

## ORIGINAL ARTICLE

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# Reflective practice of experiential learning visit to drug rehabilitation centres improved pharmacy curriculum prospects and services in promoting community engagement

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## ABSTRACT

**Introduction:** Reflective practice has been proven effective in improving students' learning outcomes from various health disciplines, including pharmacy. As healthcare providers, pharmacists have frequent contact with vulnerable patients with risky behaviours thus require appropriate attitudes and positive perceptions to ensure equal services. These intangible components require self-reflection of individual learning processes. This study aimed to investigate the view of pharmacy students towards an experiential learning opportunity at drug rehabilitation centres via a reflective practice approach.

**Method:** Pharmacy students from International Islamic University Malaysia participated in a reflective practice exercise following a visit to drug rehabilitation centres in Pahang, Malaysia, in 2018. A total of 43 of the 69 students consented for their reflective writings to be analysed for this research. Thematic content analysis was conducted, and emerging themes were identified.

**Results:** Students reflected on several themes, which were 1) sense of responsibility and volunteerism, 2) perspective on pharmacy knowledge application, 3) professional and societal engagement, 4) understanding people's behaviour 5) personal inadequacy.

**Conclusion:** Pharmacy students have effectively utilised a reflective practice approach to address specific issues and needs of the local community related to substance use disorders which were beneficial to improve the curriculum and encourage community engagement activities.

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## Introduction

Reflective practice is an essential component that integrates the theory and practice for students in health profession disciplines. Students are exposed to various tools on reflective practice through writing, reflecting on experiences, observation, and developing metacognition to enhance their learning and practice (Mann, Gordon, & MacLeod, 2009). It is a powerful method for students to express their emotions based on good and bad experiences during practice (Ganesh & Ganesh, 2010) then share their learning process and discovery through self-reflection (Lie *et al.*, 2010).

There are various self-reflection techniques and tools that allow students to improve written communication skills, think critically, and link the learned information to practical applications. Examples include writing reflective diaries that require students to identify their limitations, reflect on learning incidents and create change among themselves (Zimmerman *et al.*, 2007); e-portfolios reported to improve students' self-assessment skills (Hj. Ebil *et al.*, 2020; Marinho *et al.*, 2021); and role playing in simulated experiences (Kilgour *et al.*, 2015). A study on physiotherapy students in Malaysia has shown that students reflected on applying theory into practice, self-development, improving communication skills and adaptation to clinical environment through reflective diary (Ramli, Joseph & Lee, 2013). In the United States, a PIE-RECAP method was an eight-domain format used in reflective journal writing to encourage students to prioritise, identify, explore, recollect, evaluate, and challenge/solidify their knowledge. The method as mentioned above needs to be conducted incongruent with an action plan for professional development experiences and growth in curricular, co-curricular and affective domains (Hughes *et al.*, 2019).

Qualitative researchers have used diaries for data collection when there is limited access to individual subjects' experiences with a certain situation (Elliot, 1997; Zimmerman & Wieder, 1997). The main advantages of using the 'diary-interview' method in healthcare research include accommodating different response modes and participants' priorities and elucidating the contexts within which help-seeking occurred. In the context of students visiting drug rehabilitation centres, the first-hand experience of students learning addressing marginalized population is best documented on reflective diaries where students can express their feelings, perspective and thoughts. It has been reported that diaries play significant roles as a record of reflection on the experience of an illness and means of understanding what is 'taken for granted' in accounts of health and illness (Elliot, 1997). Boud *et al.* (1985) have categorised six stages of increasing depth of reflection: attention to feelings, association, integration, relationship-seeking, validation, appropriation, and outcome.

In pharmacy education, the training methods provided

to address substance use disorders (SUDs) at the undergraduate level vary in course structures, experiential visits, and average hours of didactic instructions (Thomas & Muzyk, 2018). However, only a few studies have investigated these components. A study by Keating *et al.* (2019) has highlighted essential findings on pharmacy education addressing mental health discipline. People with SUDs are closely linked to mental and certain brain-related illnesses due to physical and psychological trauma related to SUDs. Yet, few opportunities for experiential education or contact-based learning with former drug users have been available in Malaysia to explore various aspects such as drug-related health issues including chronic diseases which require tailored intervention. Contact-based learning and sharing personal recovery stories have improved student attitudes towards patients with mental illnesses as reported in a previous study where a brief experiential visit to a mental health hospital has integrated students' learning and values related to their expertise in supporting patients with mental disorders (Keating *et al.*, 2019). This study aimed to explore the reflections of pharmacy students from a visit to drug rehabilitation centres by using a reflective diary method.

