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BRIEF REPORT

Pharmacists' mental health support behaviors with simulated patients: A mixed-methods pilot study



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ABSTRACT

Background: Simulated mental health role-plays provide a safe and relevant learning experience for pharmacy students, improving confidence in and attitudes toward providing mental health support. Little research explores the use of mental health role-plays, enacted by trained actors, with pharmacists.

Objectives: This study aimed to pilot the adaptation of simulated patient (SP) role-plays, from the university classroom with students, to a workshop with pharmacists, and explore pharmacists' experiences.

Methods: Pharmacists attended a two-hour workshop. Trained actors enacted simulated scenarios (previously developed for pharmacy education) with pharmacist volunteers while being observed by peers, a workshop facilitator, and mental health consumer educator (MHCE). Pharmacists engaged in self-assessment immediately post-roleplay, followed by performance feedback and debrief discussions with MHCEs, workshop facilitators, and peers. Pharmacists completed pre- and post-workshop surveys exploring intended mental health support behaviors, then invited to participate in an interview exploring their workshop experiences and opinions about using mental health role-plays in clinical practice (via mystery shopping). Non-parametric tests were conducted to analyse role-play and survey scores, and thematic analyses were undertaken on interview transcripts.

Results: Thirty-five pharmacists attended the workshop. Fourteen role-plays were analysed. Pharmacist self-assessment scores were significantly lower than MHCE scores (P = 0.028). Overall, the role-plays significantly increased pharmacists' intentions in supporting a person experiencing mental health crises such as suicide and psychosis, as well as encouraging other supports (P < 0.05). Four themes emerged from interviews (n = 4): realistic context for skills application and practice, benefits of observing, self-assessment and feedback, and integrating into clinical practice (via mystery shopping).

Conclusion: SP role-plays of mental health symptoms and crises, enacted by trained actors, may effectively assess and enhance pharmacists' intended mental health support behaviors. It is recommended that the SP method is adapted into clinical practice, via repeated mystery shopping visits with immediate performance feedback, to shape pharmacists' mental health support behaviors.

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Key points

Background:

- Pharmacists have an important and expanding role in supporting people experiencing mental health symptoms and crises but may not feel comfortable or confident to provide mental health support.
- Mental Health First Aid (MHFA) training can increase pharmacists' self-reported skills, knowledge, confidence, and preparedness to provide mental health support, but little is known about how these selfreported outcomes translate to intended or actual MHFA behaviors.
- Simulated patient (SP) role-plays of mental health scenarios, enacted by trained actors and immediately followed by feedback and debrief discussions with mental health consumer educators, enable pharmacy students to practice MHFA skills in a safe learning environment.

Findings:

- Simulated mental health role-plays, previously developed for pharmacy education, were adapted into an educational workshop for pharmacists, creating a realistic context for skills application, and contributing to pharmacists' intended mental health support behaviors.
- Adapting SP scenarios into clinical practice, via repeated mystery shopping visits with immediate performance feedback, may be an acceptable and feasible method of observing and shaping pharmacists' mental health support behaviors.

Background

Pharmacists regularly interact with people experiencing mental health symptoms or crises,¹ but may not feel comfortable or confident in their abilities.²⁻⁴ Mental Health First Aid (MHFA) training is internationally well-accepted, evidence-based,^{3,5,6} and can increase learners' self-reported skills, knowledge, confidence, and preparedness to provide mental health support.^{1,7,8} All pharmacists are encouraged to complete MHFA training,⁹ which is increasingly being embedded in pharmacy curricula in countries such as Australia¹⁰ and the United States.¹¹⁻¹³ However, little is known how self-reported MHFA outcomes translate to intended and actual mental health support behaviors.^{7,8}

Simulated mental health role-plays, co-designed with mental health stakeholders,¹⁴ improve pharmacy students' mental health confidence, stigma, and provide enjoyable and relevant learning experiences.¹⁵ Using trained actors to enact simulated patients (SPs) and role-play with students, in a safe and educational environment, enables observation of behaviors with social and psychological fidelity,¹⁶ fostering dynamic and empathetic engagement.^{1,17} The learning experience is further enhanced and authenticated by involving consumers with lived experience of mental illness in education design

and delivery, providing performance feedback and personal reflections.¹⁷⁻²¹ While these benefits have been demonstrated at a university level, it is unknown how pharmacists view the SP method as a means of educating and upskilling healthcare practitioners in responding to individuals seeking or requiring mental health support.

Objectives

This study aimed to pilot the adaptation of mental health role-plays, previously evaluated with students, into an educational workshop with practising pharmacists. The objectives were to assess MHFA behaviors of pharmacists via SP role-plays (with trained actors), explore the impact of SP roleplays on pharmacists' intended behaviors in providing mental health support, and explore pharmacists' experiences of the workshop and their thoughts about using SPs as a mental health training method in clinical practice.

Methods

This mixed-methods study was conducted via three means: SP role-plays, pre- and post-workshop surveys, follow-up semi-structured interviews.

