Mental Health Simulation Training for Pharmacy Workforce in Secondary Care

East London NHS Foundation Trust

Special thanks to Barts Health NHS Trust

Sponsored and supported by Health Education England: London and Kent, Surrey, and Sussex

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1/4/2022- 31/3/2023

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1. Background

There is a gap in pharmacy education in mental health from an undergraduate level to clinical practice, especially around interactions with people living with mental illness. NHS Long Term[1] plan highlights the need to develop services and workforce in different sectors to provide the right level of care for people with mental illness. This requires a shift towards delivering integrated training programmes for pharmacists and pharmacy technicians. In doing so, pharmacy staff can gain confidence and competence to support people with mental illness, whatever their speciality and or main area of work is.

The current challenge is that people live longer with multiple and complex health conditions including mental health. Additionally, staff are currently trained to treat specific conditions or work in specific sectors or practice settings e.g. acute, mental health etc. that can have an impact on provision of good quality care.

The Health Education England (HEE) task and finish group[2] reviewed roles in mental health pharmacy. They identified that many pharmacy technicians and pharmacists have limited exposure to mental health services during their training. A recommendation from this report was the need to ensure that all pharmacy professionals are confident and competent from pre-registration training onwards to manage general mental health conditions as a minimum.

Mental health was a focus in the HEE business plan 2021-22[3] and one aspect was to establish regional pharmacy mental health programmes to support the mental health workforce ambitions as outlined in NHS long term plan. This project was also designed to align with one of HEE's objective of supporting the development of a national education-training pathway for the pharmacy workforce working with severe mental illness (SMI). Hence, this project is a valuable development opportunity for the acute pharmacy workforce, who also have interactions with patients with mental health illness admitted in the acute setting.

Simulation training is widely used in healthcare education with good evidence to demonstrate its impact on improving skills[4]. Training in mental health requires specific skills and attitudes, which are best achieved through experiential learning. Simulation training is particularly suited to deliver this type of learning experience. It involves the use of simulated patients experiencing symptoms of mental health in a safely constructed environment, followed by a detailed and reflective debrief to consolidate learning. Learners carry out a series of scenarios, but the focus is on an effective debrief where these actions are discussed in a safe environment, and evaluated, which in turn leads to learning opportunities.

Simulation training can provide the right tools to apply learning in practice to enhance patient care, as well as addressing topics such as health inequalities and working with the

multi-disciplinary team. Training via simulation enables the learners to develop their skills in a safe environment without harming patients but by putting patients at the centre of care. The same scenarios are delivered consistently so that learners will have the same experience.

This simulation training is also in line with the East London NHS Foundation Trust (ELFT) strategy to address inequalities in experience, access, and outcomes[5]. This project aimed to ensure an improved service by equipping the workforce with the right skills, values, and behaviours to care for people with mental health illnesses and also to meet the parity of esteem agenda. Hence, this project is directed towards an integrated learning and development approach across the system between system partners.

ELFT (mental health and community health service setting) and Barts Health NHS Trust (acute setting) are part of North East London integrated care service (NEL ICS). This project is in line with the NEL ICS priority of improving people's mental health[6]. It is the first step in identifying the training and developmental needs of pharmacy professionals in any sector within the NEL ICS to support people with mental health illness. It has the potential to bridge the gaps between services and inequalities between different groups by tackling variation in care within the NEL ICS. With simulation, the national drivers from the NHS mental health implementation plan[7] of stopping over-medication of people (STOMP) with learning disabilities and awareness of suicide prevention can also be addressed, through training that can be sustained and improved over time.

This project aligns with the Department of Health and Social Care mandate to HEE for workforce transformation[8]. A goal of HEE from its business plan is to ensure the early careers workforce develops the knowledge, skills and expertise needed to provide high-quality care and to support learners as they develop towards advanced practice. Another key recommendation from the mental health workforce review was for all foundation level training to include mental health conditions and to ensure pharmacy professionals are competent and confident to support people living with mental illness without needing to refer to secondary care or feeling unable to treat or care for such patients. Hence, simulation is a resource by which training and development needs can be scoped for this workforce within ELFT as well as other system partners (Barts).

2. Project aims and objectives

The primary focus is to increase the pharmacy workforce's confidence in supporting and caring for patients with mental health illnesses. The focus will be on soft skills, values, and behaviours such as communication skills when supporting people with mental illness or their carers.

This project was led by ELFT but participants were from both ELFT and Barts Trust to facilitate integrated learning and development between system partners. The course was aimed at Band 5 Medicines Management Pharmacy Technicians (MMPTs), Band 6 pharmacists and Band 7 pharmacists from both Trusts. Additionally, it involved collaboration with the people participation team and the medical education department with support from the simulation lead from ELFT.

Objectives

1. To be more familiar with mental health conditions including within a substance misuse & learning disabilities context
2. To build confidence in formulating treatment plans in mental health
3. To be able to have effective communication (verbal and non-verbal) when interacting with people with mental illness
4. To gain confidence in talking to patients in distress
5. To gain confidence in taking appropriate history from person experiencing mental health concerns

3. Course design and methodology

The project lead is the ELFT education and training lead pharmacist. The first aspect of the project was to recruit an ELFT simulation pharmacy team. We recruited a ST4 psychiatrist who was experienced and trained in simulation debriefs and was part of the ELFT medical education and simulation team. Additionally, the core pharmacy simulation team consisted of a Band 7 pharmacist who helped with logistics and a Band 8a pharmacist who supported with research aspects such as analysis. People participation leads were included to ensure service users were involved from the planning stage to the course delivery. The E&T lead pharmacist and the ST4 were both trained in facilitating debriefs via an accredited course.

A training needs analysis was formatted and sent electronically to ELFT and Barts MMPTs and pharmacists via their education and training leads. A range of topics were provided, with a request to rank them for preference. The topics provided were in line with the NEL ICS priorities[6] and NHS mental health implementation plan[7]. However, the form provided opportunity for respondents to request any other topics that they preferred. The survey also queried if they required theoretical knowledge to supplement the learning.

In total, there were 11 responses to the training needs analysis and the top five preferred topics, based on prevalence, were: learning disabilities, perinatal mental health, depression and suicidality, psychosis and substance misuse. The majority of these topics were key focus areas as defined in the NHS mental health implementation plan.

3.1 Scenario development

Development of the five scenarios included a service user with lived experience, a specialist pharmacist (Band 8a or above) such as the perinatal pharmacist and MMPTs (Band 6 or above), the pharmacy simulation team and a multi-disciplinary team member who had experience in the particular clinical area e.g., consultant psychiatrist in intellectual disability. Meetings were held virtually and scenarios were co-developed including the scenario specific learning objectives, which were in line with the project objectives.

Once scenarios were completed, the training pack was developed which consisted of the course plan for the day. Post this, the dates were confirmed for a pilot and 3 training days. Our initial plan was to have the participant cohort to be part of the pilot group. However, due to staff shortages, this was difficult to facilitate.

The pilot group consisted of 7 senior MMPTs and pharmacists with representation from Barts and ELFT's community health services as well. On the pilot day, the course was delivered as it would have been for the training day. Pre and post simulation training questionnaires were completed. A group feedback session was done at the end of the training day, with targeted questions around course delivery, facilitator feedback, inclusion of service users and the pre- and post- questionnaires. The main result from the pilot feedback was to change the empathy scale in the questionnaire used from the Perth

Empathy scale[9] to Jefferson empathy scale (JSE)[10]. The pilot group felt that the Perth scale questions were not reflective of the course outcome.

Each scenario had 2 trained debrief facilitators (project lead and ST4). Additionally, all scenarios had simulated patients portrayed by trained actors. However, the learning disabilities scenario had a learning disabilities service user as the actor and a carer from the role player company instead. One service user/actor was involved throughout the day and took an active part in all debriefs.

Presentation slides that incorporated clinical knowledge such as treatment options were developed by the specialist pharmacist from the task group. These were sent a week prior to the training to alleviate any participants' fears about a lack of clinical knowledge and were used as a refresher prior to initiating any of the five scenarios. The debrief methodology used by the trained facilitators was a modified "Diamond Debrief" structure[11] with the "plus delta" method [12]. A flip chart was used to document the plus delta method. The flip charts were used at the end of the day to consolidate the learning.

3.2 Evaluation methodology

Pre and post simulation training questionnaires were developed using Google forms f evaluation of course value and effectiveness in achieving the project aim. The form was anonymised as each participant was asked to form their own unique participant ID to be used for the pre- and post- questionnaires. The pre-evaluation questionnaires were sent to all participants a week before the course, along with the clinical slides. Time was allocated towards the end of the training day to allow for participants to complete the post evaluation questionnaire.

The pre and post evaluation questionnaires included two validated scales and course specific questions that aligned with the project objectives. The Mental illness: Clinicians' Attitude Scale (MICA-4) [13] is a validated scale to measure the participant's attitudes about psychiatry and people with mental illness. The Jefferson Scale of Empathy (JSE) for Healthcare Professionals is a validated scale to assess the participants empathy in health care professionals involved in patient care in a clinical setting. The course specific questionnaire was to assess participant's confidence in relation to the project's learning objectives and incorporated both open and closed questions. As part of the quality assurance strategy, participants completed facilitator and scenario feedback, and the service user completed a feedback form as well. The project gathered quantitative and qualitative data via pre and post simulation questionnaires.

Statistical Product and Service Solutions (SPSS) version 27 was used to analyse quantitative data. Thematic analysis was completed using Nvivo pro (V12). A single author was assigned to complete the initial analysis. The responses to the open-ended questions completed in Google forms were exported to an excel document. The excel document was then exported into Nvivo, alongside the unique participant code. Transcription was overseen by the project lead.

An inductive thematic process was applied to the data in Nvivo to code the statements into groups based on key words. The code was then allocated an overarching theme that reflected the grouped statements. A second and third rater examined the themes and statements. The three coders discussed the statements and themes as a group to reach agreement on allocation.

4. Results

Qualitative and quantitative data were collected in this study. The full qualitative dataset and its summary is shown in Appendix 1. Feedback from the service user is highlighted in Appendix 2. Quantitative data are analysed below.

4.1 Quantitative Results - statistical analysis

A total of 29 participants (Male: Female: Prefer not to say- 6:22:1) comprising of medicine management pharmacy technicians (MMPT; n= 13), Band 6 (n= 7) and Band 7 (n= 9) pharmacists from acute and mental health settings completed simulation training.
The table below provides a demographic overview of the participant group in terms of gender, age range, role and the main area of work.

Table 1: Gender

	Frequency	Percent (%)
Male	6	21
Female	22	76
Prefer not to say	1	3

Table 2: Main area of work

	Frequency	Percent (%)
Acute setting	15	52
Mental health setting	14	48

Table 3: Role

	Frequency	Percent (%)
B7 Pharmacist	9	31
B6 Pharmacist	7	24
B5 MMPT	13	45

Paired sample t tests

Paired sample t test was used to determine if there had been a significant difference in empathy scores (JSE) and attitudes towards those with mental health conditions scores (MICA-4), pre- and post-delivery of the simulation training.

4.1.1 Whole group analysis

Whole group analysis (n= 29)

Table 4: MICA- 4 paired t test

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	36.79	8.90978	3.1379	5.3232	.9885	1.1130	5.1628	3.174	28	.004
Post sim	33.66	8.33356								

The MICA-4 assess clinician's attitudes towards psychiatry and individuals with mental health conditions. A **higher total score** indicates a **more negative** attitude. The paired sample t test showed a significant decrease in the MICA-4 score before simulation training (M= 36.79; SD= 8.91) to post simulation training (M= 33.66; SD= 1.55), t (28) = 3.174, p = .004 (two tailed). There was a mean reduction in sum score of 3.14 with a 95% confidence interval ranging from 1.11 to 5.16. The significant reduction in total score demonstrates the simulation training had a positive impact in improving attitudes towards persons with mental health conditions. The effect size using Cohen's d (uses the sample standard deviation of the mean difference) was .589 or 0.6. Based on the guidelines proposed by Cohen 1988, this indicates a moderate effect size (d= 0.5).

