing as healthcare professionals and that generated self-satisfaction and motivated further learning. In addition, the students’ comments regarding the application of knowledge in practice imply that their experience led them to quickly recognise that the application of didactic knowledge in practice calls for the integration of multiple skills.

The study demonstrated that students could identify ways to improve future performance by reflecting on past performance (reflective practice) in ways useful for student learning but also for curriculum design. For example, the students identified the need for additional communication skill training but placed that responsibility on faculty rather than on themselves. Pharmacy students, if they are to become independent practitioners, must be able to take charge of their own learning when a learning need is identified. Evidence-based methods recommended for pharmacy student education include early and continuous experiential education which presents a programme-long opportunity for faculty to design experiential courses that foster students’ life-long learning skills (Speedie et al, 2012).

It is reasonable to expect pharmacy students to be uncomfortable when faced with unexpected patient questions but, reflecting the previous paragraph, it is important for faculty to consider curriculum design. Small group discussion is an evidence-based teaching method that allows students to share their experiences with their peers and for the peers, based on their own experiences, to provide constructive comment (Speedie et al, 2012). It is an important part of the learning process for students to recognise their experiences as opportunities for improvement rather than cause for embarrassment. It is reasonable to expect students who have presented examples of their practice-based performance and their ideas for improving that performance on multiple occasions over multiple years to their peers and faculty in small group discussion classes would graduate with ingrained and advanced continuous professional development skills. It is also reasonable to expect that a student who describes a positive learning experience to her/his peers would encourage the peers to seek out similar experiences for themselves.

Students’ ability to self-assess their learning is limited but the students’ comments on improved self-confidence are consistent with the literature including supervisor-based assessments of self-confidence in student pharmacists in early experiential education (Dunning, Heath, Suls, 2004; Hendry et al, 2016). The students’ comments about interest in repeating the experience help to validate their comments about increased self-

confidence.

The major limitation of this study was the small sample size and the lack of variability in the demographic characteristics of the volunteer students. Larger studies with greater diversity in the study participants will be required before findings can be generalised. In addition, further studies will be required to assess the ability of Malaysian pharmacy students to use reflective practice to improve future practice performance. There is a possibility of biased responses provided during the interview since the interviewer and participants knew each other but the interviewer did not involve in the health programme and there was only sharing of experience, without any assessment or incentives given to the participants that minimised the risk of biased findings.

### Conclusion

A one-day experience providing face-to-face care for PHSUDs resulted in multiple positive learning outcomes for Malaysian pharmacy students. The students were able to recognise and appreciate improvements in their abilities to care for patients and provided information useful for curriculum design.

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### Conflict of Interest

The authors declare no conflict of interest.

### References

- Accreditation Council for Pharmacy Education (2016). Accreditation standards and key elements for the professional program in pharmacy leading to the doctor of pharmacy degree. <https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf> (accessed 2021 March 23).
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2): 77-101. doi: 10.1191/1478088706qp063oa.
- Canadian Council for the Accreditation of Pharmacy Programs (2020). Accreditation Standards for Canadian First Professional Degree in Pharmacy. [CCAPP-Professional-Standards-ENG.pdf.](https://ccapp.ca/wp-content/uploads/2020/10/July7-</a></p>
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- Clark, L., Birkhead, A. S., Fernandez, C., & Egger M.J. (2017). A transcription and translation protocol for sensitive cross-cultural team research. *Qualitative Health Research*, 27(12): 1751-1764. doi: 10.1177/1049732317726761.
- Dunning, D., Heath, C., & Suls, J. M. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest*. 5(3): 69-106. doi: 10.1111/j.1529-1006.2004.00018.
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5: 1-11. doi: 10.1177/160940690600500107.
- Fugard, A. J. B., & Potts, H. W. W. (2015). Supporting thinking on sample sizes for thematic analyses; A quantitative tool. *International Journal of Social Research Methodology*, 18(6): 669-684, doi: 10.1080/13645579.2015.1005453.
- General Pharmaceutical Council (2021). Standards for the initial education and training of pharmacists. <https://www.pharmacyregulation.org/initial-training> (accessed 2021 March 23).
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1):59-82.7. doi 10.1177/1525822X05279903.
- Hendry, G., Winn, P., Wiggins, S., & Turner C.J. (2016) Qualitative Evaluation of a Practice-based Experience Pilot Program for Master of Pharmacy students in Scotland. *American Journal of Pharmaceutical Education*, 80(10), 165. doi: 10.5688/ajpe8010165.
- International Pharmaceutical Federation. (2018). FIP Statement of Policy – The role of pharmacists in reducing harm associated with drugs of abuse. [www.fip.org/statements](http://www.fip.org/statements) (accessed 2021 March 23).
- Kolb D.A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, New Jersey: Prentice Hall.
- Kolb D. (1999). *The Kolb Learning Style Inventory, Version 3*. Boston: Hay Group.
- Lisko, S., & O'Dell, V. (2010). Integration of theory and practice: experiential learning theory and nursing education. *Nursing Education Perspectives*, 31 (2), 106.
- Mohd Taufek, N. H., Halimi, S. N., Ab Rahman, N. S.,

- Zin, C. S., Che Mohamad, C. A. & Turner, C. J. (2021). Experiential education as a strategy to preserve Maqasid Al-Shariah by identifying and addressing stigmatic views held by pharmacy students of patients with substance use disorders. *Journal of Pharmacy* 1(1): 1-7. <https://doi.org/10.31436/jop.v1i1.9>
- Regmi, K., Naidoo, J., & Pilkington, P. (2010). Understanding the processes of translation and transliteration in qualitative research. *International Journal of Qualitative Methods*, 9(1). doi: 10.1177/160940691000900103.
- Speedie M. (2006). Introductory Experiential Education: A Means for Introducing Concepts of Healthcare Improvement. *American Journal of Pharmaceutical Education*, 70(6), 145.
- Speedie, M. K., Baldwin, J. N., Carter, R. A., Raehl C.L., Yanchick V.A., & Maine L.L. (2012). Cultivating “habits of mind” in the scholarly pharmacy clinician: report of the 2011-12 Argus Commission. *American Journal of Pharmaceutical Education*, 76 (6) S3; doi: 10.5688/ajpe766S3.
- Willig, C. (2013). *Introducing qualitative research in psychology*. 3rd ed. New York, NY: McGraw-Hill Education.