Setting and participants

A two-hour educational workshop was organised in partnership with Australia's peak professional pharmacy organisation, The Pharmaceutical Society of Australia (PSA),²² and conducted in July 2023 in Sydney, Australia. All pharmacy graduates, interns, and pharmacists in Australia were invited to attend through PSA's marketing channels (email, social media). At the beginning of the workshop, attendees were invited to participate in any or all parts of the study, henceforth referred to as "participants". In November 2023, PSA invited workshop attendees, via email on behalf of the research team, to participate in a follow-up interview via telephone or Zoom videoconferencing.²³

Interventions

Workshop attendees formed four groups. Volunteers in each group engaged in SP role-plays with actors (who had undergone prior training with TU, a MHFA-trained pharmacist, and/or SE, a licensed MHFA instructor) while being observed by peers, a MHFA-trained workshop facilitator, and mental health consumer educator (MHCE). Four previously developed scenarios and associated marking rubrics were utilised,¹⁴ pertaining to first-episode psychosis with suicidal thoughts, a person living with schizophrenia who has a plan for suicide, non-adherence to antipsychotic medication, and antidepressant-induced mania. The scenarios were conducted round-robin style: each group experienced all four scenarios. for an intended total of 16 role-plays. MHCEs and facilitators used the marking rubric to score participants' performances while the role-plays were being conducted. Immediately following role-plays, role-playing participants engaged in selfassessment using the same rubric. Performance feedback and debriefing with peers, the MHCE, and facilitator then ensued.

Study instruments

Workshop attendees were invited to individually complete a survey to collect demographic data, and the 23-item Mental Health Support Scale (MHSS)-Intended,²⁴ exploring the impact of the role-plays on participants' intended behaviors to provide mental health support (Appendix 1). Survey data were collected and managed online using the REDCap electronic data capture tool hosted at The University of Sydney.²⁵ Roleplays were scored using aforementioned rubrics¹⁴; each item was scored out of 2: 0=no marks, 1=partial marks, 2=full marks. To pass the scenario, a facilitator score greater than 50% and fulfilment of scenario-specific pass/fail criteria were needed (e.g., asking directly about suicidal thoughts).

For the interviews, a semi-structured guide was developed based on researchers' previous experience,¹⁵ exploring participants' experiences of the workshop and their opinions of using SP role-plays with immediate feedback to train pharmacists in providing mental health support (Appendix 2). While not discussed during the workshop, an additional consideration was explored during the interviews to gauge pharmacists' opinions about adapting SP role-plays into clinical practice (via repeated "mystery shopping" visits), to observe and shape pharmacists' mental health support behaviors.

Data collection and analysis

Surveys were completed immediately before (T0) and after (T1) the workshop. Non-parametric (Mann-Whitney U) tests were conducted on unmatched survey data after testing for normality, to explore T0 scores according to MHFA training status, as well as changes in intended behaviors for all participants, also for MHFA-trained and non-MHFA-trained participants alone. Missing data were excluded test-by-test.

Role-play scores were converted to a score out of 100 to facilitate comparison of scores awarded by each rater (self, facilitator, MHCE) for each scenario. Role-play scores were analysed using non-parametric (independent-samples Kruskal-Wallis) and post-hoc tests (pairwise comparisons and Bonferroni correction for multiple tests) after conducting normality tests on data, to explore differences in rater scores. A chi-square test was conducted to explore relationships between pass/fail outcomes according to MHFA training status of participants. Another chi-square test was conducted to explore relationships between pass/fail outcomes according to scenario. Missing data were excluded listwise.

Interviews were conducted between November 2023 and January 2024 via Zoom,²³ digitally recorded, and transcribed verbatim by TU. An inductive thematic analysis approach was applied; all transcripts were de-identified, then read and reread by TU for data familiarisation. Initial codes were generated, preliminary themes and subthemes were mapped in Microsoft Word, iteratively discussed and reviewed, then defined and refined collaboratively with two other co-authors (COR and RM).²⁶

Ethics approval and reporting

This study received ethics approval from The University of Sydney Human Ethics Committee (2023/148) and is reported using the COnsolidated criteria for REporting Qualitative research (COREQ) checklist.²⁷

Results

Thirty-five participants attended the workshop, with 30 completing the T0 survey (Appendix 3). Most participants identified as female (70%), with a mean age of 44.17 years (SD 15.69). Fifty percent of participants were MHFA-trained. Nine (31%) had a personal diagnosis of mental illness, and 22 (76%) had a close friend or relative living with mental illness.

Role-play performance scores

Sixteen role-plays were conducted, with 14 available for analysis (one excluded as role-played by two people, one participant did not sign consent for data inclusion). Additionally, during two role-plays the actor mistakenly volunteered the pass/fail criterion for that scenario. This criterion was excluded from the pertaining rubrics, the total score was adjusted for those two role-plays, and they were excluded from analyses of pass/fail outcomes. The median self-assessment score (n = 14) was 75.0/100 (IQR 58.2-84.1, range 50.0-90.9). The median facilitator score (n = 14) was 85.7 (IQR 77.3-90.2, range 4.5-100.0). The median MHCE score (n = 13) was 90.9 (IQR 36.4-100.0, range 36.4-100.0). There was a significant difference between raters' scores (H[2] = 7.09, P = 0.029), with MHCEs scoring significantly higher than participants scored themselves overall (P = 0.028).