Table 5: JSE paired t test

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	106.52	11.8852	-9.517	10.1721	1.8889	-13.3865	-5.6479	-5.038	28	.000
Post sim	116.03	10.6351								

The JSE scale assess a clinician's level of empathetic behavioural orientation. A higher score indicates greater empathetic behaviour.

The paired sample t test showed a significant increase in the JSE score before simulation training (M= 106.52; SD= 11.89) to post simulation training (M= 116.03; SD= 10.64), t (28) = -5.038, p = .000 (two tailed).

There was a mean change in sum score of -9.517 with a 95% confidence interval ranging from -13.39 to -5.65.

The significant increase in total score demonstrates the simulation training had a positive impact on improving the empathic behaviour towards persons with mental health conditions. The effect size using Cohen's d was .936, which indicates a large effect size (Cohen's d large effect size = 0.8).

4.12 Analysis by staff group subset

Analysis of MMPT (n= 13) and Pharmacists (n= 16) subset

Paired t test analysis was completed based on the role, to explore if there was any significant difference in pre and post JSE and MICA-4 scores based on the role of the participant.

Table 6: MMPT (n=13): MICA- 4 paired t-test

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	38.923	10.388	3.692	6.382	1.770	-.1643	7.549	2.086	12	.059
Post sim	35.231	9.859								

A paired t- test was completed for the pre and post MICA-4 scores for the MMPT participant group. Although there was a reduction in the pre and post scores, the paired t-test analysis did not find a significant reduction between the pre-MICA-4 (M= 38.92; SD= 10.39) and post MICA-4 scores (M= 35.23; SD= 9.86), t= 2.086, p= .059 (two tailed).

Table 7: MMPT (n=13): JSE paired t- test

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	106.462	12.129	-8.0769	10.128	2.809	-14.197	-1.957	-2.875	12	0.14
Post sim	114.539	11.652								

A paired t- test was completed for the pre and post JSE scores for the MMPT participant group. Although there was an increase in the pre and post scores, the paired t-test analysis did not find a significant difference in the pre JSE (M= 106.46; SD= 12.13) and post JSE scores (M= 114.54; SD= 11.65), t= -2.875, p= .014 (two tailed).

Both the pre and post MICA-4 and JSE scores did not show a significant difference in the sum scores. This would indicate there was not a significant change in the overall group empathy and attitudes towards those with mental health conditions.

Table 8: Pharmacists (n= 16): MICA-4

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	35.063	7.398	2.688	4.453	1.113	.3147	5.060	2.414	15	.029
Post sim	32.375	6.927								

A paired t- test was completed for the pre and post MICA-4 scores for the pharmacist participant group. The paired t-test showed there was a significant reduction in the pre-MICA-4 (M= 35.06; SD= 7.398) and post MICA-4 scores (M= 32.38; SD= 6.93), t= 2.414, p= 0.29). The effect size using Cohens d was .61, which indicates moderate effects size (> 0.5).

Table 9: Pharmacists (n= 16): JSE

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	106.563	12.083	-10.688	10.384	2.596	-16.221	-5.154	-4.117	15	<.001
Post sim	117.250	9.950								

A paired t- test was completed for the pre and post JSE scores for the pharmacist participant group. The paired t-test showed there was a significant increase in the pre JSE (M= 106.56; SD= 12.08) and post JSE scores (M= 117.25; SD= 9.95), t= -4.117, p= <.001). The effect size using Cohens d was -1.03, which indicates a larger effect size (> 0.8).

Both the pre and post MICA-4 and JSE scores showed a significant difference in the sum scores. This would indicate there was a significant change in the overall group empathy and attitudes towards those with mental health conditions following simulation training.

4.1.3 Analysis by care setting subset

Analysis of acute setting (n= 15) and mental health setting (n= 14) subsets

A paired t- test was completed for the pre and post MICA-4 and JSE scores for the mental health group (n= 14) and the acute setting (n=15), which comprised of B6, B7 pharmacists and MMPTs. Analysis based on area of work was completed to evaluate if there was a difference in empathy and attitudes scores based on whether the participants worked in the acute setting or those who worked in a mental health setting.

Table 10: Mental health setting (MMPT= 5; Pharmacists B6= 4; Pharmacists B7= 5): MICA-4

	Paired Differences									
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	36.071	9.360	4.286	4.890	1.307	1.462	7.109	3.279	13	.006
Post sim	31.786	9.234								

The paired t-test showed there was a significant decrease from the pre-MICA-4 (M= 36.07; SD= 9.36) to the post MICA-4 scores (M= 31.79; SD= 9.23), t= 3.279, p= .006). The effect size using Cohens d was .87, which indicates a larger effect size (> 0.8).

Table 11: Mental health setting (MMPT= 5; Pharmacists B6= 4; Pharmacists B7= 5): JSE

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	109.214	11.376	-8.000	7.083	1.881	-12.038	-3.936	-4.253	13	<.001
Post sim	117.214	11.716								

The paired t-test showed there was a significant increase from the pre JSE (M= 109.21; SD= 11.38) to the post JSE scores (M= 117.21; SD= 11.72), t= -4.253, p= <.001). The effect size using Cohens d was -1.3, which indicates a larger effect size (> 0.8).

The paired t-test for the mental health group (n=15) showed the simulation training helped improve both empathy and attitudes towards those with mental health conditions.

Table 12: Acute health setting (MMPT= 8; Pharmacists B6= 3; Pharmacists B7= 4): MICA-4

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	37.467	8.741	2.067	5.650	1.459	-1.062	5.195	1.417	14	.178
Post sim	35.400	7.278								

The paired t-test showed there was not a significant decrease in the pre-MICA-4 (M= 37.47; SD= 8.74) and post MICA-4 scores (M= 35.40; SD= 7.28), t= 1.417, p= .178). The effect size using Cohens d was .36, which indicates a small effect size (> 0.2).

Table 13: Acute health setting (MMPT= 8; Pharmacists B6= 3; Pharmacists B7= 4): JSE

			Paired Differences							
						95% Confidence Interval of the Difference				
	Mean	SD	Mean	SD	Std. error mean	lower	upper	t	df	Sig. (2 tailed)
Pre sim	104.000	12.177	-10.933	12.510	3.230	-17.861	-4.006	-3.385	14	.004
Post sim	114.933	9.801								

The paired t-test showed there was a significant increase in the pre JSE (M= 104.00; SD= 12.18) and post JSE scores (M= 114.93; SD= 9.80), t= -3.385, p= .004). The effect size using Cohens d was -.87, which indicates a large effect size (> 0.8).

The paired t-test for the acute group (n=15) showed following simulation training, there was no significant change in attitudes, but there was an increase in empathy towards those with mental health conditions.

4.2 Pharmacy course specific objectives and outcomes

The course specific questions were designed to assess if participants reported an improvement in confidence when interacting with those with mental health conditions, pre and post simulation training. Scores were set as strongly agree (4), agree (3), disagree (2) and strongly disagree (1). Higher scores (%) indicated higher levels of confidence in reference to a particular measure.

Prior to starting the simulation training, baseline information was obtained from the participant group about their understanding and experience of simulation training. Out of the 29 participants, 2 reported they had completed simulation training before. The following measures were also baseline information.

The pharmacy course specific questionnaire contained 15 measures (questions), which represented the 5 project objectives. The results for these measures have been presented in line with each project objective.

<u>Measure 1: Understand purpose of simulation training for pharmacy HCP</u>

93.1% reported they understood the purpose of simulation training, and 6.9% stated they did not understand the purpose. After simulation training, 100% participants reported they understood the purpose of simulation training.

Measure 2: Understand the value of simulation training to be able to interact with those who have mental health conditions

		Strongly agree % (no.)	**Agree** % (no.)	**Disagree** % (no.)	**Strongly disagree** % (no.)
Measure 2	Pre-sim	51.7 (15)	44.8 (13)	---	13.4 (1)
	Post-sim	93.1 (27)	6.9 (2)		

Measure 3: Understand the value of mental health simulation training for pharmacy HCP

		Strongly agree % (no.)	**Agree** % (no.)	**Disagree** % (no.)	**Strongly disagree** % (no.)
Measure 3	Pre-sim	41.4 (12)	55.2 (16)		13.4 (1)
	Post-sim	93.1 (27)	6.9 (2)		

The pre- and post-simulation results show overall participants agreed / strongly agreed with measures 2 and 3. However, post-simulation training, the majority (93.1%) of the participant group strongly agreed that there was value in having mental health-based interactions and simulation training for pharmacy HCPs.

Objective 1: To be more familiar with mental health conditions including within a substance misuse (SM) & learning disabilities (LD) context

Measure 4: Familiar with mental health conditions, including substance misuse and learning disabilities

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 4	Pre-sim	6.9 (2)	69.0 (20)	17.2 (5)	6.9 (2)
	Post-sim	86.2 (25)	13.8 (4)		

Measure 5: Comfortable talking to those with mental health conditions

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 5	Pre-sim	6.9 (2)	72.4 (21)	13.8 (4)	6.9 (2)
	Post-sim	72.4 (21)	27.6 (8)		

Measure 6: Comfortable talking to someone with substance misuse disorder

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 6	Pre-sim	10.3 (3)	58.6 (17)	27.6 (8)	3.4 (1)
	Post-sim	65.5 (19)	31.0 (9)		3.4 (1)

Measure 7: Comfortable talking to someone with learning disabilities

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 7	Pre-sim	34.5 (10)	62.1 (18)		34.5 (10)
	Post-sim	55.2 (16)	44.8 (13)		

For measures 4-7 overall there was a positive improvement post-simulation in participants reporting they feel more comfortable talking to those with mental health conditions, substance misuse and learning disability. All post-measures were 100% agree / strongly agree. Measure 4 produced the largest shift in perception from pre-simulation results being spread across strongly agree to strongly agree to 86.2% strongly agreeing they felt more comfortable talking to those with mental health conditions.

Objective 2: To build confidence in formulating treatment plans in mental health

Measure 8: Comfortable talking about treatment options in relation to mental health condition

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 8	Pre-sim	6.9 (2)	48.3 (14)	41.4 (12)	3.4 (1)
	Post-sim	58.6 (17)	41.4 (12)		

Measure 9: Able to involve patient in decision making process for medication

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 9	Pre-sim	10.3 (3)	55.2 (16)	34.5 (10)	
	Post-sim	62.1 (18)	37.9 (11)		

Measure 8 and 9 pre-simulation training responses were once again spread out between strongly agree to strongly disagree, with the majority of responses being between agree (measure 8- 48.3%/ measure 9- 55.2%) and disagree (measure 8- 41.4/ measure 9- 34.5).

Post-simulation training there was a positive shift in confidence to 100% participants responded feeling more comfortable in involving persons with mental health conditions in the decision making process and talking about the treatment choices.

Objective 3: To be able to have effective communication (verbal and non-verbal) when interacting with people with mental illness

Measure 10: Confident talking about the risk of medication

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 10	Pre-sim	17.2 (5)	55.2 (16)	24.1 (7)	3.4 (1)
	Post-sim	69.0 (20)	31.0 (9)		

Measure 11: Confident managing challenging interactions with patients

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 11	Pre-sim		62.1 (18)	34.5 (10)	3.4 (1)
	Post-sim	24.1 (7)	48.3 (14)		27.6 (8)

Measure 12: Able to ask for help from other HCP when finding it difficult to talk to patients

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 12	Pre-sim	31.0 (9)	65.5 (19)		3.4 (1)
	Post-sim	58.6 (17)	34.5 (10)		6.9 (2)

Overall, there was a positive change in the pre and post simulation scores across measures 10 to 12. The most significant difference noted was for measure 11, where 27.6% of participants reported they felt less confident managing challenging interactions with patients.

