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Views and experiences of decision-makers on organisational safety culture and medication errors

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Abstract

Background: In 2017, the World Health Organization published "Medication Without Harm, WHO Global Patient Safety Challenge," to reduce patient harm caused by unsafe medication use practices. While the five objectives emphasise the need to create a framework for action, engaging key stakeholders and others, most published research has focused on the perspectives of health professionals. The aim was to explore the views and experiences of decision-makers in Qatar on organisational safety culture, medication errors and error reporting.

Method: Qualitative, semi-structured interviews were conducted with healthcare decision-makers (policy-makers, professional leaders and managers, lead educators and trainers) in Qatar. Participants were recruited via purposive and snowball sampling, continued to the point of data saturation. The interview schedule focused on: error causation and error prevention; engendering a safety culture; and initiatives to encourage error reporting. Interviews were digitally recorded, transcribed and independently analysed by two researchers using the Framework Approach.

Results: From the 21 interviews conducted, key themes were the need to: promote trust within the organisation through articulating a fair blame culture; eliminate management, professional and cultural hierarchies; focus on team building, open communication and feedback; promote professional development; and scale-up successful initiatives. There was recognition that the current medication error reporting processes and systems were suboptimal, with suggested enhancements in themes of promoting a fair blame culture and open communication.

Conclusion: These positive and negative aspects of organisational culture can inform the development of theory-based interventions to promote patient safety. Central to these will be the further development and sustainment of a "fair" blame culture in Qatar and beyond.

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1 | INTRODUCTION

Despite the attention given worldwide to the development of patient safety systems and processes, medical errors remain a major contributor to patient morbidity and mortality, with estimates in high income countries of one in ten patients being harmed while receiving medical care.[1] Medication errors, most commonly defined as, "any preventable event that may cause or lead to inappropriate medication use or patient harm, while the medication is in the control of the health care professional, patient, or consumer,"[2] are highly prevalent. It is estimated that these errors cause at least one death every day and injure approximately 1.3 million people annually in the United States (US) alone.[2] Global estimates of costs resulting from medication errors are around $42 billion annually.[3] While errors can occur at any stage of the medication use process, most published literature focuses on prescribing, dispensing and administration stages. Systematic reviews have concluded that the causes of medication errors are generally complex and multifactorial, resulting from systems and/or human factors.[4-9]

In March 2017, the World Health Organization (WHO) published "Medication Without Harm, WHO Global Patient Safety Challenge," primarily intended to reduce patient harm caused by unsafe medication use practices.[3,10] The authors proposed a target reduction of 50% by 2022 for severe, avoidable medication-related harm, through improving medication prescribing, dispensing, administration, monitoring and usage. Countries were mandated to systematically develop and prioritise an action plan, involving safety experts, health care professionals and leaders, other key stakeholders and patient representatives to achieve this target.[3]

Key to meeting the WHO challenge is promoting a positive patient safety culture within healthcare organisations. Organisational safety culture has been defined as, "the product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour that determine the commitment to and the style and proficiency of, an organisation's health and safety management".[11] In an attempt to provide an objective measure of safety culture, the Agency for Healthcare Research and Quality (AHRQ) and Medical Errors Workgroup of the Quality Interagency Coordination Task Force (QuIC) in the United States sponsored the development of the Hospital Survey on Patient Safety Culture (HSOPS).[12] This provides a quantitative assessment across healthcare organisations and hospital units of key areas of strength and weaknesses in organisational safety culture thus providing a framework for development and baseline data for measuring change.

It is well recognised that a blame culture is more likely to occur in organisations which "rely predominantly on hierarchical, compliance-based functional management systems," while a "fair" blame culture is an indication of organisational safety culture which "elicits greater employee involvement in decision-making."[13] There is, however, an accumulation of published, peer-reviewed evidence that there is an element of fear among health professionals in reporting medication errors, resulting in marked under-reporting.[14-25] Effective and efficient error reporting systems and processes should aim to stimulate and sustain, review and analyse error reports leading to the development of recommendations to reduce and ultimately prevent, errors.[2]

A systematic review of 18 quantitative studies of patient safety culture in Arab countries using the HSOPS tool identified issues around the lack of non-punitive response to error, low staffing levels and poor communication.[26] More recently a sequential explanatory mixed-methods study of organisational safety culture in Qatar also identified that potential influences on these issues were the social/professional role and identity (eg, lack of recognition of the professional roles of nurses), emotions (eg, stress, anxiety) and environmental context and resources (eg, workload and system failure).[27] A study conducted in parallel in Qatar, using the same methodological approach, indicated health professionals' emotions as key to under-reporting of medication errors, with qualitative findings describing these in terms of "fear" and "worry" that reporting "could lead to punishment," "worsen working relationships" and that performance appraisal and development "could be negatively impacted."[28]

The five objectives of "Medication Without Harm" emphasise the need to create a framework for action, engaging key stakeholders and others.[3] To date, the research in Qatar and other Middle Eastern countries has focused on the perspectives of practitioners, primarily doctors, nurses and pharmacists. The aim of this study was to explore the views and experiences of decision-makers in Qatar on issues around organisational safety culture, medication errors and error reporting.