The relationship between MHFA training and pass/fail outcome was statistically significant; 100% of participants without MHFA training (n = 3) failed and 100% of MHFA-trained participants (n = 9) passed their scenario ($X^2(2) = 12.00$, P < 0.001, Cramer's V = 1.00). There were no significant differences in pass/fail outcomes per scenario.

Survey scores – Intended behaviors

At T0, MHFA-trained participants (n = 15) were significantly (P < 0.05) more likely, compared with participants without MHFA training (n = 15), to ask if someone has been having thoughts of harming themselves or others (P = 0.02); listen to their problems and try to provide solutions (P = 0.02); convey a message of hope by telling them help is available and things can get better (P = 0.03); and ask if they have been thinking about suicide (P = 0.04).

At T1 (n = 20), there was statistically significant (P < 0.05) increased intent compared to T0 for 8 of 23 items, in areas of active listening, encouraging other supports, responding to suicidal behaviour, immediate risk of suicide and psychotic symptoms, and investigating reluctance to seek help. For non-MHFA trained participants alone (n = 11), there were statistically significant (P < 0.05) increased intent post-roleplays for 6 of 23 items in areas of active listening, responding to suicidal behaviour, immediate risk of suicide and psychotic symptoms, and investigating reluctance to seek help. For MHFA-trained participants alone (n = 9), statistically significant increased intent post-roleplays was found for one item relating to encouraging other supports: discuss with them whether they are interested in self-help strategies (P = 0.025) (Table 1).

Table 1

Changes in survey item scores for all participants, non-MHFA and MHFA-trained participants alone

Time (n)	All participants		Non-MHFA		MHFA-trained	
	T0 (n = 30)	T1 ($n = 20$)	T0 (n = 15)	T1 (n = 11)	T0 (n = 15)	$T1 \; (n=9) \\$
Survey item	Median (IQR)				
Ask if they have been having thoughts of harming themselves or others	3.5 (2-4.3)	4 (3.3–5)	3 (2-4)	4 (3–5)	4 (3–5)	4 (3-5)
Discuss with them their wishes about privacy and confidentiality	$4(3.5-4)^{a}$	4 (4-5)	4 (4-4)	4 (4-5)	$4(3-4.3)^{a}$	5 (2.5-5)
Listen to their problems and try to provide solutions ^b	4 (4-5)	5 (4–5) ^c	4 (4-4)	5 (4–5) ^c	5 (4-5)	5 (4-5)
Let them know you are listening to what they are saying by restating and summarising what they have said	4 (4-5)	5 (4-5)	4 (4–4)	5 (4–5)	4 (4–5)	5 (4-5)
Communicate clearly and simply, and repeat things where necessary	4 (4-5)	5 (4-5)	4 (4-4)	4 (4-5)	4 (4-5)	5 (4-5)
Tell them they have to get their act together ^b	1 (1-2)	1(1-1)	1 (1-1)	1 (1-1)	1 (1-2)	1 (1-2)
Convey a message of hope by telling them help is available and things can get better	4 (4–5)	4.5 (4-5)	4 (4–4)	4 (3–5)	5 (4–5)	5 (4-5)
Try to cheer them up by telling them that things don't seem that bad ^b	2 (1-3)	1.5 (1-3)	2 (1-3)	3 (1-4)	2 (1-3)	1 (1-1.5)
Offer them information and resources appropriate to their situation	4 (4-4.3)	5 (4-5)	4 (3-4)	4 (3-5)	4 (4-5)	5 (4-5)
Discuss their options for seeking professional help	4 (4-5)	5 (4-5)	4 (4-5)	5 (4-5)	4 (4-5)	5 (4.5-5)
Ask whether they have other supportive people they can rely on	4 (4-5)	5 (4.3–5) ^c	4 (4-5)	5 (4-5)	4 (4-5)	5 (4.5-5)
Discuss with them whether they are interested in self-help strategies	4 (3-4)	4.5 (4-5) ^c	4 (2-4)	4 (4-5)	4 (4-4)	5 (4-5) ^c
Ask if they have been thinking about suicide	3.5 (3-4)	5 (4–5) ^c	3 (2-4)	5 (4–5) ^c	4 (3-4)	5 (4-5)
Tell them how much it will hurt their family and friends if they were to kill themselves ^b	2 (1-3)	3 (1-4)	2 (1-3)	3 (1-4)	2 (2–3)	3 (1–3.5)
Try to make them understand that suicide is wrong ^b	2 (1-3)	3 (1-3)	2 (1-3)	3 (1-3)	2 (1-2)	3 (1-4)
Ask if they have a plan for suicide – for example, how, when and where they intend to die	3 (2-4)	4 (3–5) ^c	3 (1–4)	4 (4–5) ^c	4 (2-4)	3 (2.5–5)
Time (n)	T0 (n=29)	T1 (n=19)	T0 (n=15)	T1 (n=11)	T0 (n=14)	T1 (n=8)
Encourage them to get appropriate professional help as soon as possible – for example, see a mental health professional or someone at a mental health service	4 (4–5)	5 (4–5) ^c	4 (4–5)	5 (4-5)	4 (4–5)	5 (4–5)
Make sure they are not left on their own	4 (4-4)	5 (5–5) ^c	4 (4-4)	5 (4–5) ^c	4 (3.8–5)	5 (4.3–5)
Acknowledge they might be frightened by what they are experiencing	4 (4-4)	5 (4–5) ^c	4 (4-4)	5 (4–5) ^c	4 (4–5)	5 (4.3–5)
Try to convince them that their beliefs and perceptions are false ^b	2 (1-3)	1 (1-4)	2 (2–3)	1 (1-4)	2 (1–3)	1.5 (1–3.8)
Listen to them talk about their experiences even though you know they are not based in reality	4 (4-5)	4 (4–5)	4 (4–4)	4 (4–5)	5 (4–5)	4 (4–5)
Find out if there are specific reasons why they do not want to seek professional help	4 (4-4)	4 (4–5) ^c	4 (4–4)	5 (4–5) ^c	4 (4–5)	4 (4–5)
Let them know they can contact you if they change their mind about seeking help	4 (4-5)	5 (4–5)	4 (4–4)	4 (4–5)	4 (4–5)	5 (4-5)