Objective 4: To gain confidence in talking to patients in distress

Measure 13: Able to formulate medicine safety plan with those at risk of suicide

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 13	Pre-sim	6.9 (2)	27.6 (8)	41.4 (12)	24.1 (7)
	Post-sim	24.1 (7)	48.3 (14)		27.6 (8)

Measure 14: Confident in being able to talk to patients in distress

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 14	Pre-sim	6.9 (2)	58.6 (17)	31.0 (9)	3.4 (1)
	Post-sim	75.9 (22)	24.1 (7)		

Measures 13 and 14 explored participant confidence levels with regards to talking to those in distress and those at risk of suicide about their medication and devising a safety plan. Pre-simulation the responses were spread between strongly agree to disagree. Post simulation 100% participants for measure 14 reported they felt more confident in talking to patients who were distressed. However, for measure 13, participant responses remained divided with regards to developing a medicine safety plan with those at risk of suicide.

Although, pre-simulation responses for measure 13, strongly agree (6.9) and agree (27.6), the post simulation responses did show an improvement in confidence (strongly agree-24.1% and agree 48.3%). This demonstrates despite 27.6% reporting less confidence, overall, 72.4% reported an improved in confidence talking to those at risk of suicide.

Objective 5. To gain confidence in taking appropriate medication history

Measure 15: Comfortable formulating treatment with someone who is mentally unwell and pregnant

		Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
Measure 15	Pre-sim	6.9 (2)	17.2 (5)	69.0 (20)	6.9 (2)
	Post-sim	55.2 (16)	44.8 (13)		

Pre-simulation responses for measure 15 were spread between strongly agree and disagree, with the majority of participants (69%) reporting they did not feel confident in being able to formulate a treatment plan with someone who was pregnant and mentally unwell. Post-

simulation training, 100% of participants (strongly agree / agree) reported increased confidence in being able to develop a treatment plan with this patient group.

4.3 Qualitative data - course feedback

4.3.1 Participant feedback about overall training

This mental health simulation training for pharmacists and MMPTs was a pilot project. In order to be able to identify what worked well and the areas of improvement, feedback about the course was obtained from the participant group. The course feedback looked at measures across delivery, quality and course structure. A 4-point Likert scale was used, from strongly disagree (1), disagree (2), agree (3) and strongly agree (4). Scores were converted into percentages for the group.

Table 14: Feedback survey results

	Measure	Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
	Course				
1	Met objectives	75.9 (22)	24.1 (7)		
2	Met expectations	75.9 (22)	24.1 (7)		
3	Liked structure	75.9 (22)	24.1 (7)		
4	Service user	79.3 (23)	20.7 (6)		
5	Improve interactions	72.4 (21)	27.6 (8)		
6	Recommend to others	79.3 (23)	17.2 (5)		3.4 (1)
	Scenario delivery				
7	Relevant written scenario information	72.4 (21)	27.6 (6)		
8	Relevant verbal information	82.8 (24)	17.2 (5)		
9	Allocated sufficient time	65.5 (19)	31.0 (9)	3.4 (1)	
10	Application	82.8 (24)	17.2 (5)		

	Debriefs				
11	Sufficient time	75.9 (21)	24.1 (7)		
12	Helpful	79.3 (23)	20.7 (6)		
	Communication skills				
13	Improved non-verbal communication	69.0 (2)1	31.0 (9)		
14	Improved verbal communication	72.4 (21)	27.6 (8)		

One response for measure 6 (n=1; 3.4%) reported they would not recommend the simulation training to others. Another response for measure 9, disagreed the scenarios were allocated sufficient time (n=1; 3.4%). Most of the participants (n=28; 96.6%) provided positive feedback on all measures with 100% of responses being between strongly agree and agree. It is difficult to know if the same participant provided negative responses to measure 6 and 9, and given the majority of responses were positive, it can be queried whether the respondent misunderstood the question.

4.3.2 Participant feedback about facilitation

Table 15: Results of feedback about facilitators

	Measure	Strongly agree % (no.)	Agree % (no.)	Disagree % (no.)	Strongly disagree % (no.)
	Course				
1	Encouraged participant	82.6	13.8		
2	Interactive and engaged	89.7	6.9	3.4	
3	Responded to concerns	86.2	13.8		
4	Encouraged reflection	82.2	17.2		
5	Created safe learning environment	18.7	10.3		

Post simulation training, feedback on facilitators was obtained from the participants (n=29). Aside from measure 2, 100% participants agreed / strongly agreed that the facilitators encouraged learning, participation and reflection, whilst providing a safe space.

For measure 2, one participant disagreed (3.4%) that facilitators were interactive and engaged.

4.3.3 Participant feedback about scenarios

Scenario feedback was obtained post simulation to help identify which scenarios participants found most and least useful in terms of their learning and clinical practice.

Scenarios were scored from 1 (least useful), 2 (less useful), 3 (somewhat useful), 4 (useful), 5 (most useful). The table below shows the range and mean score across all five scenarios and the bar charts show the percentage scores obtained for each scenario. The average score across all scenarios was 4, which suggest participants found them all useful for their learning and clinical practice.

Table 16: Average score for scenarios (n=29)

Scenario	Minimum score	Max score	Mean	Standard deviation
Psychosis	2	5	4.3	0.97
Depression/ suicidality	1	5	4.0	1.19
Learning disability	3	5	4.2	0.86
Substance misuse	1	5	3.7	1.54
Perinatal mental health	1	5	4.0	1.32

Below are visual representations of the scenario feedback used in the simulation training. The bar charts show feedback as a percentage, indicating what participants reported as being least useful to most useful scenario in terms of learning and application to their clinical practice. The graphs have been divided to show whole group feedback (n=29), as well as feedback based on role (pharmacist; MMPT) and main area of work (acute; mental health).

Whole group scenario feedback (n= 29)

In terms of whole group feedback, the learning disability scenario did not receive any negative feedback. All responses (100%) ranged from somewhat useful to most useful. When looking at individual categories, psychosis received 62.1% for being the most useful, whereas substance misuse received both the single highest response for being the least useful scenario (17.2%), as well as overall being least/less useful to learning and practice (24.1%).

Figure 1: Usefulness of psychosis scenario (%)

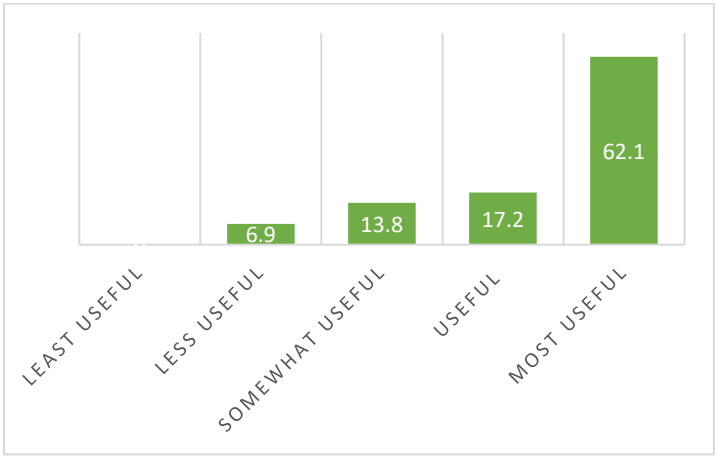


Figure 2: Usefulness of depression/ suicidality scenario (%)

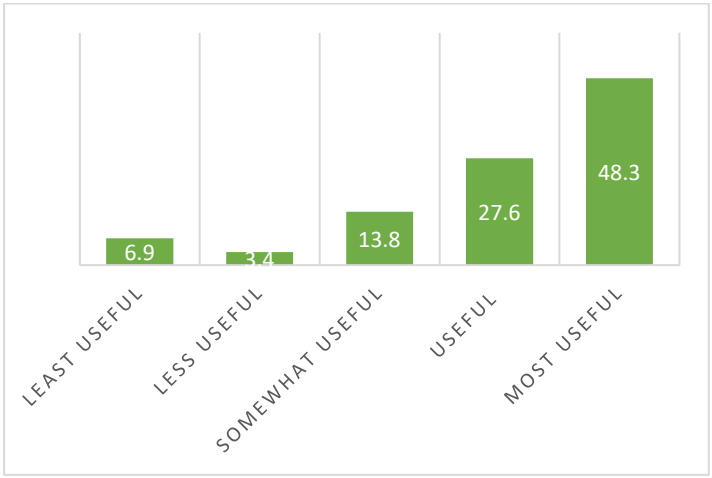


Figure 3: Usefulness of learning disability scenario (%)

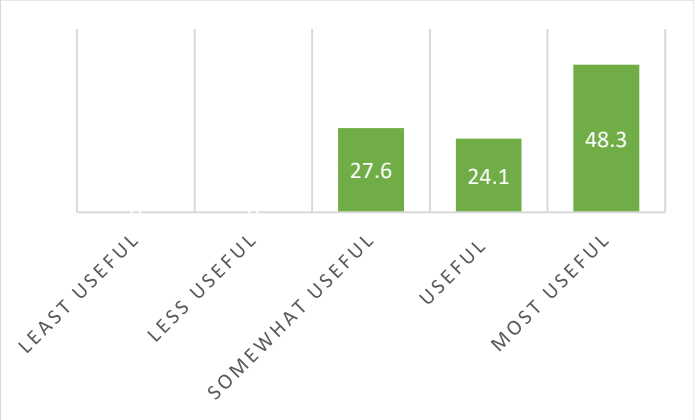


Figure 4: Usefulness of substance misuse scenario (%)

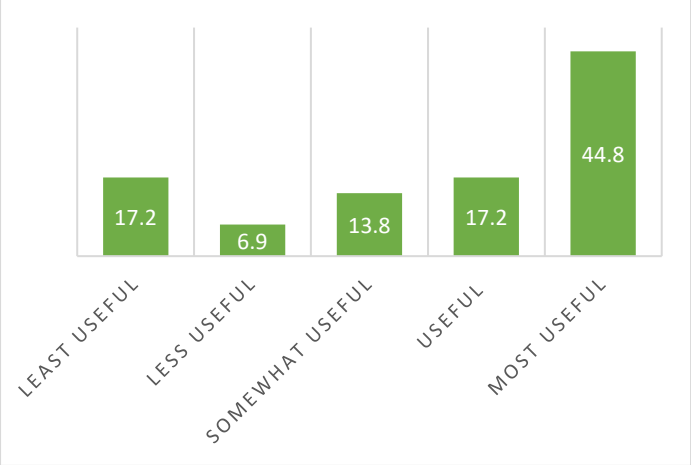
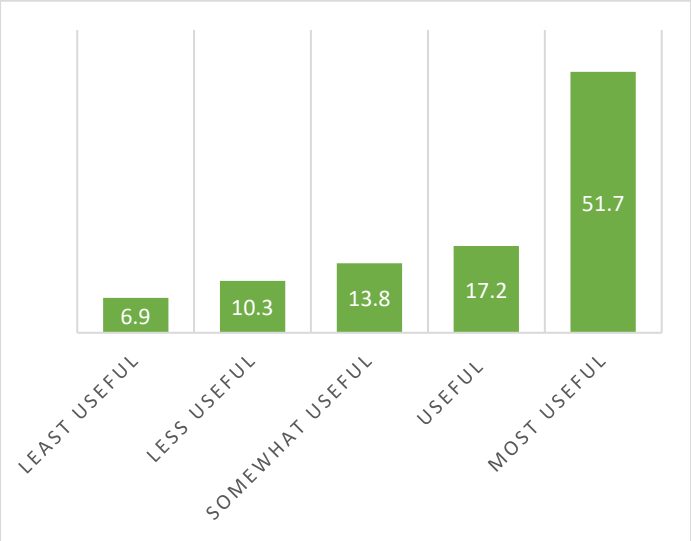


Figure 5: Usefulness of perinatal mental health scenario (%)



The results were divided into sub-groups to determine if there would a difference in what participants found useful based on their main area of work or role.

