"Study on Patient Safety Culture in Nursing Homes: A Qualitative Study in Osmanabad"

Kamble Mamata S[1*], Basanagowda Patil[2], Bangar Sapana R[3], Bankar Rahul B[3], Chate Shital[3], Telang Anuja[3]

[1]Assistant Professor, Department of Midwifery & Gynaecological Nursing, K T Patil College of BSc Nursing, Osmanabad, Maharashtra

[2]Assistant Professor, Department of Community Health Nursing, K T Patil College of BSc Nursing, Osmanabad, Maharashtra

[3]Tutors, K T Patil College of BSc Nursing, Osmanabad, Maharashtra

ABSTRACT: ***Background:*** Patient safety culture (PSC) is a cornerstone of ensuring care without harm, most notably in nursing homes whose residents are the most fragile because of old age, chronic conditions, and temporality. In rural districts such as Osmanabad, PSC encounters a variety of challenges, including resource scarcity, lack of adequate staff, and diverse sociocultural norms that may determine the way care is provided. ***Objectives:*** This study aims to describe the perceptions and practices of staff in nursing homes in Osmanabad concerning PSC, to determine systemic, infrastructure, and interpersonal factors that impact safety, and the extent to which cultural competence and family involvement impact communication and reporting. ***Method***: A qualitative, phenomenological design was employed in four nursing homes in Osmanabad. A purposive sample of 70 respondents, who consisted of registered nurses, nursing aides, and administrators, was recruited. The collection of data involved three methods: semi-structured interviews, non-participant observations, and document review. Analysis was based on open and axial coding using NVivo to thematise coding. A member checking process was used to verify the accuracy and authenticity of emerging themes. ***Results:*** Four overarching themes were identified: (1) deficiencies in safety awareness and training, with staff heavily reliant on peer-led learning; (2) infrastructure constraints including shortages of equipment and poor maintenance; (3) communication barriers, including fear of blame and limited incident reporting; and (4) cultural challenges, where language and traditional beliefs impacted on provision of standardized care. The role of the family as an informal caregiver had a mixed effect, influencing safety outcomes positively and negatively. ***Conclusions:*** Enhancing PSC in the nursing homes of Osmanabad would require a multi-pronged strategy – robust safety education, effective infrastructure, non-punitive reporting systems, and culturally sensitive care methods. Such interventions are essential to closing the gap between formal procedures and human elements in rural LTC, and to safeguard older adults in rural, underserved settings.

Keywords: Patient safety culture, rural healthcare, qualitative study, cultural competence, incident reporting, infrastructure barriers.

1. INTRODUCTION

1.1 Background

Patient safety culture (PSC) (shared values, beliefs, and norms regarding the safety of patients) influences how safety is prioritized, communicated, and practiced by healthcare staff. Among nursing home residents, who are frail and cared for in a complex and chronic manner, a higher PSC has been associated with fewer adverse events and improved healthcare quality for older adults [1,2]. Open communication, non-punitive incident reporting, and teamwork are key components in building PSC in long-term care homes within developed contexts [3].

1.2 Rationale

While a tremendous amount of work has been done on nurturing PSC within hospitals, nursing homes, particularly those in rural and resource-constrained environments, have been less well studied. Osmanabad, a district with a history of being drought-prone prone

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which has infrastructural limitations and a low number of workers, could influence how safety practices are interpreted and practiced. Use of Donabedian's structure-process-outcome model may help to highlight both how system-level factors impact PSC as well as resident outcomes in NHs [4]. Furthermore, qualitative methods such as interpretative phenomenological analysis are proposed to explore the deeper cultural and contextual levels of safety attitudes in caregiving staff [2]. Understanding the process of cultural competence, which has become crucial for staff who are challenged with how to incorporate patients' linguistic, familial, and cultural health beliefs into care, can uncover obstacles or enablers to a strong safety culture [5].

1.3 Objectives
This study aims to:

- To investigate the nursing home staff's viewpoints and experiences that strain patient safety culture in Osmanabad.
- Identify structural, environmental, and social determinants of safety in resource-poor settings.
- Explore the role of cultural competency and community involvement in safety communication and decision-making.