IQR, interquartile range; MHFA, Mental Health First Aid.

Survey items were rated on a five-point Likert scale: 1 = very unlikely-5 = very likely.

^a 1 participant did not answer these questions, therefore n = 29 T0 all participants, n = 14 T0 MHFA-trained participants for this item.

^b Not recommended, reverse scored.

^c Statistically significant (*P* < 0.05).

Follow-up interviews

Four interviews were conducted (mean duration 36 minutes, SD 9 minutes) with pharmacist participants. Four overarching themes emerged: realistic context for skills application and practice, benefits of observing, selfassessment and feedback, and integrating into clinical practice (via mystery shopping). Table 2 provides narrative points and illustrative quotes for each theme.

Discussion

This study piloted trained actors enacting simulated scenarios of mental health symptoms and crises, with pharmacists in an educational workshop. The workshop created a realistic context for skills application, contributing to pharmacists' intended mental health support behaviors, which could be integrated into clinical practice.

Concurring with previous SP studies, the realistic context of the workshop was enhanced by using trained actors; this is welldocumented to enhance learning authenticity and fidelity.¹⁶ Involving people with lived experience increased participants' awareness of consumers'/carers' feelings during the interactions.¹⁸ Role-play scores from pharmacist self-assessment were significantly lower than MHCEs. Self-doubt of pharmacists' abilities was mentioned in interviews, mirroring what students have voiced in focus groups after participating in a similar educational activity.¹⁵ Engaging in self-assessment, then receiving feedback from a facilitator and MHCE enabled participants to triangulate their performance with reflection for future practice; a point also raised previously by students.¹⁵

In this study, participants who had prior MHFA training performed differently from those who had not, as seen by the significantly different pass/fail outcomes according to MHFA training status. In previous studies, the largest effect post-MHFA training was in pharmacists' self-reported confidence in asking someone if they are having suicidal thoughts.¹ The results of this study align; MHFA-trained participants were significantly more likely than non-MHFA trained to assess for crisis such as suicide at TO.

Table 2

Themes, narrative points, and quotes from interviews.