Acute setting (n=14) vs. mental health (n=15) setting scenario feedback subset

When comparing the acute setting to mental health, psychosis received the highest score from acute (71.4%), and for mental health, the most useful scenario was learning disability (53.3%) and psychosis (53.3%).

In keeping with the whole group feedback, the substance misuse scenario received the most responses as being the least useful for both acute (14.3%) and mental health (20%) colleagues.

The perinatal scenario received the second highest response from acute (64.3%) for being most useful, in contrast to mental health where responses were the lowest from most useful (40%).

Similar to the whole group feedback, the learning disability scenario received 100% positive responses (somewhat useful to most useful).

Figure 6: Usefulness of psychosis scenario (%) – subset comparison by setting

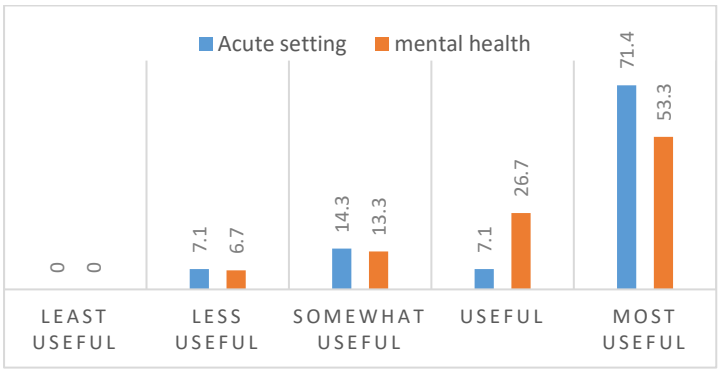


Figure 7: Usefulness of depression/ suicidality scenario (%) – subset comparison by setting

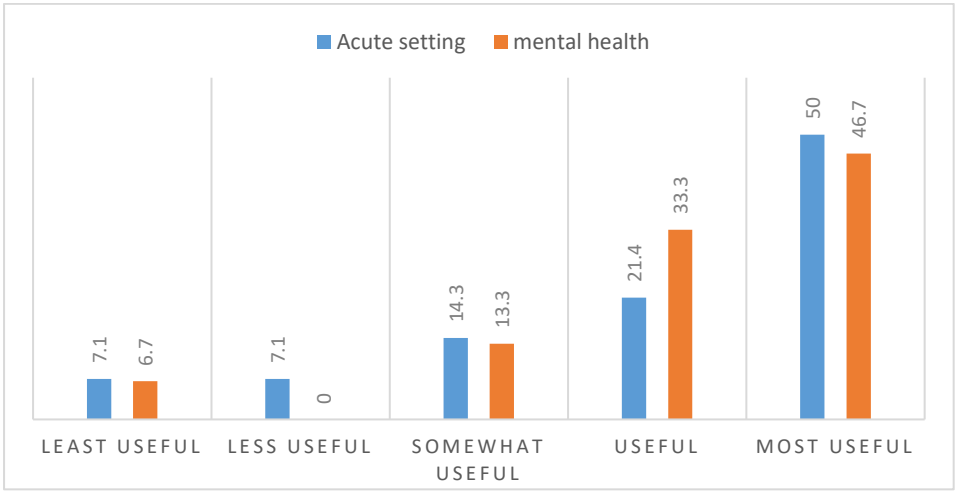


Figure 8: Usefulness of learning disability scenario (%) – subset comparison by setting

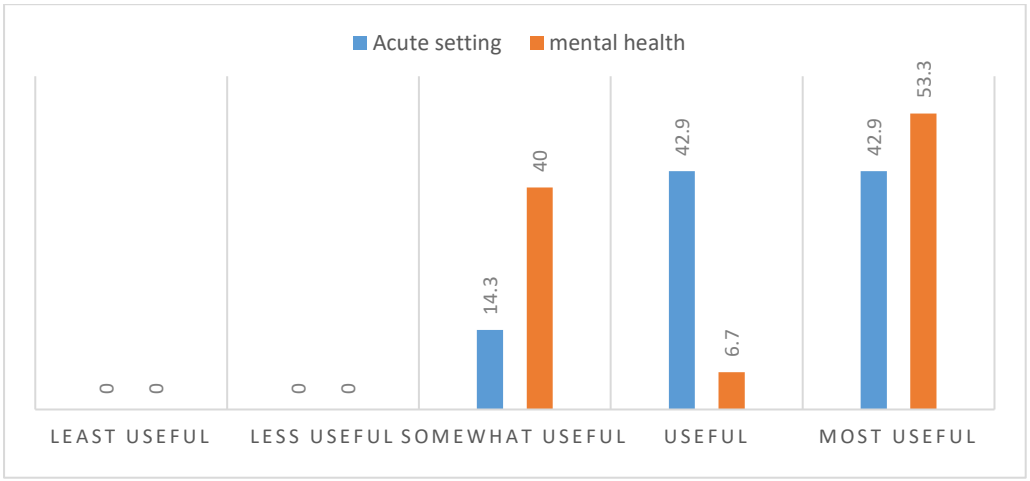


Figure 9: Usefulness of substance misuse scenario (%) – subset comparison by setting

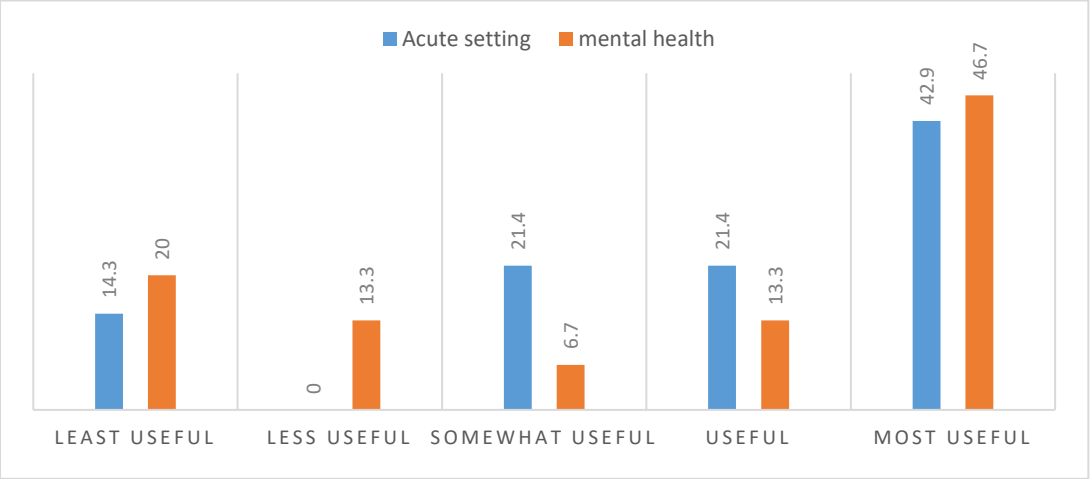
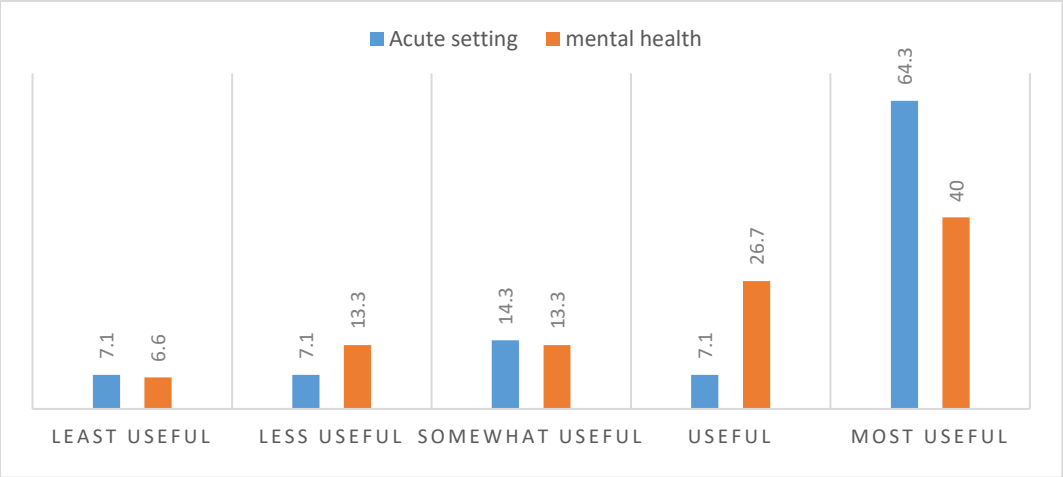


Figure 10: Usefulness of perinatal scenario (%) – subset comparison by setting



MMPT (n=13) vs. Pharmacist (n=16) role scenario feedback subset

When responses for scenarios were compared against role, the perinatal scenario received the highest response for being the least useful for MMPTs (15.4%). Whereas for the pharmacist group, substance misuse received the highest responses for being the least useful (25%).

For the MMPT group, the most useful scenario was reported as psychosis (69.2%), and for the pharmacist group the most useful scenario was reported as being psychosis (56.3%) and learning disability (56.3%).

Once again, feedback from the whole group and based on area of work (acute/ mental health), learning disability received 100% positive feedback (somewhat useful to most useful).

Figure 11: Usefulness of psychosis scenario (%) – subset comparison by role

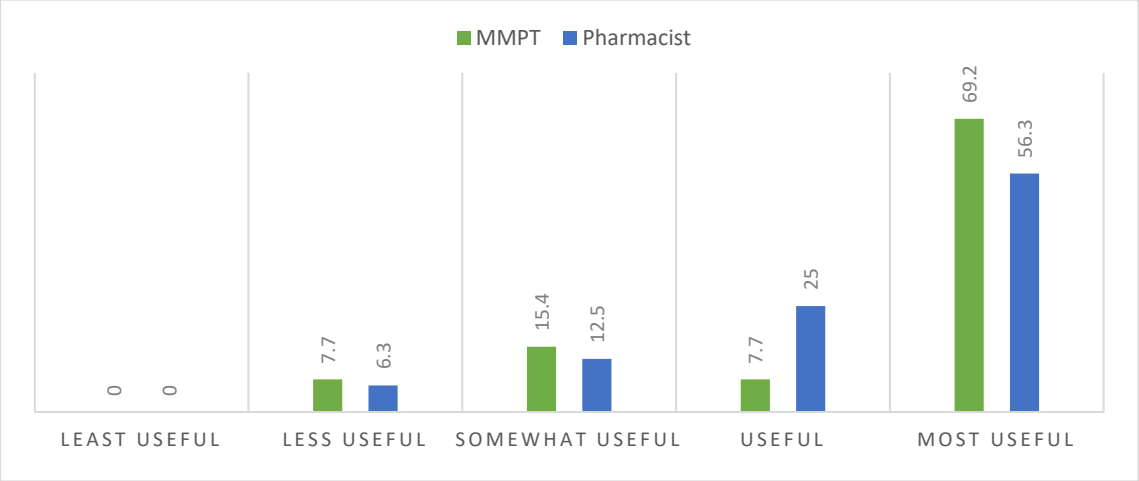


Figure 12: Usefulness of depression/ suicidality scenario (%) – subset comparison by role