2. REVIEW OF LITERATURE
2.1 Global Perspectives on Patient Safety Culture in Nursing Homes
Safety culture (PSC) in LTCFs has been increasingly highlighted worldwide, given the increasing frailty and higher care complexity of the population who reside in these institutions. Evidence from cross-sectional surveys in Norway and other high-income countries shows that workers with higher education levels report more positive safety culture perceptions, specifically in terms of teamwork and general resident safety [6]. Scoping reviews show that the majority of PSC research is carried out in the US and focuses on quantitative data, thus providing limited access to more profound cultural aspects [7].

2.2 PSC Frameworks and Measurement Tools
Several models inform PSC measurement in long-term care. The Nursing Home Survey on Patient Safety Culture (NHSPSC) and modified Hospital Survey on Patient Safety Culture (HSOPSC) are the most commonly used tools, and share constructs such as communication openness, non-punitive response to error, and management support [8]. Donabedian's framework of the structure–process–outcome model has also been used to demonstrate associations between PSC evaluations, care processes (e.g., restraints), and quality of care outcomes (e.g., falls), highlighting the pathway where organizational structures affect safety [9].

2.3 Qualitative Insights into PSC

Although surveys give a sense of staff perceptions, qualitative research reveals the lived experience behind the numbers. Indonesian nursing homes: from a phenomenological perspective [10] Some phenomenological perspectives on the presence of incidents in Indonesian nursing homes show that creating a well-functioning safety culture in this system requires good-oriented orientation, continuous education, improvement of infrastructure, and mechanisms to learn from incident reflection. These in-depth results highlight the human domain of PSC—attitudes and values of the staff and their ability to learn from near misses.

2.4 Patient Safety Culture in Rural and Resource-Constrained Settings
Nursing homes in rural areas encounter their own set of challenges: Not enough staff, aging facilities, and few resources to turn to in an emergency. While the majority of PSC research has been hospital-based, there is a growing call for context-specific research in under-resourced contexts, where informal caregiving and community links can both aid and hinder safety practices. To design practical interventions, it's important to consider how resource limitations work alongside local culture [11].

2.5 Cultural Competence and Safety Culture
Cultural competence, the competence of staff in understanding and incorporating the linguistic, family, and traditional health beliefs of residents, also guides communication, incident reporting, and adherence to protocols. Qualitative evidence from a range of contexts indicates that when families are respected and cultural norms are honoured, trust and openness are strengthened, contributing to a more open safety culture [12].

2.6 Gaps in the Literature
Despite rushed survey responses and a few unverifiable qualitative glimpses, holes persist. Little is known about PSC in Indian rural nursing homes, and there is scant attention to the relationship between cultural competency and safety attitudes. The interpretive phenomenological research is urgently needed in similar settings like Osmanabad to understand how local context, resource constraints, and staff experiences combine to create a culture of safety.

3. RESEARCH METHODOLOGY
3.1 Study Design
This research is approached based on a qualitative phenomenological design to explore experiences and views of nursing home staff concerning patient safety culture. Phenomenology allows for to investigation of meaning and context in depth, providing a starting point for researchers to derive the subtle attitudes, beliefs, and values in support of safety practices.

3.2 Study Setting

This study was carried out in four purposively selected nursing homes of Osmanabad district (Maharashtra). The bed strength (30–120 beds), nature of organization (private and charitable trusts), immigrant population, and population of the inmates in these setups differ, which offers a rich background to study safety culture in resource-poor rural areas.

3.3 Study Population and Sampling
3.3.1 Population

The study population consists of all direct workers and supervisors of the selected nursing homes, such as RNs, nursing aides, and administrators.

3.3.2 Sample Size and Technique

A total of 70 participants were recruited through purposive sampling to ensure representation across professional roles, gender, years of experience, and type of facility. This sample size balances depth of insight with practical feasibility in qualitative inquiry.