What's known

- The World Health Organization publication, "Medication Without Harm" emphasises the need to create a framework for action, engaging key stakeholders and others.
- To date, the research has focused on the perspectives of practitioners, with no consideration of key decision-makers.

What's new

- Decision-makers expressed the need to promote trust within the organisation through articulating a fair blame culture and eliminate management, professional and cultural hierarchies.
- The noted more emphasis was required on team building, open communication and feedback, and scaling-up successful initiatives.
- Medication error reporting processes and systems are suboptimal, with suggested enhancements in themes of promoting a fair blame culture and open communication.

2 | METHODS

2.1 | Design

This was a qualitative study employing in-depth semi-structured interviews.

2.2 | Setting

The research was conducted within Hamad Medical Corporation (HMC, the main provider of secondary and tertiary healthcare in Qatar), the Ministry of Public Health in Qatar and Qatar University (the national university).

2.3 | Interview schedule development

The interview schedule was developed based on the results of previously conducted survey and focus group research in Qatar,[27,28] with emphasis on: issues and priorities around error causation and error prevention; engendering a safety culture; efficiency and effectiveness of the medication reporting system; and initiatives to encourage the reporting of medication errors.

2.4 | Sampling

The sampling frame included policy makers, professional leaders and managers and lead educators and trainers, who were identified as key decision-makers in areas relating to patient and medication safety. These individuals held positions of national strategic importance to influence policy and/or practice change relating to medication safety. The participants were identified through existing networks in Qatar, with two approaches to sampling employed: purposive sampling, according to criteria or strata of position and institution; and snowball or chain sampling, where interviewees were asked to nominate relevant others who could contribute to the research.[29]

2.5 | Recruitment

Potential participants were emailed an information sheet outlining the purpose of the study and the expected time commitment. Those interested were asked to email the research team to arrange a suitable date, time and location for interview. An outline of the questions was emailed in advance to participants to allow for reflection prior to the interview taking place. Sampling and recruitment continued to the point of data saturation when no new data or themes emerged. The approach of Francis et al to data saturation was employed, with an initial sample sufficient to cover all strata and a stopping criterion of three, that is, recruitment continued until no new themes emerged from three consecutive interviews.[30]

2.6 | Data generation

Face-to-face interviews of 30-45 minutes were conducted by trained, experienced qualitative interviewers. The interviews were digitally audio-recorded, transcribed verbatim and independently checked for transcribing accuracy prior to analysis. Participants were offered the opportunity to review their transcripts (member checking) to allow review and editing.

2.7 | Data analysis

Interview transcripts were analysed thematically by two independent members of the research team using the Framework Approach of: familiarisation with the data, identifying a thematic framework, indexing, charting, mapping and interpreting.[31] Given that the discussions focused largely on aspects of safety culture and error reporting within each organisation, the initial coding framework was based on the key themes identified in the two recent studies in Qatar.[28,29]

2.8 | Ethics

The study received ethical approval from Hamad Medical Corporation, Medical Research Center Qatar (Approval 7-388-3-095), Qatar University Institutional Review Board (Approval QU-IRB 350-E/14) and Robert Gordon University Research Ethics Sub-Committee (Approval 13-147). Free and informed consent was obtained from each individual and all data were anonymised during data generation, analysis and reporting.

3 | RESULTS

Interviews were conducted with 21 participants, all of whom held strategic positions within healthcare in Qatar: nursing directors/assistant directors (n = 5); pharmacy directors/assistant directors (n = 4); medical directors (n = 3); executives/deputy executives in the Ministry of Public Health (n = 3); university educators (n = 2); quality improvement and risk management directors (n = 2); medical education director (n = 1); and research director (n = 1).