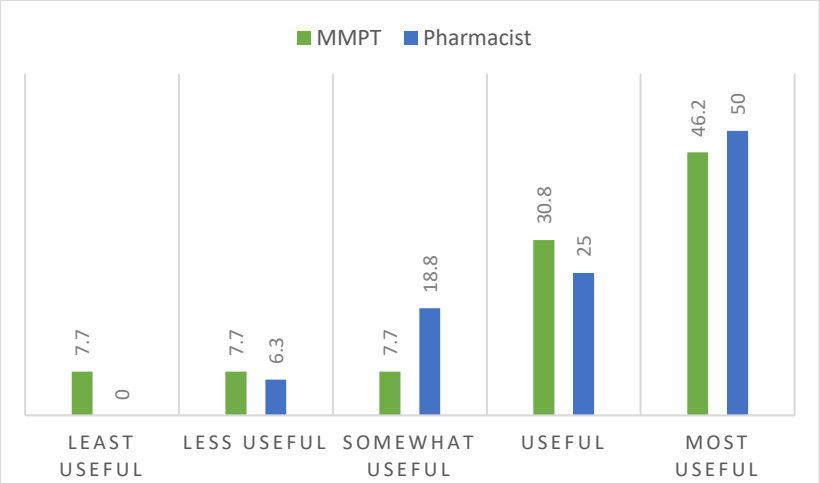


Figure 13: Usefulness of learning disability scenario (%) – subset comparison by role

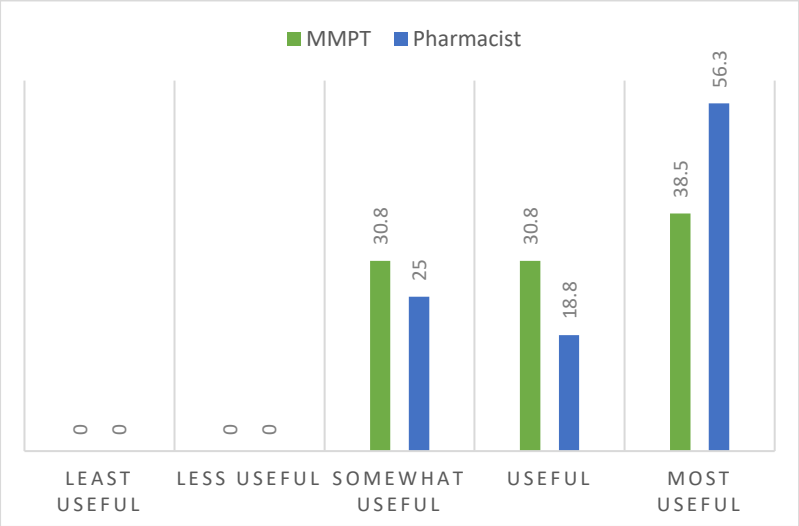


Figure 14: Usefulness of substance misuse (%) – subset comparison by role

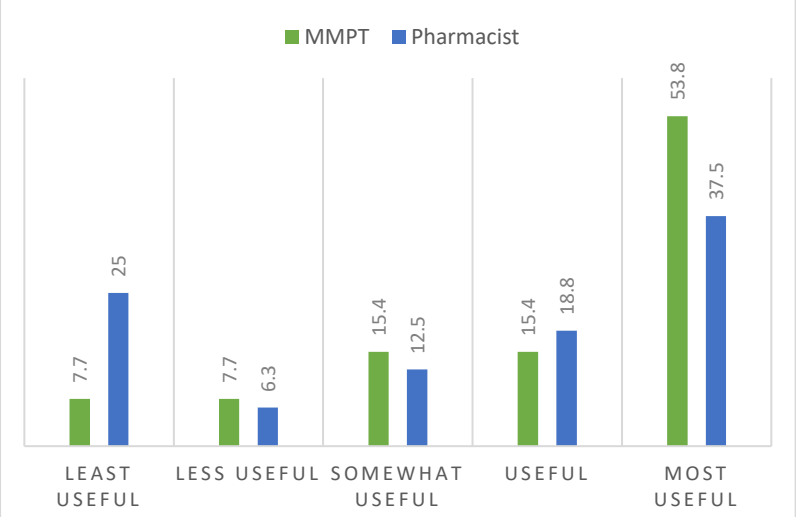
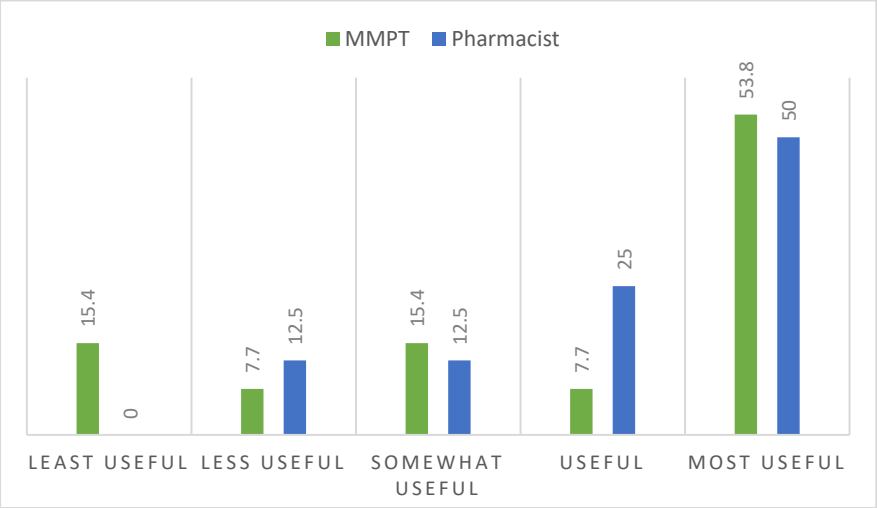


Figure 15: Usefulness of perinatal scenario (%) – subset comparison by role



5 Discussion

JSE[10] and MICA-4 scale[13] are both reliable and valid scales used in healthcare to measure empathy towards patients and attitudes towards psychiatry. Additionally, all of the five project objectives showed a positive shift in improvement, which was, reflected through the course specific questions as shown in section 4.

Improvement within the entire learning cohort

Both the scales highlighted a positive improvement in the whole group's attitude and empathy towards mental health patients. The effect size was moderate to large which also implies that these results have a practical significance as well.

The qualitative data emphasised the value of the training as shown in the themes identified from participants' pre-course responses about what they hoped to attain from the training, compared to what they achieved post training (Appendix 1-section 1 and 2). Participants commented on an increase in confidence levels relating to soft skills, such as being able to remain calm and communicate with those with mental health conditions, and those in distress.

"Gained confidence in speaking to patients with different forms of mental health conditions and patients who are in distress".

"Comfortable speaking to patients with challenging behaviours"

"Better understanding of patients' needs who have learning disability".

"Learned the importance of my own tone and body language and how it can impact the patient".

The participants' feedback above, alongside the quantitative data from section 4 show an increase in awareness of mental health conditions, including within a substance misuse and learning disabilities context (objective 1). Additionally, the above results alongside section 4.3 results also highlights an improvement in verbal and non-verbal communication skills (objective 3).

Training impact by pharmacy role

Analysis of pharmacists' responses showed improvement in their attitudes towards psychiatry and empathy for patients with mental health conditions that further validated the impact made. The debrief facilitation involved medical input from the ST4 and a pharmacy perspective from the specialist pharmacist. An opportunity was taken to raise awareness through this multi-disciplinary training approach, to promote holistic patient care and better understanding of patient's journey for their mental health concerns. An

improved awareness of inclusive care, parity of esteem and moving towards extended aspects of pharmacy workforce role was an observed theme during debrief discussions.

"Excellent team who worked well to ensure the group learnt the skills they sought to learn".

"Very insightful to everyone about how we could treat patients better and be non-judgemental and understand the patients' views".

Additionally, it is important to note that the positive analysis of the pharmacist group can also be due to direct participation. Pharmacists undertook a majority of the scenarios. Debriefs are when the learning is consolidated but directly participating in scenarios can have an impact. This was highlighted in their responses as seen in Appendix 1 (section 2):

"Acknowledging distress, using reassurance and appropriate question".

The qualitative data validated the impact made by the training and the faculty members had received informal, positive feedback from the whole group throughout the training. The course specific questionnaire also highlighted that all participants noted that they would recommend the course to others.

However, with respect to the MMPTs, this positive, informal feedback was not reflected in the validated scales as MMPT responses did not show a significant change in the overall group empathy and attitudes towards those with mental health conditions. Contributory reasons could be the small sample size (13 participants) and the significant heterogeneity within the group. Some of the cohort of MMPTs in this study were at an early stage of their careers, and their roles were more technical, rather than clinical. During the debrief, they reported that the clinical slides and scenarios seemed complex and less relevant to their current roles and/or career journey. This was not the case for all MMPTs in the study cohort, however, may account for some of the results.

The demographic data highlighted the differences in specialities within mental health and acute setting and the discussions observed from the training days highlighted varying experience levels within this group ranging from being newly qualified, new to clinical services to being relatively experienced.

Part of workforce transformation is to ensure MMPTs are able to provide high quality patient care such as being more involved in consultations. Hence, this may be a challenge for those who are not familiar to such aspects and may have not grasped a full understanding of the potential development within their role by improving on soft skills.

Another observation from the simulation training was also that some MMPTs found it more challenging to volunteer to participate in the scenarios, in response to the question of what was least useful part of simulation training (Appendix 1- section 4):

"*Volunteers for simulation"*

Training impact by pharmacy practice settings (integrated learning)

The pharmacists and MMPTs from the acute setting provided informal, positive feedback on their appreciation on the value of the training. In addition, we observed more contributions from the acute setting participants for the "Application" part of the Diamond debrief model[11] on the training days. However, no statistically significant difference was shown for attitudes towards patients living with mental health, for those working in the acute setting. Lack of clarity with some questions on the MICA-4 scale, in direct correlation to the course could have attributed to this. Nevertheless, 49% of the overall participant's qualitative feedback on the positive aspects of what they achieved from the simulation training was from an acute setting.

"I have learnt and gained much more insight about mental health patients with different situations".

"Will not only benefit me but also for the care of patients".

The majority of the participants' feedback that was within the themes of improved communication and confidence, particularly in talking to patients in distress, was from the acute setting workforce. This was also reflected in Section 4.2 where 100% of the participants indicated that following the course, they were now confident in communicating with patients who are in distress (objective 4).

"Awareness of how to speak to patients in distress".

"Able to deal with more distressed people confidently".

"I feel more confident in how to approach and speak to a patient in distress".

Despite working within the setting, the mental health pharmacy workforce showed a significant change in attitudes and empathy towards patients living with mental health illness. This could be attributed due to new knowledge gained and improvements being made on their current practice. Professional development and confidence was a key theme noted by participants from this group as shown in Appendix 1 (section 2).

"I feel more confident in talking to patients with a range of mental health issues".

"Reassurance that I am confident speaking to patients with complex needs and adjustments".

A significant difference was noted in empathy for participants in both the mental and acute health setting. A contributory factor was having service user perspective. All participants agreed from the course feedback in section 4.3 that the service user contribution was valuable. This further validated the impact made. Additionally, the Plus delta method captured empathy as a common debrief theme on all three training days, identified by the participants independently with minimal facilitation. The participants' feedback as seen in Appendix 1 (section 2) further validated the impact made and also meets all of the 5 learning objectives:

"I feel more confident knowing how to approach different patients and sensitively address their needs"

"How to approach different patients with different needs more confidently and remaining professional in an empathetic manner".

Furthermore, all the findings above reflect the measures from the results in section 4.2. The measures identified a 100% shift in all participants, regardless of the area they worked in, being more comfortable in formulating treatment plans in mental health and involving patients at the point of decision-making, thereby also meeting objective 2 of the project.

