Investigation of medication safety culture in hospital pharmacy

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Background

Understanding culture may help identify strategies to prevent medication-related harm.[1-2] Regular surveys of staff culture are recommended by the National Safety and Quality Health Service Standards, but often neglect to include pharmacists.[3-4]

Aim

To explore and describe the medication safety culture amongst pharmacists and pharmacy technicians in a tertiary teaching hospital in Australia.

Methods

This exploratory, scoping study was conducted at a tertiary public teaching hospital in Queensland (Australia) in August-September 2022 to investigate medication safety culture amongst pharmacy technicians and pharmacists. Staff employed at the site longer than three months were eligible for inclusion. Ethics exemption was granted by the local ethics committee (LNR/2021/QRBW/74199) and the University of Queensland (2022/HE001646).

Part one: Questionnaire

A cross-sectional survey of pharmacists and pharmacy technicians was conducted utilising an abridged version of the previously validated MSCQ (or "mini-MSCQ").[1,2] This eliminated statements with poor correlation during the Kantilal et al study, reduced the questionnaire size for practical purposes, and focused on incident reporting as a local priority.[1] Demographic data was collected, however participants were otherwise anonymous.

The final survey contained 13 questions across four domains of 'Teamwork', 'Safety Climate', 'Organisational learning', and 'Feedback and Communication about error' which were answered on a 5-point Likert scale. There were two open response questions on recommendations for improvement and concerns related to medication safety.

Table 1: mini-MSCQ Likert scale items

1. Teamwork
- Pharmacy staff input regarding medication safety is well received at (study site) - It is difficult to speak up if I perceive a problem with medication safety. (R)*
2. Safety Climate
- I know the proper channels to direct questions regarding medication safety. - I am encouraged by my colleagues to report any medication safety concerns I may have. - It is difficult to discuss medication errors. (R)* - Medication errors are managed and investigated appropriately. - It is easy to learn from the medication errors of others.
3. Organisational learning
- Pharmacy staff are proactive in initiatives to improve medication safety. - Medication errors have led to positive changes. - After changes are made to improve medication safety, pharmacy staff evaluate its effectiveness.
4. Feedback and communication about error
- Pharmacy staff are informed about medication errors that happen at (study site). - Pharmacy staff are given feedback about changes put in place after a medication error occurs. - We discuss ways to prevent medication errors from happening again.

Quantitative questions were reported using descriptive statistics. Open responses were analysed using thematic analysis as per Braun and Clark.[15] Survey results were analysed and used to inform a discussion guide.

Part two: Focus group

A follow-up focus group was conducted with pharmacists. Focus group discussions were audio recorded and thematically analysed. Themes were mapped against the Theoretical Domains Framework (TDF).

Results

Part one: Questionnaire

Thirty-two staff responded to the mini-MSCQ. Aspects related to Teamwork achieved the highest score (4.12 ± 0.74), whilst Feedback and Communication about Error attained the lowest score (3.87 ± 0.75).

Table 2: mini-MSCQ scores by question and domain

Mini-MSCQ domain	n*	Mean (5-point scale)	SD
1. Teamwork	31	4.12	0.74
2. Safety Climate	28	4.08	0.53
3. Organisational learning	27	4.05	0.65
4. Feedback and communication about error	30	3.87	0.75

*Participants who responded with "don't know" were omitted

Open response themes related to incident reporting and education. This included a need to improve comfort with the reporting program, ensuring multidisciplinary education is provided, and increasing the amount of education.

Part two: Focus group

Four pharmacists participated in the focus group. In total, 34 themes across 10 TDF domains were identified. Social and professional role was identified as a key facilitator to pharmacist involvement in medication safety, including a responsibility to promote safe practice, apply a collaborative and analytical approach in responding to incidents, and ensure a just culture.

> *"…demonstrating my openness to questions, which is my role… (if) people just aren't going to ask me questions because they're scared… it might lead to incidents in future." [Pharmacist 3]*

Maintaining interprofessional trust was further emphasised, with participants identifying their own feelings as barriers to involvement in medication safety incidents:

> *"overcoming your own issues and emotions is also part of this." [Pharmacist 2]*

> *"in pharmacy we always want to be liked… if they go the wrong way (it) can make it really hard for people to… trust you still… or say 'I'm not sure if I want to do this, but I'm not sure if I (want to) ask the pharmacist'." [Pharmacist 2]*

Further key barriers identified included time constraints and a lack of training in reporting.

Overall, medication safety culture was described as positive, however incidents of reporting being used as a "pejorative" tool were recounted.

Conclusion

Medication safety culture was perceived as integrated within the pharmacists' role, however further resources are required to support medication safety activities. Future work should evaluate the predictive accuracy of the mini-MSCQ, and incorporate medical and nursing perspectives.

References

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