Theme	Narrative points	Quotes
Realistic context for skills application and practice	Pharmacists appreciated the authenticity of the workshop scenarios, and the realism that synchronous interactions with trained SP actors contributed.	"in a live situation and you've got to think on your feet" [P4]
	The intensity of the actors' skills made the scenarios realistic, fostering a valid experience and valuable opportunity to practise mental health support skills.	"The actors were very good at making it realistic physical response in terms of tears and movementsyou would expect to get in the pharmacy" [P2]
	Pharmacists appreciated that the role-plays were not verbosely scripted, providing opportunity to practise interviewing skills to ascertain information from the SP as they would realistically in practice.	"The amount of information that I received was realistic They don't come and spit it all out at you. They give you bits and pieces." [P4]
	Involving people with lived experience to provide feedback on how they would personally feel about the pharmacist's response in a real-life scenario was tremendously powerful.	"sense of realitya sense of the person's feeling coming through." [P4]
Benefits of observing	Role-playing in front of peers was confronting for some pharmacists.	"noticed there was a lot of hesitancy in participating." [P4]
	Despite hesitancy to role-play, pharmacists who observed found it interesting and a beneficial learning experience.	"definitely get a sense of it even if you just watch someone." [P4]
	Both positive and negative mental health support behaviors were observed by pharmacists.	"listening to what others were doingidentify what I wouldn't do Also pick up points that I would do." [P1]
	Observing alone provided reassurance on pharmacists' own mental health support behaviors.	"I feel like I would have handled it much the samedid give me confidence that I'd be going about things in the right way." [P2]
	Pharmacists could recognise who had completed prior MHFA training, by observing the role-playing pharmacist's approach, communication skills, and management of the scenarios. MHFA-trained pharmacists' communication skills were positively acknowledged.	"empathy was greaterengaged appropriately and they provided the supports that the patient required, including taking them to another area and having a much more private conversation with them; the low slow voice was good reducing anxiety intentionsalso looking at how matching their responses with the patient's response" [P1]
	While pharmacists could attend this workshop irrespective of MHFA training status, the workshop highlighted the importance of completing MHFA training.	"I actually haan't done my Mental Health First Aid courseas a result of thatworkshop subsequently did my Mental Health First Aid course." [P1]
Self-assessment and feedback	Immediately after each role-play, the role- playing pharmacist engaged in self-assessment, followed by feedback from the workshop facilitator and MHCE, then group debrief discussions. Self-assessment was a valuable opportunity for self-reflection.	"Have I gone through all the steps that I should have gone through?Was my style comforting enough, reassuring enough without being pushy? Did I provide the right information, the right triage outcome at that time?" [P4]
	No pharmacist gave themselves full marks for any role-play. During self-assessment, pharmacists may doubt their abilities and look for the negative things in their performance.	"I think everyone had doubt in their mind about how they actually went through it" [P1]
	Immediate performance feedback was highly valued, said to be a crucial element of the workshop for instant recall and reflection on practice.	"The immediacy of the feedback I think is importanteven like a week later or a month later the memory of that scenario and your participation in it can be quite varied and flawed" [P4]
	Delivered in an intentionally positive and supportive environment, the scenarios enabled pharmacists to practise their existing mental health support skills. Coupled with feedback from people with lived experience, pharmacists could receive feedback on how someone realistically would feel, and to engage in relevant reflection.	"I was looking at the patient a lot and the reason I do that normally is because I'm trying to assess visuals like physical feedbackand yet she thought it would be intimidating or problematic and that was interesting, because my eagerness can be interpreted differently by the patient" [P4]
	The opportunity to triangulate self-assessment with facilitator and MHCE feedback provided pharmacists with personal self-assurance, boosting mental health confidence.	"I ticked most of the boxes and I was reassured I was not doing anything glaringly incorrectly or there wasn't anything major that I had missed with [facilitator's] feedback and the patient's

(continued on next page)

Table 2 (continued)

Theme	Narrative points	Quotes
		feedback was very good and also my own assessmentI thought yes, I've done this and highlight the areas that I felt I needed to pay attention to next time" [P4]
	Group debriefing discussions were invaluable for pharmacists to learn from each other.	"you hear someone else's perception of the incident and what line they would have taken or what words they would have chosenpick up other styles or helpful expressions or angles" [P4]
Integrating into clinical practice (via mystery shopping)	Pharmacists expressed a clear desire and necessity for more practice of mental health support skills and voiced that role-playing is key to further training, especially for pharmacists who don't often see crises and those who find crisis situations quite intimidating. More practice enhances sustainability of skills.	"once a year at a conference gives you a taste but then they don't get repeatedit's a little bit of a waste of an opportunitythere would definitely be value in something like the repeat in your pharmacy or workplace to see the impact of this training" [P4]
	Pharmacists spoke positively about mystery shopping (SP visits in clinical practice settings), expressing that more needs to be done; mystery shopping is underutilised in pharmacy to observe real-life practice and motivate pharmacists to consistently provide optimal care to the community.	"there might be a mystery shopper all the time always be on the top of the game" [P2]
	Immediate performance feedback would remain vital if integrating this training into practice settings, to facilitate real-time reflection.	"if they can walk right back in at that point and give you feedback, I think that is excellentthe best representation of how you handle people at that pointfar more valuable than a report, you know, like in the mail a week later. [P2]
	Repeated visits with immediate feedback and coaching would help to consolidate training and shape practice over time.	"if that similar scenario with them is repeated it's how you learn, isn't it? How you learn and how you consolidatethe skills or the knowledge that you're brushing up on." [P3]
	Suicide assessment remains a challenge for many pharmacists, said to be one particularly important element to be included in future scenarios.	"question of 'Are you going to suicide, are you going kill yourself?' – that I think is a big hurdle – people have difficulties asking someone so those that should be commonly repeated." [P4]
	While crisis management such as suicide is important, other suggested scenarios included advising about the very rare, but possible, potential for suicidal thoughts on commencement of an SSRI (selective serotonin reuptake inhibitor), and exploring comorbidities and their role in mental health.	"questioning to really find out the underlying issuetreating the mental illness if they still have a substance abuse problem really does not help." [P3]
	Pharmacists may also need further training to identify local mental health support services.	"Pharmacists also need to know what resources are out there." [P3]
	Regarding challenges, concerns were raised about the confronting nature of mystery shopping. This may be alleviated by first completing some mental health skills training to prepare.	"some people might feel spooked by it especially if they haven't done any work in that areaI would have some requirements of our staff to have done some work initially or some observation at least so that they have a sense of what the purpose of the program isan education session of all the staff because that way they're on got some sense of the philosophy behind it and the intention." [P4]
	Protective processes would need to be in place to safeguard the mental health and wellbeing of mystery shopping recipients and avoid participant harm.	"interaction with challenging behaviourhas a psychological toll on the providercontinuous psychological micro injuries throughout the daybecome accumulative over time I think we just have to be careful about the vicarious harm that might come from thisyou might need to provide some psychological backup as well." [P1]
	Mystery shoppers would need to be adequately trained, to both enact the SP, as well as gauging the wellbeing of the participants.	"The mystery shopper needs to have two hats; they need to play the role of the affected person but they also need to pay attention to the recipient of this as well to make sure that it's matched and that there's no escalation and that they are well- skilled I suppose in going 'maybe we're going too far' and/or just call it quits." [P1]
	Mystery shopping performance in clinical practice would be affected by the work	"you're surrounded by, 'Can you do this? Can you do that? This patient wants this' and so it