Simulation methodology

The course specific feedback highlighted the importance of simulation training as seen in Appendix 1 (section 3 and 6). Subsequently, an aspect of the project was to identify if simulation training as a mode of delivery is useful in mental health learning for pharmacy workforce development. Participant's feedback highlighted the usefulness of debrief technique, the delivery format and the use of service user during debriefs further validated the effectiveness of the course:

"The debrief with the whole team to learn from one another"

"To participate in the scenario itself is a learning "

"Hearing two service users experiences".

"Reflection and how we can apply the scenario to our daily practice".

A strong theme of the course being a safe learning space where reflection and learning was encouraged was noted:

"Very engaging, did not feel pressured, lots of opportunity to learn "

Additionally, the service user feedback about the course and facilitation was positive (Appendix 2):

"Structure is very good".

"The debate and dialogue between participants was useful"

Value of simulated scenarios

Although the overall qualitative and quantitative feedback for all the scenarios was positive, psychosis and learning disabilities were rated highest for being the most useful. High rating for psychosis was seen for both the acute and mental health setting participants. This could be due to the heterogeneity in the experience within the group e.g. pharmacy staff being new to mental health working or awareness. The combination of learning about mental health alongside enhancing their communication skills, especially with people who are in distress, may have contributed to this result.

The learning disabilities scenario involved a lived experience service user and a carer, and their perspective could have influenced the overall score. Suicide awareness was a theme identified as useful by the participants. This raises the importance of increasing awareness of suicide prevention within this workforce. It is important to note that the substance misuse task group was keen to convey that substance misuse patients should be not portrayed in the stereotypical manner to reduce the stigma associated with this group. As a result, participants may have perceived the final scenario as less complex and as relatively less useful in comparison as noted by a participant for future improvements suggestion:

"A harder substance misuse scenario"

Additionally, participants noted the perinatal scenario as a particularly beneficial aspect of the training.

"Better understanding of different healthcare needs, particularly pregnant/breastfeeding patients".

This is further validated through measure 15 in section 4.2, where 100% of the participants commented on an increase in their confidence in taking appropriate medication history, thereby, meeting objective 5 of the project as well:

"I found all useful, particularly the perinatal".

Overall, this project successfully demonstrated the overall aim of the project, which was to assess whether mental health simulation training would improve pharmacy workforce's confidence in supporting and caring for patients with mental health illnesses including within a learning disabilities and substance misuse context. The quantitative and qualitative analysis highlighted that the learning objectives for the project was met.

5.1 Strengths and limitations

A literature search showed that there are no published studies that assess the use of mental health simulation training within secondary care between two different types of practice settings. It is a pioneer in steering service user involvement not only from scenario development but in also being involved with debriefs.

The perspective of study participants, observed during the debriefs and at the training day, was that service user involvement reduces the stigma associated with mental health and also ensures we deliver a service that matters to service users. Their direct participation towards pharmacy workforce's learning and development improved participant's views on experience of care and population health outcomes e.g. reducing mental health stigma.

For future considerations, a lived experience service user as the actor for each scenario would prove useful. A significant strength is that the project did meet the overall aim and the five project objectives as demonstrated through the qualitative feedback as seen in Appendix 1.

Band 6 MMPTs were part of the task group in developing the scenarios. The Band 6 MMPTs were experienced, clinical staff members, and it is possible some of the results observed could be due to the Band 5 MMPTs not being at the same clinical level. For future scenario development, it would be useful to include a clinical Band 5 MMPT. In doing so, it would help pitch the scenario at the appropriate level for those MMPTs participating in simulation training. Another option would be to have a separate training session for MMPTs. This would be to look at the more specific pharmacy technician led roles within mental health scenarios.

Furthermore, consideration to have an acute pharmacy representative in the scenario development may also prove useful to gather a better understanding of training needs. Controlling variables was difficult with this group due to the large diversity of roles, expertise and responses within the group.

With future course designs, an improvement would be to have a larger sample size and to ensure participants complete the post simulation questionnaires after training day to avoid the risk of fatigue compromising results. Additionally, a follow up questionnaire at 6 months would be useful to assess if there has been any longer impact of learning on attitudes, perceptions and clinical practice.

Although the JSE scale is a well-known validated scale used to measure healthcare professional's empathy towards patients in general, they are not specifically designed for mental health patients. To avoid any potential confusion, a better introduction on why a scale is utilised or a more applicable empathy scale used in mental health could be beneficial.

The debrief structure which included a combination of trained pharmacy and medical education staff, alongside service user involvement, resulted in an effective way of improving pharmacy workforce's learning and development especially with soft skills such as communication. This project highlights the need for a larger scale training for pharmacy workforce regardless of practice settings or sector, in collaboration with multi-disciplinary team members and service users.

6 Conclusion

The project aim and each of the objectives was achieved. The overall aim of increasing pharmacy workforce confidence in supporting and caring for those with mental health illness including within a learning disabilities and substance misuse context was proven via this simulation training. This was further supported by the positive responses from participants and by the results from the two validated scales. They demonstrated that this simulation training, aside from helping in improving clinical knowledge, could also help improve pharmacy staff perceptions, attitudes, and work towards addressing stigma associated with mental health. Additionally, this training influenced their interactions with those who have mental health conditions, including those with substance misuse and learning disability, thus having the potential to improve high quality care in practice.

Future vision is to have a larger pharmacy simulation faculty along with a multi-disciplinary team approach to establish simulation training across the wider system. This would ideally be introduced at an early stage of career training such as at an undergraduate level, at beginning of career in acute/mental health practice settings. Furthermore, such training could benefit the pharmacy workforce from primary care network and community pharmacies as well.

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Appendix 1: Thematic analysis of qualitative data

An inductive thematic analysis was completed using Nvivo to group the qualitative statements into themes for each of the open-ended questions. The analysis was predominantly completed by one author and cross-rater agreeability was checked by two additional authors, in terms of grouping and themes.

Themes were grouped under the open-ended questions for the pre simulation and post simulation feedback. This was done so that themes identified related to the questions. There were a total of six open ended questions, which comprised of pre simulation (1), post simulation (3), feedback on simulation training (2) future simulation training and why (1) and facilitator feedback (1).

<u>Open ended questions:</u>

Pre-simulation: What do you hope to achieve from the simulation training?
Post-simulation: What do feel you have achieved from the simulation training?
Simulation feedback: Most useful part of the simulation training?
Simulation feedback: Least useful part of the simulation training?
Areas for improvement: simulation training would like to see in the future and why.
Delivery: facilitator feedback

As well as coding statements into themes, the role and area work was added to each statement as below. This was to enable reporting of results in as graph for each theme, reflecting feedback by role and main area of work.

MMPTA- Medicine Management Pharmacy Technician Acute
Pharmacist B6 Acute- B6PA
Pharmacist B7 Acute- B7PA
MMPTMH- Medicine Management Pharmacy Technician Mental Health
Pharmacist B6 Mental Health- B6PMH
Pharmacist B7 Mental Health- B7PMH

1.1: Pre-simulation qualitative feedback

1a: What do you hope to achieve from simulation training?

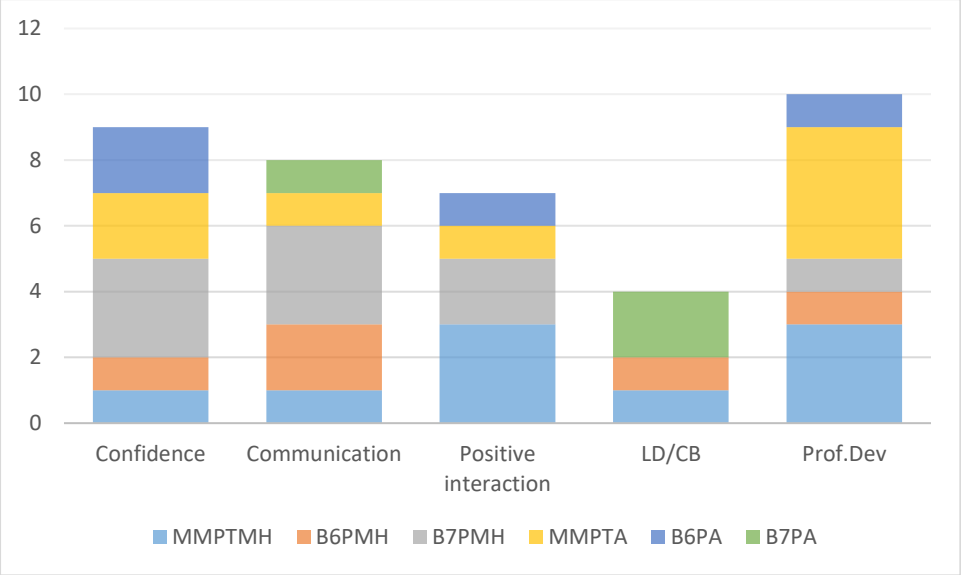
A total of 38 statements were identified which were grouped into five main themes as follows: Confidence (9), communication (8), positive interaction (post int) (7), Learning Disability (LD) or challenging behaviour (CB) and professional development (Prof. Dev) (10).

Confidence (9)	**Communication (8)**	**Positive interaction (7)**	**LD OR Challenging behaviour (4)**	**Professional development (10)**
Confidence- B7PA I would like be able to speak with patients with mental health disorders and be confident that what I am saying is not going to have more negative affect- B7PA I hope to gain more confidence regarding medication risks and optimising compliance to medications- MMPTA Become more confident when talking with patients - B6PMH	Better communication- B7PMH How to communicate with patients better- B6PMH Improved skills in communicating with patients in difficult circumstances- MMPTMH Advice on more difficult interactions with patients (e.g., someone in distress)- M6PMH How to be more careful when talking to people with mental health issues- MMPTA I can make them feel valued and heard during their hospital/outpatient care- B7PMH	Handling mental health patients- MMPTA Better understanding of how to approach different patient situations I could be faced with- B7PMH I can support patient with mental health problem- MMPTMH Learning how to interact and support service users better in terms of their care- B7PMH Know how to navigate and help patients with mental health illnesses- B6PA	Gain confidence in interacting with patients with learning disabilities and challenging behaviour- B7PA Advice on patients who have learning disabilities- B6PMH More confidence in feeling with patients with challenging behaviour – MMPTMH Dealing with challenging situations- B7PA	To learn more in detail about their behaviours- MMPTA More knowledgeable about mental health medication- B6PMH Better understanding on how to deal with mental health patients- MMPTA To improve my knowledge with managing patients with mental health conditions- MMPTA Would love to understand how to engage with patients that simply do not want to take

To gain confidence in interacting with mental health patients- MMPTA More confidence in dealing with patients with mental health- B7PA More confidence when speaking to challenging or learning disability patients- B7PMH Be confident managing challenging interactions with patients- B6PA Be empowered to confidently interact with all of our patients- MMPTMH	Tips on how to respond to patients in crisis that have disclosed suicidal thoughts- B7PA To learn how to discuss options with patients and ensure that- B7PMH	To be able to change or adapt my approach to suit different patient needs to enhance the patient experience and outcomes- MMPTMH Explore different approaches to challenging situations in healthcare. MMPTMH		medications- MMPTMH To enhance my knowledge on mental health and how to cope and support patients and colleagues with this condition- MMPTA Ensure patients are fully informed about their medicines- B6PA Improve my understanding of different mental health conditions, particularly around those with learning disabilities- MMPTMH I can learn through experience and knowledge-based information to improve my approach- MMPTMH Better pharmacist- B6PMH

1b: What participants hoped to achieve from simulation training

Most commonly reported statements were from B6 acute pharmacists (MMPTA) who hoped to gain further understanding in interacting with those with learning disabilities/ challenging behaviour (LD/CB). Professional development was identified as having the least statements for band 6 acute pharmacists (B6PA) and band 7 mental health pharmacists (B7PMH).



1.2. Post-simulation qualitative feedback

2a What do feel you have achieved from the simulation training?

