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Authors	Gleeson, Laura;O'Brien, Gary L.;O'Mahony, Denis;Byrne, Stephen
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University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Thirst for Change in a Challenging Environment: Healthcare Providers' Perceptions of Safety Culture in a Large Irish Teaching Hospital

Laura L Gleeson*[1], Gary L O'Brien[1], Denis O'Mahony [2,3], Stephen Byrne[1]

[1]Pharmaceutical Care Research Group, School of Pharmacy, University College Cork, Ireland

[2]Department of Geriatric Medicine, Cork University Hospital, Cork, Ireland

[4]Department of Medicine, School of Medicine, University College Cork, Ireland

Corresponding author: Dr Laura Gleeson, MPSI, Pharmaceutical Care Research Group, School of Pharmacy, University College Cork, Ireland, laura.gleeson@ucc.ie, T: +353 21 490 1690, F: +353 21 490 1656, ORCID: 0000-0003-2340-9127

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Abstract

Background

The Irish healthcare system is currently recognised as being understaffed and under-resourced due to historic underfunding and the aftermath of the 2008 global financial crisis. This descriptive study investigated healthcare providers' perceptions of the safety culture in a large Irish teaching hospital.

Aim

The aim of this study was to investigate healthcare workers' perceptions of the safety culture in a large Irish teaching hospital in a climate of national under-resourcing of healthcare.

Methods

Seventeen semi-structured interviews were carried out with patient-attending staff between February and June 2019. Interviews were transcribed verbatim and analysed using thematic analysis.

Results

Two predominant themes emerged from the interviews: 1) Challenging Environment and 2) Thirst for Change. Study participants described the poor working conditions in the hospital, but also recognised the importance of teamwork and communication in maintaining patient safety and had a strong appetite for change regarding the safety culture in the hospital.

Conclusion

This study highlights the complex relationship between working conditions and safety culture. Hospital staff were committed to providing the best possible care for their patients, but struggled to provide safe care in a challenging work environment. A clear appetite for change was identified amongst HCPs regarding patient safety culture in Irish healthcare.

Introduction

Safety culture refers to the way in which members of an organisation think about and prioritise safety within that organisation (1). Beginning with the publication of the US Institute of Medicine's 'To Err is Human' in 1999, the past two decades have seen increasing interest in in the measurement of safety culture within healthcare organisations (2–4). Positive safety culture is associated with improved patient outcomes such as fewer patient safety incidents, reduced patient mortality and increased patient satisfaction (5–8). While conventional questionnaire-based studies and surveys, such as the Safety Attitudes Questionnaire (SAQ) and Hospital Survey on Patient Safety Culture (HSOPSC), are valuable in identifying areas for improvement and differences in safety culture attitudes between groups, a key limitation is that the reasons for these differences in attitudes cannot be explored in any detail using a questionnaire or a survey (1,9). To date, the great majority of safety culture research has been survey-based. However, few qualitative studies have been carried out on the topic.

Ireland's healthcare system faces a number of major challenges related to both historic underfunding and the after-effects of the 2008 financial crisis (10). Severe cutbacks in health expenditure in the 1980s led to the closure of thousands of hospital beds, and the number of hospital beds per 1000 people in Ireland is still below the Organisation for Economic Co-operation and Development (OECD) average (3.0 versus 4.7 in 2017) (10,11). In December 2019, 10,003 patients waited on a trolley for a hospital bed, an increase of 288% compared to December 2006 (12). Relatedly, there has been large-scale outward migration of Irish doctors since the 2008 global financial crisis, and Ireland currently has a relative shortage of doctors per 1000 people compared to other OECD countries (3.0 vs 3.5 in 2017) (10,13). Insufficient staffing and resources, combined with an ageing population, have put considerable strain on the Irish hospital system (14).

The aim of this descriptive study is to gain a more comprehensive understanding of the patient safety culture in the acute hospital sector, in order to inform future research on the development of

interventions to improve safety culture and patient safety in Irish healthcare. This study adds to the literature by being the first qualitative interview study to examine patient safety culture in Irish healthcare.