All interviewees were well aware of the need to promote patient safety and that errors were prevalent in all healthcare settings,

> It [errors] can happen at all levels. It can happen in outpatient. It can happen in daycare. It can happen in urgent care that leads to admission, and it can happen on the ward.
>
> (INT 7)

They were able to differentiate between process, system and human errors including the causes and shortcomings known to impact efficiency on the wards,

> Sometimes, we will find the system fails. Sometimes, it's like process problem and there's sometimes human error, like I find the staff have too much stress in the work and too much workload, I will not consider it a human error. The system is actually failing the staff, not the patient.
>
> (INT 4)

There was also recognition of the likely impact on the individual committing the error and many related this to their own experiences,

> But you will never get that completely out of the system that someone feels guilty about something …I mean I know in my career that there are things where I feel guilty, you know, that I think about a state or day where maybe you did a mistake.
>
> (INT 7)

While potential causes of errors were discussed, many interviewees reflected on the economic downturns and the impact on recruitment and staffing,

> It's key, the lack of resources. Right now, we're going through a staffing squeeze where recruitment has become an issue and we are really in need of staff… This could be a cause for possible medication errors.
>
> (INT 6)

While there was less familiarity with the specific systems and processes involved in error reporting, there was discussion around the issue of under-reporting impacting effectiveness and efficiency. One interviewee also noted that this was not a situation unique to Qatar,

> There is significant under reporting that's making that process less efficient and this is an issue, unfortunately it's not only here in the region, it's on a global scale…
>
> (INT 16)

Several key themes emerged around error causation, error reporting and potential solutions, as follows.

3.1 | Promoting trust within organisations through articulating a fair blame culture

Key to learning from errors and advancing the patient safety agenda was adoption of a non-punitive, fair blame culture,

> And so I think we have to get over the fear of [reporting] …there's a little bit of a hesitation around singling, you know, singling people out. But actually if it's done in a professional way and a learning way…
>
> (INT 18)

Hand-in-hand with the fair blame culture was the notion of continuous improvement and cycles of shared experiential learning,

> So it's not a blame culture. It's ongoing improvement because this is a problem. I have to say that everyone would feel threatened if you ask them. Everyone wants to be the perfect healthcare provider.
>
> (INT 1)

Core to advancing the patient safety agenda was the right organisational environment, safety culture and, most importantly, a fair blame culture, all of which could encourage error reporting,

> Because ultimately, healthcare professionals know that patient safety is the number one. If they know that, that if an incident, if an event is reported anonymously, and there's no penalty involved with it, then I know that for patient safety they will report it.
>
> (INT 12)

3.2 | Eliminating management, professional and citizenship hierarchies

Some interviewees explained that blame existed among a culture of inequality of professional standing, with evidence of engrained scapegoating behaviours. It became apparent that within areas of healthcare, the blame culture prevailed for certain professions,

> They [doctors] will blame a nurse even though it could be the fault of somebody else and they are always looking at who they can blame rather than doing a system review…It is completely a blame culture and it's everybody admonishing responsibility and minding their own back.
>
> (INT 11)

Given the evidence thus far of closed communications, lack of reporting, scapegoating of nurses for example, open communication was challenging particularly within multi-disciplinary teams.

> The minute you mix doctors and nurses or whatever, the group that isn't doctors or non-doctors, they clam up completely. They are not… they do not feel that they have the right to speak out against the medical fraternity.
>
> (INT 5)

There was further recognition that these issues were complicated by the cultural differences among staff with shared professional identities from multiple countries,

> …what one's expectations are of a doctor in another country don't necessarily transfer to here.
>
> (INT 1)

The challenge of open communication was made even more difficult not only between professions, but also between different levels of experience alongside mixed nationalities.

> There's not a reporting culture here…You know frankly, if they are a Syrian trainee and they see a mistake made by a Qatari senior, they are not going to put it down.
>
> (INT 5)

3.3 | Focusing on team building, open communication and feedback

Many of the interviewees discussed at length the need for open communication surrounding errors and a transparent and fair system which would be responsive to prevent similar errors occurring in the future,

> There should be a very good system, it should be transparent, it should be systematic, so when someone detects an error, what are the steps that should happen, and there should be a system of like feedbacks so the person who made the error as well as the one who reported the error.
>
> (INT 6)

There were encouraging reports of progress in team building moving in the right direction to promote multidisciplinary patient care, noting that improvements in safety culture and working practices required long-term effort and investment,

> I think overall the happiness in the team and the understanding for the structure has come up and there are some cultural barriers for some to take that on but we know we are working on that one too. It's just a matter of time.
>
> (INT 7)

It was, however, apparent that there was some way to go. One of the interviewees discussed their experiences of professionals knowingly taking on tasks beyond their knowledge, experience and competence rather than making this clear to others,

> You know people do not even have the courage to say they don't know something. They would rather plough on and do something or agree to do something and not do it, than say they can't do it or they don't understand.
>
> (INT 11)

3.4 | Promoting professional development through experience sharing

Linked to promoting team building and open communication was the requirement for professional development. There was an expectation of providing opportunities for learning from shared multiprofessional experience of errors in healthcare delivery, always with the aim of improved patient safety,