A total of 47 statements were collated which, from which seven themes were identified. Five themes were the same as the pre-simulation, what participants hoped to achieve from training, and two new themes were identified. Themes were as follows; confidence (11), communication (5), positive interaction (5), LD/ CB (4), professional development (9), positive experience (4), reflection (9). An increase in confidence levels with regards to being able to remain calm, and talk to those with metal health conditions, and those in distress was the most commonly reported in terms of participants felt they had achieved from the simulation training.

Confidence (11)	**Communication (5)**	**Positive interaction (5)**	**LD and challenging behaviour (4)**	**Professional development (9)**	**Positive experience (4)**	**Reflection (9)**
Confidence- B7PA I feel more confident knowing how to approach different patients and sensitively address their needs - B6PA More confidence- MMPTA Confidence in remaining	Better communication in challenging situations- B7PMH It's always good as well to summarise what you've talked about with the patient, and to establish what the meeting is about - B6PMH	How patients prefer you to respond when they are hearing voices- B7PA Acknowledging distress, using reassurance and appropriate questions - B7PMH Its important to stay	Better understanding of patients' needs who have learning disability, resources available such as ward sheets and hospital passports -B7PA The learning disability session was really helpful, I	I have learnt and gained much more insight about mental health patients with different situations- MMPTA I feel that I have gained more insight into how to adapt to different scenarios and more complex patients - MMPTA More knowledge about the mental health conditions, I'm	Good experience- MMPTMH Excellent, open and real- MMPTA Very useful- MMPTA Experience with different patient interactions- MMPTMH	That counselling is not easy, and it is a skill that needs continuous improvement- B6PMH I can reflect on my own practice, and see how different approaches can lead to better outcome

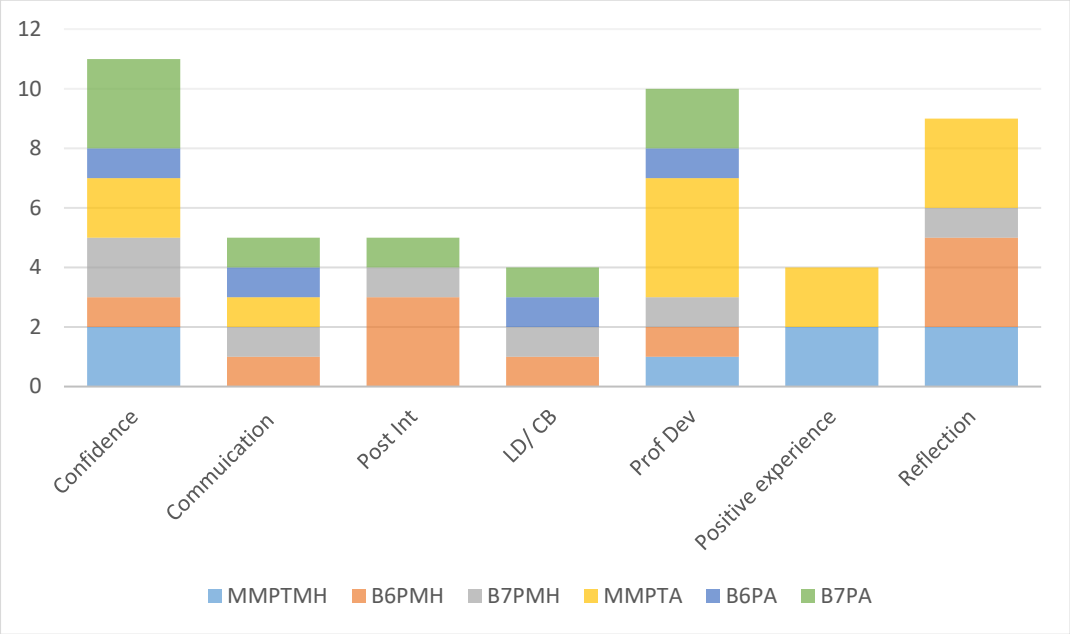
calm- B7PMH Gained confidence in speaking to patients with different forms of mental health conditions and patients who are in distress- B7PA Able to deal with more distressed people confidently- MMPTA I feel like I have more confidence in approaching patients who are in difficult situations – MMPTMH	Awareness of how to speak to patients in distress - B6PA Developed my communication skills when faced with patients with a variety of mental health issues- MMPTA Learned the importance of my own tone and body language and how it can impact the patient - B7PA	calm even if the patient is acutely unwell- B6PMH For future practice I will ensure I am proactively asking how I can make patients more comfortable- - B6PMH Its important to stay calm even if the patient is acutely unwell- B6PMH	did not know about hospital passports - B6PMH Reassurance that I am confident speaking to patients with complex needs and adjustments - learning disability scenario- B7PMH Comfortable speaking to patients with challenging behaviours- B6PA	not the only one that might have difficulties speaking with patients, and that there are various ways to ask questions without necessarily triggering the patient- B6PMH When to signpost- B6PA I have gained more knowledge into mental health and taken away practices that I can use in my work- MMPTA I have learned various phrases to use and resources available - B7PA By attending this training has made me aware of various treatments and conditions of mental health and given me the skills and knowledge on this topic - MMPTA		s for the patient- MMPTMH I'm not the only one that might have difficulties speaking with patients, and that there are various ways to ask questions without necessarily triggering the patient- B6PMH I also received reassuring feedback from when I participated in a scenario. It was useful to see other people's

More confidant at consultation- B6PMH I feel more confident in how to approach and speak to a patient in distress/mental health conditions - B7PA How to approach different patients with different needs more confidently and remaining professional in an empathetic manner – MMPTMH I feel more confident in talking to				Better understanding of different healthcare needs, particularly pregnant/breastfeeding patients and being able to offer reassurance around medication- MMPTMH I have learnt of resources to use to help aid patient understanding- B7PMH		approaches, was good to see what to use for myself and what not to do- B6PMH I feel more at ease knowing what kind of techniques to use while doing a consultation- MMPTMH Reassurance that I am confident speaking to patients with complex needs and adjustments - learning disability scenario- B7PMH

patients with a range of mental health issues who may be presentin g acutely. I have learnt of resources to use to help aid patient understan ding- B7PMH						I have been able to gauge what is expected from me from the point of view of others and how it would be better in practice- MMPTA I think will not only benefit me but also for the care of the patients- MMPTA Appropri ate to my role as pharmac y technicia n facing patients with mental health- MMPTA

2b What participant felt they had achieved from simulation training

Statements under the theme of positive interaction (Pos Int) were all from pharmacists, with the highest feedback being from band 6 mental health pharmacists (B6PMH). Statements relating to professional development were highly reported by MMPTs from the acute setting (MMPTA).



1.3. Feedback on simulation training

3a Most useful part of simulation training?

A total of 33 statements were collated and five themes were identified as follows: topic choice (7), format of delivery (6), professional development (6), reflection (12) and suicide awareness (2). The ability in being able to reflect as part of the debriefs and discussions for the scenarios was reported as being the most useful part of simulation training.

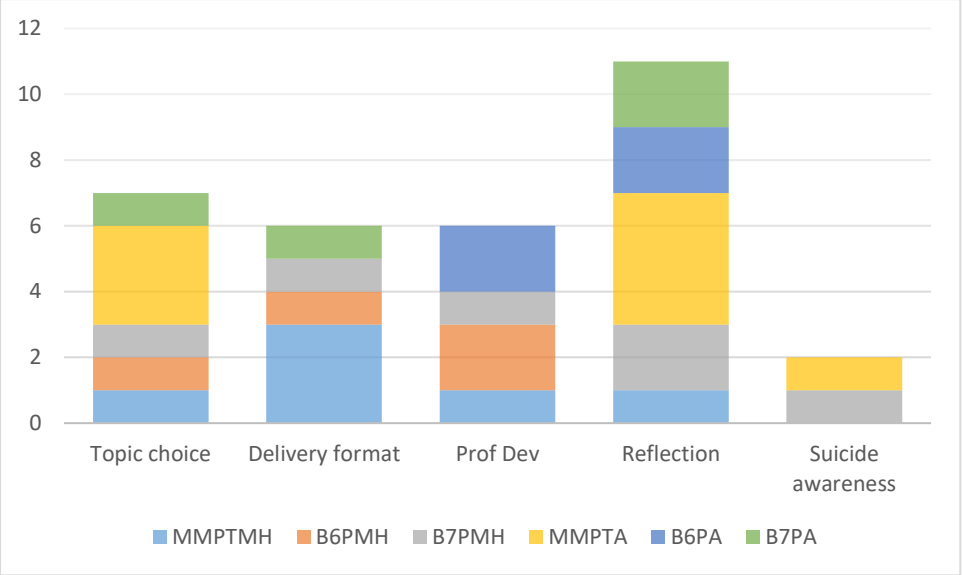
Topic choice (7)	**Format of delivery (6)**	**Professional development (6)**	**Reflection (12)**	**Suicide awareness (2)**
Psychosis (3) Learning disability (3) Scenario (1) Psychosis-B7PA Psychosis-MMPTMH Psychosis-MMPTA (3) All useful, but the most useful was the learning disability scenario-B7PMH Learning disability-B6PMH Learning disability-MMPTA (3) I found all useful, particularly the perinatal	Scenarios (3) Watching and participating in "life like" scenarios-B7PA Learning disability patient as it was a real service user-B7PMH (1) The acting scenes gave it a real sense of feeling-MMPTMH (1) Taking part in the simulation-MMPTMH (1) To participate in the scenario itself is a learning-B6PMH Participating in the scenario – MMPTMH (3)	Being able to pick up good habits they have for your own practice-B6PA (1) Talking about each mental health condition and the basics of how we would treat them-B6PMH (1) Ways we could make improvements-B6PA (1) Understanding how to address auditory hallucinations-B7PMH (1) I understand better how to handle difficult patients-MMPTMH (1) Consultation skills-B6PMH (1)	Discussions (2) Debriefs (4) Scenario (3) Learning we are all helpful-MMPTA (1) Reflecting with others about the scenarios-B7PMH Seeing how other people handle scenarios- B6PA The debrief sessions-B7PA Learning disability debriefing-MMPTA The debrief-MMPTA Hearing two service user experiences with learning disability and	Addressing suicidal thoughts-MMPTA Talking about suicide-B7PMH (2)

part as this seems most rare and have never come across- MMPTA (1)			hallucinations- B7PA (2) Reflection and how we can apply the scenario to our daily practices - B7PA (3) Very interesting and useful- MMPTA (1) Debrief discussions after scenarios - reflection and application-B6PA The debrief with the whole team to learn from one another- B7PMH (4) The discussions afterwards- MMPTMH (2)	

3b Most useful part of simulation training

The theme of reflection received the most statements in terms of being useful to learning and clinical practice. Suicide reflection had the lowest statements (2), with one band 7 mental health pharmacist (B7PMH) and one MMPT acute (MMPTA) stating they had found the talking about and addressing suicidal thoughts as useful for their learning and practice.

4a Least useful part of simulation training?