Method

Study Design

This study was carried out in a large acute teaching hospital in the southwest of Ireland. Semi-structured face-to-face interviews were carried out with healthcare professionals (HCPs) to explore their perceptions of the safety culture in the study hospital. This interview method was chosen as it allows detailed investigation into participant's personal perspectives of complex systems (15). The COnsolidated criteria for REporting Qualitative research (COREQ) checklist was used to guide study reporting (16). Ethical approval was obtained from the local research ethics committee. A topic guide was developed to address important aspects of safety culture, including job satisfaction, working conditions, and perceptions of support from management, and also included questions on important patient safety issues and error reporting in the hospital (17,18). The primary author (LG) and a co-investigator (GLO'B) were involved in the development of the topic guide. Both researchers are registered pharmacists and were PhD students when the study was conducted. The topic guide, displayed in **Table 1**, was refined after being pilot tested with two physicians, however these interviews were not included in the final data analysis.

Table 1: Topic Guide

No.	Question
1	How would you describe your job satisfaction at present?
2	How would you describe the quality of teamwork you experience within your profession/with members of other professions?
3	How would you describe the quality of communications you experience within your profession/with members of other professions?
4	How would you describe your working conditions? *Prompt: How do you think your working conditions affect patient safety?* *Prompt: Does stress affect your job performance?*

5	How would you describe the support you receive from hospital management on a day-to-day basis?
6	How committed do you think this hospital/clinical area is to patient safety? *Prompt: What is your role in maintaining patient safety?*
7	What do you think are the most important patient safety issues in the hospital at the moment?
8	How safe would you feel if you were being treated here as a patient? *Prompt: At what point during a hospital admission do you think a patient's safety is most at risk?*
9	How would you describe the error reporting culture in this hospital/clinical area?
10	How does the safety culture in this hospital compare to that in other hospitals you've worked in?

Setting

This study was carried out in a large acute teaching hospital in the southwest of Ireland. With over 40 medical and surgical specialities on campus, it is the only level 1 Trauma centre in the country. The hospital contains 810 beds and provides secondary and tertiary care for a catchment area of approximately 550,000 people.

Sampling

All HCPs, including physicians, nurses, health and social care professionals (HSCPs) and healthcare assistants (HCAs), who had been working in a patient-facing role in the hospital for at least two months were eligible to take part in the study. Participants were recruited using purposive sampling. A recruitment advertisement poster was sent via email to all staff in the hospital, inviting them to take part

in the study. Maximum variation sampling was used to ensure variation in profession, clinical area of work, and professional grade; the sampling framework is presented in **Table 2**.

Table 2: Sampling Framework

		Profession			
		Physician	**Nurse**	**HSCP**	***Total***
Gender	**Male**	4	1	2	*7*
	Female	1	5	4	*10*
	Total	*5*	*6*	*6*	
Work Experience	**≥10 Years**	2	3	3	8
	5-10 Years	1	2	0	*3*
	≤5 Years	2	1	3	*6*
	Total	5	6	6	

Data Collection

Seventeen interviews were carried out by the primary researcher at the study hospital between February and June 2019. The primary researcher had undergone training in qualitative interviewing and data analysis. There were no established working relationships between the research team and any study participants prior to study commencement. Before the interviews began, each participant was informed that the primary researcher was a pharmacist who was undertaking this study as part of her PhD work. Written informed consent was obtained from each participant before commencing the interview. Along with the questions set out in the topic guide, study participants were asked to state their profession, their clinical work area and how long they had been working in the hospital. To allow for the emergence of unanticipated and unprompted issues, the interview structure was not restricted to the topic guide, and the interviewer prompted and explored issues in more detail as appropriate. Field notes were recorded after each interview to inform data analysis. The method developed by Francis *et al*. was used to determine data saturation.(19) Interviews were audio-recorded after obtaining participants' written informed consent and were transcribed verbatim. All interviews consisted of one interviewer and one

interviewee and were recorded and transcribed using a Dictaphone® device. Interviews took place in a quiet and confidential space within the workplace campus of the HCP being interviewed. Interviews ranged in time from approximately 19 minutes to 33 minutes.

Data Analysis

The interviews were analysed using thematic analysis as described by Braun and Clarke (20). Thematic analysis involves six phases: (i) familiarisation with the data, (ii) generation of initial codes, (iii) searching for themes, (iv) reviewing themes, (v) defining and naming themes, and (vi) producing the report. Data familiarisation began during transcription of the interviews and by reading transcripts and field notes. Each transcript was coded by the primary author (LG) and a sample of transcripts was coded by a co-investigator (GLO'B). Relationships between the codes were explored and developed into themes by both researchers. The themes were named and defined, and disparities were identified and resolved, through discussion. QSR International's NVivo12 Plus® software was used to manage the qualitative data (21).