Pharmacists' mental health support behaviors

Table 2 (continued)

Theme	Narrative points	Quotes
	environment and may depend on what is happening in the pharmacy at the time, especially as pharmacists are busy juggling tasks.	would probably be a lot briefer Unless there's a booking, when you know you're sitting down and giving a cognitive service." [P3]
	Pharmacy infrastructure, such as time and availability of a private consultation room, may influence mystery shopping performance and the quality of service provision.	"if there was some privacy available, if there were other work pressures or interruptions Pressures is often people waiting or sometimes management in placesyou hear anecdotally don't spend more than so many minutes with someone" [P4]
	The lack of remuneration for participating in mental health research and support services was raised, with hesitancy from pharmacists to utilise their resources without payment.	"what is the point to do all this if we're not remunerated for it?The consumer won't pay for ithaven't got the money to pay for it." [P3]
	Mental health is an important and evolving area of research. While evaluation studies often involve pre- post interventions, the direct clinical outcomes of mental health training on service recipients are difficult to measure.	"a very important area and it's often underplayeda lot of people don't consider it important and they tend to shy away from it We desperately need research in this area You don't know how many people you've prevented from suiciding How do you know your intervention did anything at alldid it affect the patients? Well we don't know because we never see them again." [P1]

Analyses of T1 survey scores for participants overall also aligned with previous findings; further mental health training increases likelihood of encouraging other supports, by means of asking about supportive people they can rely upon, and discussing self-help strategies.¹ Furthermore in this study, the likelihood of suicide assessment by participants overall increased significantly at T1, also for non-MHFA trained participants alone. While research increasingly explores the effects of suicide prevention training on pharmacists' attitudes, perceptions, and confidence, little is known about pharmacists' behaviors and ability to engage in suicide prevention in practice,²⁸ hence the importance of including such scenarios in ongoing mental health training for pharmacists.

Self-reported intentions to provide MHFA can predict actual mental health support behaviors.^{7,29,30} However, there is a need to collect direct observational data to supplement self-report, to determine the effectiveness of training on pharmacists' behaviors, and clinical outcomes.^{8,31} This can be challenging as it hinges upon opportunities for pharmacists to provide mental health support in practice.³⁰ This study hence explored workshop attendees' opinions of adapting the SP method into clinical practice (via mystery shopping),³²⁻³⁴ to help evaluate the training and address self-reporting biases of trainee behaviour.^{29,35,36}

A consistent finding between this study and others is that while single educational events such as workshops are effective, pharmacists desire interactive and contextually relevant continuing education.¹⁸ The clear interest in continuing education post-workshop could involve managing mental health crisis situations in the community pharmacy setting, as standard MFHA training does not address the environmental constraints of a community pharmacy.⁸ Mystery shopping may be considered workplacebased assessment, exploring translation of educational workshop performance to clinical practice.³⁷ The interviews in this study indicated a positive response to the idea of repeated mystery shopping visits, to measure behavioural change longitudinally. The scenarios would depict real patient experiences, and immediate feedback and coaching would be provided to foster reflection and discussions on how practice can be improved.¹⁷ Mystery shopping is valuable and previously piloted in community pharmacy^{34,38}; there is a definite need in mental health support settings. Future mental health training programs for continuing professional development should involve mental health consumers with lived experience, and role-plays of real-life scenarios in the community pharmacy setting for pharmacists to practise skills.^{18,31}

All of the challenges regarding mystery shopping raised in this study concur with previous research: significant contextual factors include time constraints, high workloads. and the lack of reimbursement to deliver mental health services.^{1,36} Adapting mental health scenarios for mystery shopping purposes is associated with numerous ethical considerations^{39,40}: the scenarios and method must be designed to protect the psychological safety of all participants involved, with comprehensive debriefing opportunities. Other factors potentially influencing quality of healthcare delivery include lack of infrastructure such as private space for counselling, staff shortages, inadequate mental health training, limited time, and difficulties communicating with mental health consumers.¹⁸ Pharmacists may also need more training in navigating local mental health resources.⁸

The challenge that remains is in determining if mental health training improves the mental health of the general public,³⁰ something that was also voiced in this study to be difficult to measure. While the best way to address this is to evaluate the actual benefits to individuals who are exposed to mental health support interventions, with a possible follow-up on these patients/participants,⁴¹ repeated mystery shopping visits and reports may be the closest alternative.