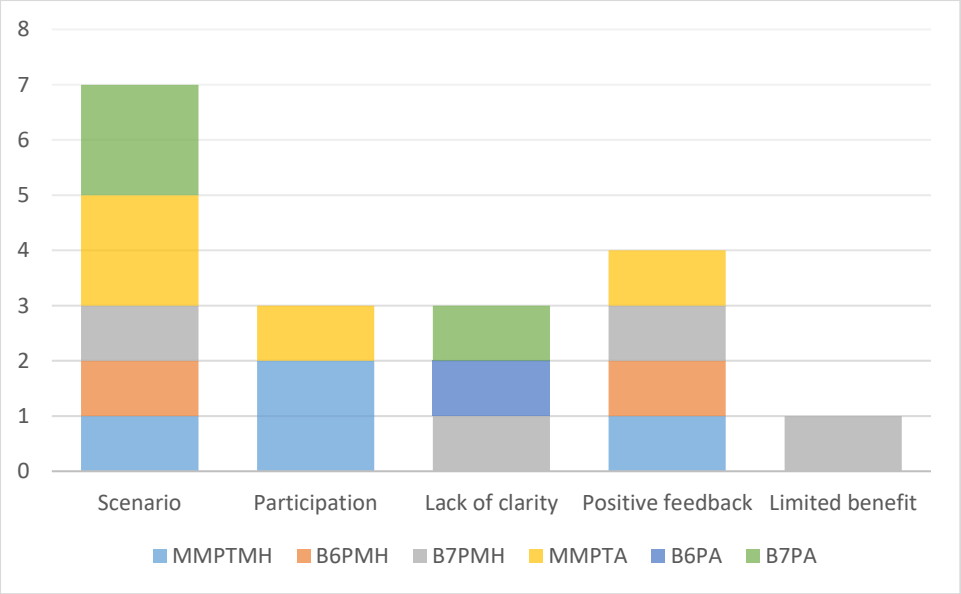
A total of 17 statements were grouped into five themes: scenarios (7), participation (3), lack of clarity (2), positive feedback (4), benefit to practice (1). For the least useful category, positive feedback was obtained from participants. It is possible participants misunderstood the question and/ or did not feel there was any part of the training which could be different. The type of scenario received the most feedback, with participants finding the substance misuse and methadone scenario last useful to their learning and practice.

Scenarios (7)	**Participation (3)**	**Lack of clarity (2)**	**Positive feedback (4)**	**Limited benefit to practice (1)**
Substance misuse (3) Perinatal (2) Methadone (2) Substance misuse- B7PA The substance misuse scenario-B7PA Substance misuse-B6PMH (3)	Individual good and bad reflections - better as a group talking- MMPTA Volunteers for simulation- MMPTMH Patient very difficult- MMPTMH	The purpose of the consultation and our role in the scenario was sometimes not clear-B6PA Applications to practice and positives of the simulations can be grouped together-B7PA Rushed clinical parts-B7PMH	Useful (3) Not sure there was anything- B7PMH (1) Everything was helpful! - B6PMH It was all useful- MMPTMH Do not come across patients	Prior knowledge about the topics - more so because of my own experience- B7PMH (1)

Perinatal-MMPTA Perinatal-MMPTMH (2) Methadone patient-B7PMH The least helpful part I would say would possibly be the methadone patient as we have all had experience with this-MMPTA (2)			with mental health but very useful to know- MMPTA (3)	

4b Least useful part of simulation training

Statements under the participation theme were reported by the MMPT group (acute/ mental health) such that asking for volunteers and individual reflections as difficult. Pharmacists (acute/ mental health) feedback was around e.g. uncertainty re: purpose of consultation and role in the scenario.



5a What other simulation scenarios would you like to see in the future and why?

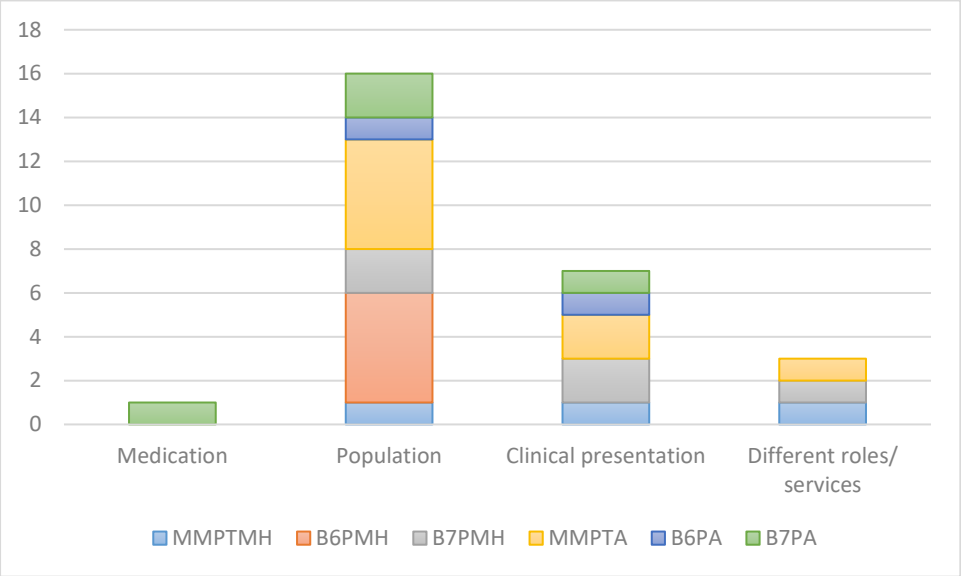
Five themes were identified from the 28 statements as follows: medication (1), population (17), clinical presentation (7) and different services/ roles (3). Most statements corresponded to the population theme, whereby participants reported wanting scenarios involving e.g., children with mental health conditions and older adults.

Medication (1)	**Population (17)**	**Clinical presentation (7)**	**Different services/ roles (3)**
Clozapine-B7PA (1)	Children (7) Child interaction-MMPTA Impact of mental health on children e.g., eating disorders- B7PMH Paediatric child and adolescent mental health scenario-B7PA Paediatrics- B6PA Children's mental health as they would act differently- MMPTA Child and adolescent mental health- B6PMH Possible scenario with younger children and/or elderly- B7PMH (7) Dementia patient-MMPTMH (1)	More on how to handle non-compliance- B6PA (1) I would like to see more counselling based scenarios-MMPTA (1) Patients who we are querying capacity - B7PMH (1) The more challenging ones opened up further discussions-B7PMH (1) Maybe more aggressive patients and how to deal and get out of dangerous situations- B7PA (1) Selective mute patients- MMPTMH (1) Different cases-MMPTA (1)	Needle exchange-MMPTA More mental health scenarios and maybe more what kind of services there are outside of hospital settings-MMPTMH Maybe trialling a multi-disciplinary discussion which requires pharmacy input and challenging a Dr or nurse- B7PMH

	More on self-harm and suicidal thoughts and with carers- B7PA (1) ADHD- B6PMH bipolar affective disorder- B6PMH borderline personality disorder- B6PMH Anxiety in non-pregnant people (they may have other issues that they are anxious about that we could learn how to deal with)- B6PMH A harder substance misuse scenario - would've liked to see how you to handle someone who has missed the 72hr time and have to re-titrate- B6PMH Short prognosis depression- MMPTA Pregnant mental patient. Lot to learn and understand their feelings- MMPTA Psychosis- MMPTA (1)		

5b What other simulation scenarios would you like to see in the future and why

The theme of population contained the most statements across all role MMPT/ pharmacist) and areas of work (acute/ mental health). There was only one statement pertaining to a future scenario involving medication.



6a Facilitator feedback: group feedback

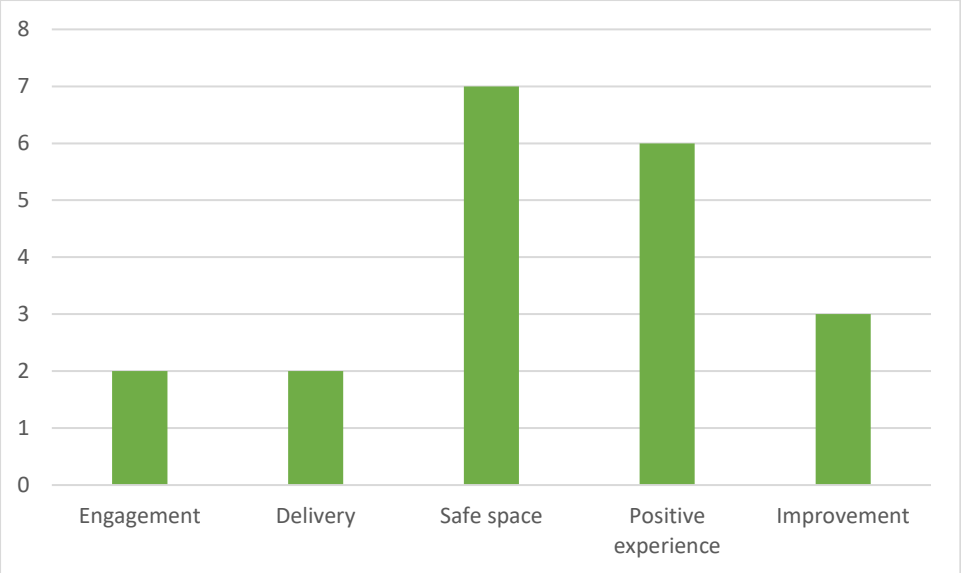
Five themes emerged from the 20 statements provided for facilitator feedback: engagement (2), delivery (2), safe space (7), positive experience (6), improvement (3). Most commonly reported statements from participants were in the area of facilitators creating a safe, non-judgemental and encouraging environment, as well as a positive experience of the simulation training.

Engagement (2)	**Delivery (2)**	**Safe space (7)**	**Positive experience (6)**	**Improvement (3)**
Very engaging Very engaging, did not feel pressured, lots of opportunity to learn	Very well structured, great variety of scenarios which were lifelike Excellent team who worked well to ensure the group learnt the skills they sought to learn	Encouraging (3) Felt like a safe environment even when things didn't go particularly well during the scenario Great energy and encouraging Very welcoming and non-judgemental. I would not normally volunteer but they made me feel comfortable They all were very enthusiastic and encouraging Super friendly and helpful Encouraging	Thoroughly enjoyed! Very good! Very insightful to everyone about how we could treat patients better and be non-judgemental and understand the patients' views Very useful They did very well All excellent All good	For the scenario with a non-binary person, I think it is important to remind people during debrief about the correct pronouns and touch on it a bit more. Maybe expand on the fact that a service user is much less likely to engage if you mis-gender/do not acknowledge gender identity It is a bit intimidating that the facilitators are all mental health based as it can feel like the people not from mental health backgrounds are being watched a bit

				(maybe they could join in in a scenario or do a scenario where we look for positives and negatives as though they are also participating in the training) Clozapine training

6b Facilitator feedback: group feedback

Themes of facilitators creating a safe space (7) and providing positive learning experience (6) received the



Appendix 2: Service user feedback

The training involved one service user throughout the 3 days as part of the course and for the debriefs. The data below is the cumulative feedback from the service user for all three training days.

	Measure	Strongly agree %	Agree %	Disagree %	Strongly disagree %
1	The facilitators were caring and compassionate	100			
2	Facilitators encouraged participation	100			
3	Facilitators were interactive and engaged with participants	100			
4	Facilitators encouraged learning and reflection	100			
5	Facilitators listened to and responded to my concerns/ worries	100			
6	Facilitators provided a safe learning environment	100			
7	Facilitators provided clear explanations	100			
8	Facilitators provided constructive feedback	100			
9	What did you think about the structure of the day? - Very constructive - Structure is very good - I like the different simulation parts with plenty of space for reflection				
10	What do you think was the most helpful part of the training? - The feedback per se what the most constructive where a dialogues could be achieved - The debate and dialogue between participants was useful				
11	What do you think could be changed to help improve the learning experience for the participants? Nil comments				

Acknowledgements

Our thanks go to all who supported in the development of this project, especially the service users.

Pharmacy Simulation team members:
Dr Michaela Hinson- Raven – ST4 Psychiatrist
Fabio Serra- Band 7 pharmacist
Iffah Salim- Band 8a pharmacist

Renato Congias- contributed to course delivery (service user)

ELFT Medical education team members including Dr Lorena Valdearenas (ELFT simulation lead)

Academy of lived experience including Upma Monga (Team lead) and people participation teams- service users who have contributed to scenario development

Multi-disciplinary team members, pharmacists, medicines management pharmacy technicians from different specialist teams who have contributed towards scenario development.