Results

Seventeen interviews were carried out. The interviews ranged in length from 19 to 34 minutes, with an average duration of 24 minutes. The characteristics of the study participants are outlined in **Table 3**. Six non-medical/nursing staff members took part in the study: two radiographers, one dietician, one mould room clinical specialist, one pharmacist and one physiologist. To ensure anonymity, these participants will be referred to as HSCPs.

Table 3: Participant Characteristics

		Profession			
		Physician	**Nurse**	**HSCP**	***Total***
Gender	**Male**	4	1	2	*7*
	Female	1	5	4	*10*
	Total	*5*	*6*	*6*	
Work Experience	**≥10 Years**	2	3	3	8
	5-10 Years	1	2	0	*3*
	≤5 Years	2	1	3	*6*
	Total	5	6	6	

Two major themes emerged from the interviews: (i) *Challenging Environment* and (ii) *Thirst for Change.* Although interviewees believed that in general, hospital staff were committed to providing safe patient care, poor infrastructure and insufficient staffing levels, as well as a perceived lack of safety culture at an organisational level, contributed to a sense of frustration amongst study participants. The identified themes highlight the persistent difficulties experienced by HCPs with maintaining a positive safety culture in the context of an under-funded and under-resourced health system.

Challenging Environment

Study participants described the working conditions in the hospital as "*difficult"*, "*dangerous"*, *"negative*", and "*challenging*". Commonly mentioned issues included a lack of necessary equipment, insufficient space to see patients, and not having enough beds for admitted patients.

> "*I suppose what I find frustrating is how under-resourced the hospital is in terms of equipment*" (HSCP 2)

> "*We'd examine patients on the corridor, I talk with them standing up, in a corridor, because there's literally no space to see them in an exam room*" (Physician 1)

> "*I suppose we don't have enough beds, you know because we would have had 48 beds and we had to cut down to 31*" (Nurse 2)

The issue that was commented upon most frequently across the interviews was lack of staffing. Insufficient staffing levels were believed to contribute towards many of the other issues faced by hospital staff, such as stress and burnout, and to have a direct impact on patient safety.

> "*There's not enough staff to look after all the patients*" (Nurse 3)

> *"The biggest safety issues… I think it's got to be staffing levels, it has to be, because that impacts on every single other part of* [patient care]*... if people are working too hard, and become too tired, exhausted, stressed, taking on too much at once, immediately you're going to start getting problems"* (HSCP 1)

Hospital staff often felt that they did not receive adequate support from hospital management. When asked what they would do differently if they were part of hospital management, several interviewees responded that they would communicate more with frontline staff to identify the issues and challenges that were important to them.

> "*The general consensus on the ground is that hospital management don't support their staff*" (HSCP 2)

> "*I'd be going around the different wards and the different departments, asking, you know, the questions that need to be asked about what can be done, what can we do to help*" (HSCP 1)

Staff wellbeing also emerged as an important topic in the interviews, which study participants believed was linked to working conditions. Low staffing levels, patient overcrowding and poor infrastructure were felt to contribute to varying levels of job satisfaction and morale.

> *"Morale is ok in general but I feel like… people are seeing staff numbers go down, patient numbers go up… safe staffing levels are always a concern…. and I suppose that does get morale down"* (Physician 3)

Staff acknowledged that while poor working conditions had an impact on their job satisfaction, it was the patients who were most affected by the negative hospital environment.

> "*The working conditions are horrific, and I suppose the point to make before I answer any further is that the conditions are even more horrific for the patients*" (Nurse 6)

Study participants felt that the working conditions in the hospital had a negative impact on the quality of care they could provide to patients.

> "*A lot of the time you're really stressed and you feel like… you can't give the proper care, because of lack of staffing, and you're afraid that you're going to forget something, because it is so busy*" (Nurse 2)

Thirst for Change

Study participants' perceptions of the safety culture in the hospital were mixed, however a major theme across the interviews was a thirst for change. Some interviewees had positive perceptions of the safety

culture and felt that it had greatly improved in recent years, while others believed that a lot of progress was still needed.

> *"I think on the whole we have a very good culture of patient safety, and it has improved in the last few years"* (HSCP 1)

> *"I think we've a long way to go before safety is embedded…I think we're a long way off from it, but at least the conversation is starting"* (HSCP 2)

There were some study participants who, although they desired change, believed that the challenging working conditions were not conducive to a proactive approach to patient safety.