Strength and limitations

This study provided the opportunity for pharmacists to apply their skills in a range of authentic mental health scenarios and receive feedback from people with lived experience. The survey data are based on self-reporting, which was not matched with specific role-play performances. There may have been variability in how respondents interpreted certain survey items, subject to social desirability bias. There also could be self-selection bias as participants voluntarily roleplayed and volunteered to complete the surveys and interviews.⁸ The Hawthorne effect⁴² may have been involved during the role-plays, with participants modifying their behaviors under the awareness of being observed. Furthermore, the performance of participants who completed role-plays after the first rotation may have been affected; these participants had already been exposed to aspects of the marking rubric and participated in feedback/debriefing discussions for the previously enacted scenarios.

This was a pilot-study, to observe and explore the needs, acceptance, and feasibility of using the SP training method with pharmacists in an educational setting and adapting it to clinical practice. Given the small sample size, the results of this study may not be generalisable to all pharmacists. Finally, first author TU (an experienced pharmacist and educator) conducted the interviews, therefore researcher subjectivity is acknowledged per reflexivity practices.⁴³

Conclusion

SP role-plays of mental health symptoms and crises, enacted by trained actors with pharmacists while being observed by peers, workshop facilitators, and MHCEs, may be an effective method to assess and enhance pharmacists' intended mental health support behaviors. There remains a gap between intended behaviors and actual mental health support provision and outcomes. Adapting the SP method into clinical practice, via mystery shopping, may be an acceptable means of shaping pharmacists' mental health support provision longitudinally.

Disclosure

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References

 Carpini JA, Sharma A, Kubicki Evans M, et al. Pharmacists and Mental Health First Aid training: a comparative analysis of confidence, mental health assistance behaviors and perceived barriers. *Early Interv Psychiatry*. 2023;17(7):670–680.

- Goodman CS, Smith TJ, LaMotte JM. A survey of pharmacists' perceptions of the adequacy of their training for addressing mental health–related medication issues. *Ment Health Clin.* 2017;7(2):69–73.
- Kirschbaum M, Peterson G, Bridgman H. Mental health first aid training needs of Australian community pharmacists. *Curr Pharm Teach Learn*. 2016;8(3):279–288.
- Alzubaidi H, Saidawi W, Goldstone L, et al. A roadmap beyond dispensing for educating and training community pharmacists on key mental health competencies: a mixed-methods national study. *Res Soc Adm Pharm.* 2024;20(6):134–145.
- Kitchener BA, Jorm AF. Mental Health First Aid: an international programme for early intervention. *Early Interv Psychiatry*. 2008;2(1):55–61.
- Kitchener BA, Jorm AF. Mental Health First Aid training for the public: evaluation of effects on knowledge, attitudes and helping behavior. BMC Psychiatry. 2002;2(1):10.
- Morgan AJ, Ross A, Reavley NJ. Systematic review and meta-analysis of Mental Health First Aid training: effects on knowledge, stigma, and helping behaviour. *PLoS One*. 2018;13(5):e0197102.
- Witry MJ, Fadare O, Pudlo A. Pharmacy professionals' preparedness to use Mental Health First Aid (MHFA) behaviors. *Pharm Pract Granada*. 2020;18(4):2102.
- 9. McKee J, Mospan CM, Benfield M, Gillette C. A call for community pharmacists to complete Mental Health First Aid training. J Am Pharm Assoc (2003). 2019;59(2):167.
- Pham L, Moles RJ, O'Reilly CL, Carrillo MJ, El-Den S. Mental Health First Aid training and assessment in Australian medical, nursing and pharmacy curricula: a national perspective using content analysis. *BMC Med Educ.* 2022;22(1):70.
- Frick A, Osae L, Ngo S, et al. Establishing the role of the pharmacist in mental health: implementing Mental Health First Aid into the Doctor of Pharmacy core curriculum. *Curr Pharm Teach Learn*. 2021;13(6):608–615.
- Dulellari S, Vesey M, Mason NA, Marshall VD, Bostwick JR. Needs assessment and impact of mental health training among Doctor of Pharmacy students. *Curr Pharm Teach Learn*. 2022;14(6):729–736.
- McKeirnan KC, MacCamy KL, Robinson JD, Ebinger M, Willson MN. Implementing mental health first aid training in a doctor of pharmacy program. *Am J Pharm Educ.* 2023;87(8):100006.
- Ung TX, O'Reilly CL, Moles RJ, El-Den S. Co-designing psychosis simulated patient scenarios with mental health stakeholders for pharmacy curricula. *Int J Clin Pharm.* 2023;45(5):1184–1191.
- Ung TX, El-Den S, Moles RJ, O'Reilly CL. Simulated psychosis care roleplays for pharmacy curricula: a qualitative exploration of student experiences. Soc Psychiatry Psychiatr Epidemiol. 2024;59(7):1269–1277.
- Hogg G, Ker J, Stewart F. Over the counter clinical skills for pharmacists. Clin Teach. 2011;8(2):109–113.
- 17. Weldon SM, Ralhan S, Paice L, Kneebone R, Bello F. Sequential simulation of a patient journey. *Clin Teach.* 2017;14(2):90–94.
- Wheeler A, Mey A, Kelly F, Hattingh L, Davey K. Education and training for community pharmacists in mental health practice: how to equip this workforce for the future. J Ment Health Train Educ Pract. 2014;9(3): 133–144.
- 19. Towle A, Godolphin W. Patients as educators: interprofessional learning for patient-centred care. *Med Teach*. 2013;35(3):219–225.
- Voorhees HL, Mackert M. Helping future providers talk about mental health. *Clin Teach*. 2021;18(3):247–251.
- Ung TX, El-Den S, Moles RJ, O'Reilly CL. The use of mental health simulation in pharmacy practice and education: a systematic review. Am J Pharm Educ. 2023;87(6):100058.
- 22. Pharmaceutical Society of Australia. We're for Pharmacists. Available at: https://www.psa.org.au. Accessed March 24, 2024.
- Archibald MM, Ambagtsheer RC, Casey MG, Lawless M. Using Zoom videoconferencing for qualitative data collection: perceptions and experiences of researchers and participants. *Int J Qual Methods*. 2019;18: 1609406919874596.
- Morgan AJ, Wright J, Mackinnon AJ, Reavley NJ, Rossetto A, Jorm AF. Development of the Mental Health Support Scale: a new measure of Mental Health First Aid behaviors. *Assessment*. 2023;30(5):1486–1498.
- **25.** Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research Electronic Data Capture (REDCap) a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform.* 2009;42(2):377–381.
- Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101.
- 27. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007;19(6):349–357.
- Stover AN, Lavigne JE, Carpenter DM. A scoping review of suicide prevention training programs for pharmacists and student pharmacists. *Am J Pharm Educ*. 2023;87(3):ajpe8917.
- 29. Forthal S, Sadowska K, Pike KM, Balachander M, Jacobsson K, Hermosilla S. Mental Health First Aid: a systematic review of trainee