## Methodology

Ethics approval was received from the International Islamic University Malaysia (IIUM) Ethics Committee (ID No. IREC 2020-116). A retrospective qualitative study using thematic content analysis of data from reflective diaries was conducted to describe reflections of experiences of pharmacy students following a visit to drug rehabilitation centres in Pahang, Malaysia. All (69) reflective diaries in the 2018 archives were retrieved and 43 of the 69 students consented to the study. This was the first cohort that used reflective diary as an assessment for an elective course, Drug Abuse PHM 3282. This study was conducted between October until December 2020 at the Kulliyyah of Pharmacy, IIUM.

The visit involved six settings which were private and government drug rehabilitation centres which included shelters for children and recovering drug users for adults. Students were divided into groups for each setting, shelter homes for children, male adults, female adults, drop-in centres for active drug users for males and females and a community integration centre. During the visit, students listened to the briefing by the staff and interviewed the residents. Then individual reflective diaries written in English language was submitted for assessment after the visit. The diary consisted of six parts which were 1) description of activities, 2) significant experience/observation, 3) learning from experience/observation, 4) additional learning needs and plan to achieve learning, 5) summary of learning and 6) meaningful interaction with the team (peers, participants, residents, preceptors).

The reflective diaries were de-identified from the participant information and analysed anonymously. Two researchers conducted the thematic content analysis to compare and cross-check the themes identified from the diaries. One researcher independently constructed, compared, and cross checked to produce a final list of these codes. The coding decisions were agreed upon by two researchers. The summary of the data was done by manually scrutinising and generalising the data sets. In this research, the six stages of the Braun and Clarke thematic analysis method (2006) were used: (1) data familiarisation: the reflective journals were repeatedly read, and the thoughts on meaningful data were jotted down; (2) generating initial codes: after reading the content of the reflective journals, meaningful contents were coded; (3) searching themes: related and similar codes were analysed and grouped to form potential themes; (4) reviewing themes: the themes were repeatedly read, and the relevance of their context was confirmed; (5) defining and naming themes: the nature of each theme was examined, and the data described by each theme were confirmed; and (6) writing the report. A protocol was used to guide the analysis to four categories from the reflective diaries: habitual action/non-reflection, understanding, reflection, and critical reflection (Kember et al., 2008). The questions used to guide the participants in completing diaries were not used in the data analysis.

## Results

Table 1. describes the relevant excerpts from five themes emerged from reflective diaries of 43 students.

### 1. Sense of responsibility and volunteerism

Students reported their responsibility to volunteer in the society and the drug rehabilitation centres to educate the residents, community and reduce stigma to ensure sustainable recovery of former drug users. They also reflected on the responsibility of pharmacist to be involved in pharmaceutical care (e.g. HIV medications adherence and side effects) and education with all stakeholders. These values have been described in terms of collective responsibility and volunteerism to improve the success of drug addiction treatment in the community holistically.

‘I really want all children that are suffering from HIV can be cured...to change the mentality of community which being so scared to socialize with them...we, as a person who know, need to educate them on how safe it is to other people...’ (S35)

‘I was touched...there are some children who are HIV positive asked the reasons why he or she needs to take certain medication while others not...I know it is very hard for them. This experience makes me want to do my very best to become a successful person in the future and help all these needy people...I plan to go on the weekend with some of my friends as volunteer helpers’ (S4)

‘...I feel eager to contribute something to them as a support...to create opportunity to them to rebuild their life...we can organize programme to teach various skills...does not necessarily in large scale but can give a big impact to residents’ (S41).

### 2. Perspective on pharmacy knowledge application

Students were exposed to pharmacy related knowledge which they were able to identify the importance of correct education and improved adherence about medications for HIV/AIDS, HAART, tuberculosis, sexually transmitted diseases, hepatitis and assesses their application. They were aware of the challenges occurred at the shelter homes involving children, psychiatric patients, and the needs of identification drug-related problems (e.g. side effects, drug-drug interaction) with pharmacists' intervention. Students appreciated the knowledge of medicinal chemistry application when it was asked by the staff at the centre. They identified various aspects for involvement of pharmacist to provide pharmaceutical care and health education.