> "*At the moment we're living at crisis level, so we just deal with the day to day, so there's no forward planning, there's no seeing how initiatives could be changed, how we could change services, we're just treading water, keeping ourselves going*" (Nurse 5)

> *"Under these conditions you can't be proactive in trying to develop safety, you're just trying to fight fires all the time"* (Physician 1)

Interviewees were aware of the importance of various aspects of patient safety culture including communication, teamwork, and incident reporting. Communication within medical teams was considered key to ensuring patient safety during a hospital stay, while communication with community healthcare services, including general practitioners (GPs), was equally important in maintaining patient safety once the patient had left hospital.

> "*If there isn't communication among team members then there is going to be a slight kind of break in the link chain of the patient's actual clinical management, and that then could affect the patient safety in different ways*" (HSCP 5)

> "*I suppose proper communication that … if you send out a letter to a GP, that the GP gets it and that you know that the GP has gotten it*" (Physician 4)

They also acknowledged the detrimental effects that poor communication can have on patient safety, and reported encountering both practical and social obstacles to effective communication.

> "*Over the years, any occurrences, near misses, incidents, that I have been involved in or have been part of or heard about, when you break it down it all comes back to communication breaking down*" (HSCP 4)

> "*Very difficult…. the staff directory is useless, trying to find the doctor you want, they don't answer their bleep*" (HSCP 6)

> "*You'd always feel that, obviously, the doctors know a lot more… you'd often feel that it's not your place to tell them 'that's not right'…*" (HSCP 3)

Teamwork was also seen as an essential part of safe patient care.

> "*I don't think the working day would work at all without every other member of the profession, and the multidisciplinary team [MDT]*" (Physician 3)

Working in MDTs could lead to conflicts due to differing priorities, however the presence of different viewpoints was often helpful in finding solutions to problems. While some staff members experienced a good level of teamwork in their clinical area, others felt more isolated.

> "*I think different specialities working together in one team offers different viewpoints and different, I suppose aspects of the patient's care, that one speciality alone mightn't notice, so I think that it's a positive impact on patient safety, strong teamwork*" (Physician 5)

> "*My team here, you can see it on a daily basis, they're coming out and checking each room, 'I'm free now do you want me to help with anything?', and that works very, very well*" (Nurse 4)

> "*I don't think our teamwork is great, I'll be honest with you. I think we work very much in* [a] *silo in* [our] *department*" (HSCP 2)

Study participants also recognised the importance of incident reporting in maintaining safe patient care and felt that the concept of a no-blame reporting culture was becoming more prominent in the hospital, especially since the appointment of a medication safety pharmacist.

> "*I think the culture has changed so much. When I started you would have been hung out to dry if you made a medication error. The culture has changed dramatically over the years, that we now look at that as a learning prospect*" (Nurse 1)

> "*There's a medication safety pharmacist now, and she's pushing reporting of medication errors, and there's been a two or three-fold increase in error reporting, which is great*" (Physician 3)

However, some study participants felt that they did not receive enough feedback in response to their reports and believed that improved feedback could increase reporting of errors.

> "*There's no feedback, you know, we would like to see some kind of feedback, and we would like to see the actions that were implemented, and the success or failure of that action"* (HSCP 5)

In general, study participants believed that the hospital was committed to patient safety, however they acknowledged that a lack of resources posed a barrier to patient safety.

> "*I have no doubt that it's committed. I think under financial restraints it does a very good job*" (Nurse 1)

> *"We just don't have the resources to change things"* (HSCP 2)

Discussion

The aim of this study was to gain a better understanding of the attitudes of Irish HCPs towards the safety culture in one acute hospital. The key finding of this study was that, in the face of high stress levels and low morale caused by challenging working conditions, staff at the study hospital had a thirst for change

and were dedicated to providing safe patient care. Study participants described how chronic under-resourcing and ongoing staffing issues had detrimental effects on both staff wellbeing and patient safety. Despite these challenging conditions, interviewees believed that most hospital staff were committed to patient safety. Perhaps surprisingly, the majority of participants had positive attitudes towards the safety culture in the study hospital.