behavior and recipient mental health outcomes. *Psychiatr Serv.* 2022;73(4):439–446.

- **30.** Hadlaczky G, Hökby S, Mkrtchian A, Carli V, Wasserman D. Mental Health First Aid is an effective public health intervention for improving knowledge, attitudes, and behaviour: a meta-analysis. *Int Rev Psychiatry*. 2014;26(4):467–475.
- **31.** Ng R, El-Den S, Collins JC, et al. Evaluation of a training program to support the implementation of a community pharmacist-led support service for people living with severe and persistent mental illness. *J Am Pharm Assoc.* 2023;63(3):807–816.e2.
- **32.** Björnsdottir I, Granas AG, Bradley A, Norris P. A systematic review of the use of simulated patient methodology in pharmacy practice research from 2006 to 2016. *Int J Pharm Pract.* 2020;28(1):13–25.
- Xu T, de Almeida Neto ACde A, Moles RJ. A systematic review of simulated-patient methods used in community pharmacy to assess the provision of non-prescription medicines. Int J Pharm Pract. 2012;20(5): 307–319.
- 34. Collins JC, Schneider CR, Naughtin CL, Wilson F, de Almeida Neto AC, Moles RJ. Mystery shopping and coaching as a form of audit and feedback to improve community pharmacy management of non-prescription medicine requests: an intervention study. *BMJ Open.* 2017;7(12): e019462.
- 35. El-Den S, Moles RJ, Zhang R, O'Reilly CL. Simulated patient role-plays with consumers with lived experience of mental illness post-Mental Health First Aid training: interrater and test re-test reliability of an observed behavioral assessment rubric. *Pharmacy (Basel)*. 2021;9(1):28.
- 36. Ng R, El-Den S, Stewart V, et al. Pharmacist-led interventions for people living with severe and persistent mental illness: a systematic review. *Aust N Z J Psychiatry*. 2022;56(9):1080–1103.
- 37. Lim A, Krishnan S, Singh H, et al. Linking assessment to real life practice comparing work based assessments and objective structured clinical examinations using mystery shopping. *Adv Health Sci Educ.* 2023;29: 859–878.
- Xu T, de Almeida Neto AC, Moles RJ. Simulated caregivers: their feasibility in educating pharmacy staff to manage children's ailments. *Int J Clin Pharm.* 2012;34(4):587–595.

- Collins JC, Moles RJ, Penm J, Schneider CR. Ethical considerations for mystery shopper studies of pharmaceutical sales. *Bull World Health Or*gan. 2020;98(6):375, 375A.
- 40. Collins JC, Chong WW, de Almeida Neto AC, Moles RJ, Schneider CR. The simulated patient method: design and application in health services research. *Res. Social Adm. Pharm.* 2021;17(12):2108–2115.
- 41. Chowdhary A, Zlotnikova V, Lucas C, Lonie JM. How do Mental Health First AidTM interventions influence patient help-seeking behaviors? A dilemma for pharmacist Mental Health First Aid responders. *Res Soc Adm Pharm.* 2019;15(1):106–108.
- **42.** McCambridge J, Witton J, Elbourne DR. Systematic review of the Hawthorne effect: new concepts are needed to study research participation effects. J Clin Epidemiol. 2014;67(3):267–277.
- Olmos-Vega FM, Stalmeijer RE, Varpio L, Kahlke R. A practical guide to reflexivity in qualitative research: AMEE Guide No. 149. *Med Teach*. 2023;45(3):241–251.

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