‘..as a pharmacist, we can do a home medication review to the residents there to see whether they take the medications correctly, compliance...’ (S22)

‘...he keeps mentioning about this certain group of public people that recently consume antitussive medication, codeine and been arrested for a positive urine strip test of morphine. However, later lab test result shows a negative result...the officer basically got confused...our preceptor found out that the principle might be behind the metabolism of codeine into morphine in vivo...since the structure of codeine and morphine are more or less quite the same, the problem might lie within the sensitivity of the strips itself.’ (S38)

‘RVD patients are not the same with TB (tuberculosis) patients whom all their belongings cannot be shared with healthy people...it is difficult to ensure RVD (retroviral disease) residents take the medication punctually with various side effects such as excessive heat, fever, vomiting and loss of appetite...the staff also found uneaten medications when they clean the area...we should treat RVD as normal person...express our empathy’ (S6)

### 3. Professional and societal engagement

Students acknowledged the lack of engagement from the society including health care professionals to contribute better services and activities to improve health care in the shelter homes. The societal exclusion and isolation with stigma had led to empathy among students to encourage support to this population. They reflected the importance of integration of different types of services and disciplines to collaborate and engage to improve services at the centre. The community engagement activities are needed to support

the recovery of the residents.

‘I will be glad if the visit would include us to also involve with the clients’ activities or at least have a thorough insight, watching them conducting their daily activities...it made me realize that I also had some stigma and afraid of the ex-drug addicts before...people out there should also get a close insight to them like this visit to truly understand them’ (S11)

‘...we can increase the work to educate our community regarding HIV..to help our people fully understand on how HIV spread and believe that HIV are not spread through air and touch...we can organize programme held by neighbourhood, the mosque...’ (S19)

‘...every individual is responsible to give moral support to ex-drug addict to return to normal life...if they return to abuse drug, it is part of our mistake because we neglected their presence as part of community’ (S4)

#### **4. Understanding people's behaviour**

Students understood that the behaviour of residents was shaped by their past experiences particularly addressing the segment of society with underprivileged environment. They were able to identify difference in individual behavior affected by different stories first-hand and understood about different approaches applicable in their interaction. These are important soft skills needed by health professionals to be tailored to individual needs in health services and reflecting from experiences could open opportunities for innovation.

‘...she had depression once she knows that she has HIV+ from her husband...they are also struggling to make a life, to have courage to adapt with the society...not all of them involved with drugs by their own will, some get involved due to pressure situation from family and working environment...’ (S13)

‘The other boy is socially awkward and did not want to talk to us even we tried our best to make him speak...I can clearly see that probably he has some bad memory with his family before entering this house and eventually traumatized...in the next visit, we plan to bring some chocolate or some playful stuff to be played with and these may make the boy to be socially comfortable with us...’ (S6)

‘...we did not have much opportunity to interact with clients because they seem scared to be approached by us...fortunately we were able to interview a volunteer whom once a victim of drug addicts...it was meaningful...she had adverse effects when taking efavirenz such as lethargy, insomnia, confusion and dizziness...her stories motivate me to become a future responsible pharmacist’ (S26)

#### **5. Personal inadequacy**

The communication skill has been identified as the main challenge when interacting with the residents who had history of trauma from various aspects. Students suggested that it would be beneficial if they had the chance to be exposed to actual treatment programmes at the centre, which could improve their understanding and specific skills in addressing this population. A better training and exposure would help student to perform better in building trust and rapport with the residents or future patients.

‘I need to improve my communication skills...needed when dealing with people involved with drug abuse...they could be sensitive and easily touched...need to be very careful when interviewing them..I need to practice and be prepared of what to ask and how to ask...’ (S19).

‘I think it would be a nice experience if we could join them in whatever programme that they do if appropriate, to understand them better and see the intervention..activities modules and daily chores’ (S13)

‘It is difficult for the patient to take the medicine because it can cause pain during swallowing...it is better if we get to see how the medicines look like...we need to know about medication for HIV patients...if possible, we can watch during their medication taking session’ (S28)

Table 1: Relevant excerpts from five themes emerged from reflective diaries of 43 students.