Recent literature has depicted an overwhelmingly negative image of Irish healthcare in general (10,14,22,23). In 2018, the European Commission expressed concerns about the cost-effectiveness and sustainability of the Irish health system (24). In the same year, Turner discussed how, despite spending the fifth highest amount per capita on health in the world, historic underspending coupled with the effects of financial austerity was contributing to poorer clinical outcomes for many common conditions, longer patient waiting lists and overcrowding in Irish hospitals (10). Humphries *et al.* described the culture of medical migration in the country and how conditions in Irish hospitals were influencing doctors' decisions to remain abroad rather than return to take up senior posts in Ireland (25). Furthermore, Hayes *et al.* found that one third of Irish doctors experience burnout due to a suboptimal work environment (23). The Health Service Executive (HSE) in Ireland has acknowledged that the 2008 financial crisis led to major consultant recruitment and retention difficulties. In February 2019, a three-day strike was held by the Irish Nurses and Midwives Organisation (INMO) over the issue of pay, which was claimed to be causing staff retention issues (26,27). In a 2019 study by Gallen *et al.*, two thirds of nurses and midwives surveyed stated that they were not engaged in quality and safety as part of their clinical practice (28).

Many of the issues reported by study participants, such as poor hospital infrastructure and staff wellbeing, can be attributed to insufficient or inappropriate healthcare spending. However, most interviewees considered patient safety to be an integral part of their job and were enthusiastic about initiatives to improve patient safety in their clinical area. The role played by good inter-professional

communication, MDT collaboration, and having an open incident reporting culture in maintaining a positive safety culture was widely recognised and appreciated, as well as the negative impact that inadequate resources, lack of staffing, and poor support from management can have on the safety culture of an organisation. Participants generally believed that the hospital was committed to safety, however they were concerned about the suboptimal hospital environment and the negative impact it could have on patients, and were eager for organisational attitudes towards patient safety to change.

The significance placed by HCPs on communication and teamwork could be attributable to the increased emphasis placed on communication and MDTs in recent years, as well as campaigns such as the WHO global safety challenge (29–31). While concepts such as safety culture and blame-free error reporting culture seem to have influenced how frontline staff think about and deliver patient care, unfortunately the same changes do not seem to have occurred at an organisational level in Irish hospitals (1,2).

This study adds to the literature on the attitudes of HCPs towards patient safety culture. To our knowledge it is the first qualitative study on this topic in an Irish hospital context, however we believe that these results could be relevant to health services research internationally. Studies in other countries have reported similar results. Dixon-Woods *et al*. collected data from senior stakeholders and frontline staff in the English National Health Service and found that despite a universal desire to provide safe patient care, organisational and systemic issues meant that staff had difficulty delivering safe care effectively (32). Similarly, Ederer *et al.* carried out interviews with 14 midwives from Austria, Germany and Switzerland. The midwives described how, despite the importance they placed on patient safety, institutional circumstances such as support from management and inter-professional communication could prevent the implementation of patient safety into their everyday work (33). The parallels between the results of these studies and those presented here indicate that the same patient safety issues are faced in many clinical settings, regardless of size or location. Projects such as the Michigan Health & Hospital

Association Keystone Centre for Patient Safety & Quality Obstetric Collaborative Project and the Scottish Patient Safety Programme have demonstrated how patient safety can be improved through an ongoing, strategic and multidisciplinary approach (34,35).

A limitation of the present study is that the use of email to recruit study participants may have introduced selection bias, as not all staff members check their email accounts regularly. Selection bias may also have been introduced by the fact that staff with a prior interest in patient safety may have been more likely to take part in the study, and the staff members worst affected by understaffing and excessive workload may have been unable to take the time to participate.

This study will have important implications for healthcare in Ireland as it demonstrates that although Irish HCPs experience high levels of work-related stress, they are enthusiastic about and willing to engage in initiatives to improve patient safety. Future research should involve the use of qualitative research methods to investigate HCP attitudes towards safety culture at a national level and to inform the design of interventions and initiatives to improve patient safety.

Conclusion

Chronic under-resourcing and ongoing staffing problems have led to poor working conditions and low staff morale in Irish hospitals, which can have an impact on the safety culture of an organisation. The HCPs interviewed in this study expressed very clearly the stress caused by these poor working conditions, and the impact that chronic stress can have on both staff wellbeing and patient safety. Despite these difficulties, the interviewees had generally positive perceptions of the safety culture in the hospital. Hospital staff recognised the importance of teamwork and communication in maintaining patient safety and were committed to providing the best possible care for their patients. Future research on safety culture and patient safety, both in Ireland and abroad, must recognise the restrictions and pressures put on staff working in such a resource-limited environment.

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