> Instead of blaming, let's learn and improve, and prevent such errors in the future. Like, so like, when an error is detected, like if I'm a head nurse or a head pharmacist, I would have my employees together and we discuss it openly, and how we can prevent it.
>
> (INT 6)

3.5 | Scaling successful initiatives

While initiatives could be successful in specific settings or clinical areas, there was acceptance that to be effective, these needed to be scaled-up and sustained across organisations. This would require support and investment from key individuals in leadership and policy development,

> Any project you want to roll out or anything that you want to do that is what's best for patient care or what enhances patient care must gain the support of hospital administration, I mean the CEO [chief executive officer], the Medical Director and the Heads of Departments.
>
> (INT 16)

4 | DISCUSSION

4.1 | Key findings

Key decision-makers in the field of patient safety highlighted issues to be tackled as part of their commitment to reducing medication errors. Key themes which emerged in this qualitative study were the need to: promote trust within the organisation through articulating a fair blame culture; eliminate management, professional and cultural hierarchies; focus on team building, open communication and feedback; promote professional development; and scale-up successful initiatives. There was also recognition that the current medication error reporting processes and systems were suboptimal, with

suggested enhancements in themes of promoting a fair blame culture and open communication.

4.2 | Strengths and weaknesses

To our knowledge, this is the first study conducted within the Middle East exploring the perspectives of decision-makers in positions to effect organisational change in policy and practice relating to medication safety. Indeed, there is a paucity of any published research focusing on decision-makers, with only a few studies reporting the perspectives and actions of nursing leaders.[32,33] Further strengths the multiple steps taken to promote research trustworthiness. Given that the research was conducted in Qatar, the qualitative findings may not be transferable to countries beyond the Middle East.

4.3 | Interpretation

This study of decision-maker perspectives on issues around medication errors, organisational safety culture and error reporting complements our earlier work on the perspectives of health professionals.[27,28] Indeed, there are many areas of congruence between these in terms of non-punitive response to errors, feedback and communication, openness of communication and continuous organisational learning. The decision-makers were well aware of the need for action at all organisational levels to promote patient safety.

One theme that emerged was that of "fair" blame culture, which was viewed as a positive move in eliminating scapegoating behaviour around inequalities of professional standing. A "fair" blame culture is more likely to occur in organisations with open communication and employee involvement in decision-making.[13] Effective leadership and human resource management capabilities are paramount when transitioning from a blame culture to a more "fair" blame culture.[34] Many other themes identified in our study in relation to promoting greater patient safety also concur within these concepts, including the need for open communication, gaining and maintaining trust at all levels and removal, or at least open recognition, of hierarchies in healthcare settings and management. There was also widespread recognition that Qatar is a country of mixed nationalities, cultural differences, behaviours, expectations and perceptions, which also had to be handled carefully. These added complexities have also been noted by others reporting that professional cultures contribute to the challenges of effective interprofessional teamwork in healthcare.[35]

Encouragingly, many decision-makers described initiatives which had been implemented to promote patient safety and while these were generally small-scale, they were perceived to be successful. It is, however, widely recognised that scaling-up and sustaining small-scale or pilot studies is challenging and requires commitment and investment at all levels.[36] Applying organisational and implementation theories to all stages of intervention development, testing and scaling, will increase the likelihood of success.[37]

When errors are committed or near misses identified, it is important that these are reported and handled within an effective and efficient error reporting system and process. Interestingly, the decision-makers were very aware of the issue of under-reporting in Qatar,[28] and globally,[2,3,10] and that optimising the reporting system and process could positively impact patient safety. Many themes that emerged bear striking resemblance to those which also emerged from the health professional study in Qatar.[28] There was recognition of the emotional stress of submitting an error report and beliefs of consequences of the punitive action which could result. Engendering a "fair" blame culture should have a positive impact on the effectiveness and efficiency of the reporting system.

The WHO Challenge articulates the necessity to develop strategies, guidelines, plans, processes and tools to ensure safety of medication practice and to strengthen the quality of reporting and monitoring data.[3,10] While the perspectives of these decision-makers is clearly highly valuable in driving and enabling change, there is widespread acknowledgement that achieving change at all levels is likely to be complex.[37] The body of research in Qatar can be incorporated into these developments to target the key issues identified. Embedding intervention development within a framework of behavioural, organisational and management change may increase the likelihood of success.

4.4 | Conclusions

This study of decision-maker perspectives on issues around medication errors, organisational safety culture and error reporting in Qatar has complemented recent research on healthcare professionals, highlighting positive and negative aspects of organisational culture which can inform the development of theory-based interventions to promote patient safety. Central to these will be the further development and sustainment of a "fair" blame culture in Qatar and beyond.

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