<p><b>1. Sense of responsibility and volunteerism</b></p> <ul style="list-style-type: none"> <li>• Realised the struggles and was motivated to serve the community after first-hand observation with residents.</li> <li>• Responsibility of community to give hope to build future, to help improve awareness in the community</li> <li>• To help children in terms of education (e.g. free academic tuition), improve interaction and social skills, build confidence.</li> <li>• To educate the public, universities, and schools and participate in volunteer works.</li> <li>• Health care providers should support vulnerable residents with low self-esteem.</li> <li>• As future pharmacists, there is a responsibility to educate the community about the harms of drugs, risk of infection and human immunodeficiency virus (HIV) and remove the stigma.</li> <li>• To volunteer in an outreach programme with the residents to help unfortunate people involved with drug abuse.</li> </ul>
<p><b>2. Perspective on pharmacy knowledge application</b></p> <ul style="list-style-type: none"> <li>• Knowledge on screening procedure for diseases, aware of critical role pharmacist plays to help with compliance of medications for various diseases HIV, Hepatitis, Tuberculosis – challenges for young children taking highly active anti-retroviral therapy (HAART) medications due to side effects and lack understanding.</li> <li>• To arrange seminars and talks to educate on medications adherence, conduct research to find better solutions to the problem.</li> <li>• The positive urine test for opioid in residents taking Pholcodine ® - aware of the importance of educating about the chemical structure and appreciating medicinal chemistry knowledge.</li> <li>• Severe side effects of withdrawal symptoms during treatment due to poly-drugs.</li> <li>• Pharmacists should raise awareness on drug addiction education since many people underestimate the effects of drugs on themselves.</li> <li>• The need to improve knowledge about amphetamine-type stimulants that are widely used where users are prone to psychotic disorders.</li> <li>• Ensure continuous supply and follow-up of medications for HIV, Tuberculosis, Hepatitis B or C infection, and psychiatric illnesses.</li> <li>• Pharmacists need to strictly monitor the sales of cough mixture in the community setting as it can be abused easily.</li> <li>• A pharmacist is responsible for discovering new treatments to achieve the highest success rate to recover from drug addiction.</li> <li>• Pharmacist should participate to help HIV patients and sex workers to practice healthy lifestyle, together with the Therapy Adherence Peer Support for HIV/AIDS, sexually transmitted diseases.</li> <li>• Immunisation to ensure minimise risk from infectious diseases, condoms distribution for harm reduction.</li> </ul>

**3. Professional and societal engagement**

- Community should not isolate the residents but give them hope to build good character, build new future, get opportunity for education.
- Society to treat residents equally so that they can contribute to the country.
- Judgmental society could not provide supportive role that prevents drug relapse - recovery process is more challenging when residents face harsh treatment from society.
- Community activities to increase understanding and help maintaining the abstinence.
- Not to judge different methods of treatment total abstinence 'cold turkey' or harm reduction 'methadone substitution therapy', religious approaches, psychological methods.
- Health care providers can contribute their expertise in helping drug abusers to quit drugs since they understand better the physiological changes and chemistry of substances.
- Combination of methods including psychological, social, functional, spiritual, family and medication can contribute to effective treatment.

**4. Understanding people's behaviour**

- Empathy on the suffering of drug withdrawal symptoms and strict medication schedule for HIV treatment.
- Challenges in the behaviour of children who had trauma and fear from their past related to family with drug abusers.
- Difficult behaviour of people with psychiatric illnesses from previous abuse of polydrugs cannabis, ecstasy morphine and cocaine.
- Acknowledge the positivity and optimistic behaviour portrayed by the clients who are determined to manage their challenges and recover.
- Sense of inferiority due to known people's perception, avoidance of eye contact, admitted their mistakes.
- Psychological impact in residents was severe related to health, family and financial issues but residents were nice, friendly and welcoming.

**5. Personal inadequacy**

- To participate in the program at the centre e.g. motivational talk, treatment modules, counselling as first-hand experience.
- Should understand the feeling of residents, not to ask sensitive questions.
- Lacked preparation when interacting with children with difficulties in social skills.
- Need to improve communication skills and psychological aspect, did not know what to expect and struggled to start conversations.

## Discussion

The present study reported that reflective practice was a strategy to identify intangible components of learning among pharmacy students addressing patient care in marginalised population with high-risk behaviors. The students reflected that a one-day visit to drug rehabilitation centers was beneficial in identifying actual issues related to pharmaceutical care, community engagement and social justice, empowering underprivileged group with education and training. Collective efforts need to be implemented to reduce inequality in health care received by residents at these shelter homes. The experiential visit and reflective reports have provided evidence that pharmacy education is an excellent platform to improve knowledge and training regarding the role of pharmacists in harm reduction services, prevention and treatments strategies associated with SUDs. Other than didactic classes, practical learning aspect in terms of interaction with patients who are former drug users is important to pragmatically identify contextual issues. Training pharmacy students about SUDs produced a positive impact in their attitudes and knowledge on this subject matter (Muzyk *et al.*, 2017). Undergraduate pharmacy curricula must be designed to demonstrate a patient-centred approach to care, treat others with sensitivity, empathy, respect and dignity, and recognise the value and structure of a multi-professional team (Keating *et al.*, 2019).

Our findings demonstrated that reflective-thinking skills need to be a focus in pharmacy education to improve its prospects and create pathway to prepare competent pharmacists who meet the healthcare needs of the public. It was able to develop ability of students to view patient's situations from different angles to gain new perspectives (Tsingos *et al.*, 2015). Pharmacy service delivery should sustainably strengthen pharmacists' capacities to meet complex needs of population such as SUDs associated with infectious diseases and psychiatric illnesses. Our context has revealed the needs for collaboration and integration of knowledge between different disciplines for effective SUDs treatment. Students were able to recognise the important role of respective disciplines towards holistic approaches of an individual with complex issues of physical and psychological trauma. This finding could open to opportunities in interprofessional collaboration and learning from other disciplines including nursing, medical, physiotherapy and psychology. The reflective diary was an important tool to advance the knowledge regarding specific subject or experience when the description of the events was translated and reflected in the form of feelings, knowledge application, barriers, gaps and opportunities. The Fink's Taxonomy of Significant Learning described the domains of foundational knowledge, application, integration, human dimension, caring, and learning how to learn emphasising that human

factors can have an important impact on health services outcomes (Fink, 2013).

Substance use disorders is one of the key areas in public health of which pharmacy services are involved with harm reduction programme, prevention, and treatment intervention (International Pharmaceutical Federation, 2018). From students' reflection about the experiential visit, we were able to recognise the need for improved training in pharmacy graduates to address the gaps in learning such as communication skills, pharmacy knowledge application related to reviewing medications commonly used in this population (e.g. psychiatric, infectious diseases), as well as efforts in addressing attitudes of health professionals and community towards stigmatised patients to reduce gaps in health services (van Boekel *et al.*, 2013; Sattler *et al.* 2017). Pharmacists need to proactively involve educating society regarding issues with SUDs for relapse prevention and sustainable treatment and recovery (Livingston *et al.*, 2012).

Previous studies reported on reflective writing within pharmacy and other health professions education (Ganesh & Ganesh, 2010; Brooman & Darwent, 2012; Ramli, *et al.*, 2013; Keating *et al.*, 2019; Hughes *et al.*, 2019). Depending on respective discipline-specific outcomes, the formats for reflective writing have been varied. Our application of real-time journal entries through low technology (pen and paper) has also been reported as an effective tool in reporting the experiential learning in pharmacy students (Mamede, Schmidt & Penaforte, 2008). In comparison to our previously published study using one-on-one interview with pharmacy students (Mohd Taufek *et al.*, 2021), reflective diary method required shorter time to analyse, higher number of students consented to the study, more detailed description of experiences and data saturation was quickly achieved. The limitation of this study includes biases which may occur since it was part of course assessment submitted within one week after the visit, when compared to researcher-administered face-to-face interviews. However, both methods have been proven effective in exploring the views of pharmacy students addressing people with SUDs by reflecting on knowledge, stigma, empathy, motivation to learn and other learning values to become better pharmacists (Mohd Taufek *et al.*, 2021). Other methods may be explored in the future to enhance the ability and convenience of students reflecting on their experience addressing various learning components. It is proposed that reflective diary should be used as part of the learning tools in experiential learning activities towards improvement of pharmacy curriculum and personal growth of students.

## Conclusion

Reflective practice has permitted pharmacy students to describe their experiential learning effectively from individual perspective. Experiential visit to drug rehabilitation centres has exposed students in learning to address and discuss different issues and needs of local community related to SUDs. This learning outcome opens the opportunities for improvement in pharmacy curriculum as well as innovations in providing pharmacy services to encourage community engagement activities.

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## Conflict of Interest

The authors declare that there is no conflict of interest.

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