3.4 Inclusion and Exclusion Criteria
Inclusion criteria:
- Worked at the nursing home for at least six months
- Whose duties include direct patient care or safety oversight of residents
- Willing to provide informed consent

Exclusion criteria:
- Administrative personnel who did not provide direct patient care
- Staff on probation or secondment of importance.

3.5 Data Collection Methods
Data were gathered via:
- Semi-Structured Interviews: Individual interviews (45–60 minutes) that followed an open-ended interview schedule about perceptions of safety, previous training, patterns of communication, and the reporting of incidents.
- Non-Participating Observer Visits: Brief observations to record workflow, safety signage, and informal team communication.
- Document Review: Analysis of incident logs, training records, and safety policies for corroboration of interview information.
- All interviews were recorded with consent, transcribed, and, where applicable, translated into English.

3.6 Data Analysis
Transcripts and field notes were organized using NVivo. Thematic analysis followed these steps:
- Repeated exposure and reading up on the data.
- Open-coding for identifying meaningful segments of text.
- Axial coding to cluster codes into categories.
- Extraction of themes to capture global patterns.
- Member validation with a sample of subjects for confirming 'quasi' themes.

3.7 Ethical Considerations

Participants gave written consent and were guaranteed confidentiality and freedom to withdraw. Audio and transcripts were kept on password-protected devices used only by research staff.

4. RESULTS AND ANALYSIS
4.1 Overview

The study drew upon 70 staff interviews and environmental observations conducted at four nursing homes in Osmanabad to demonstrate four central dimensions that shape patient safety culture: training gaps, infrastructural shortfalls, communication barriers, and cultural and family dynamics. These threads highlight the interaction between concrete resources and human agents in rural LTC.

4.2 Participant Characteristics

Table 1: **Participant Characteristics**

Characteristic	n (%) or Mean ± SD
Total participants	70 (100)
Age (years)	35.2 ± 8.7
Gender	
• Female	42 (60.0)
• Male	28 (40.0)
Role	
• Registered nurses	45 (64.3)
• Nursing aides	20 (28.6)
• Administrators	5 (7.1)

Years of experience	6.5 ± 4.1
Facility type	
• Private	38 (54.3)
• Charitable trust	32 (45.7)

Table 1 indicates a relatively equal distribution of effectiveness levels between nurses, aides, and managers, and a predominantly female staff. Average age was greater than six years, which represented substantial experience with facility procedures.

4.3 Emergent Themes

Table 2: Emergent Themes

Theme	Subtheme	Participants (n)
1. Safety Awareness & Training	1.1 Formal training gaps	52
	1.2 Informal peer-led learning	45
2. Infrastructure Constraints	2.1 Equipment shortages	60
	2.2 Facility maintenance issues	55
3. Communication & Reporting	3.1 Fear of blame	48
	3.2 Reliance on verbal handovers	50
4. Cultural Competence & Family Involvement	4.1 Language and belief barriers	40
	4.2 Family as informal caregivers	47

Table 2 highlights that, in addition to near-universal training and equipment shortages, communications and cultural factors were also important.

4.4 Theme 1: Safety Awareness and Training
The majority of the staff (n = 52) lacked organized patient safety lectures (Table 1). 'I learnt how to cope in an emergency, mostly off older (senior) nurses on nights'. Peer-led sessions (n = 45) addressed some of these gaps but had varying levels of depth and consistency.

4.5 Theme 2: Infrastructure Constraints
Equipment problems were raised in 60 interviews, with call bells that did not work and not enough emergency trolleys. "Our oxygen cylinder got over last month; we mobilized it from a nearby hospital". Poor maintenance (n = 55) — leaky floors, flickering lights — deepened risk perceptions.

4.6 Theme 3: Communication and Reporting
Approximately 70% of respondents (n = 48) were afraid of punishment when making mistakes. "We can correct the slip and avoid filling out that incident form, and we're not being blamed. Verbal handovers were the most common (n = 50), though missing during shift transitions frequently occurred.

4.7 Theme 4: Cultural Competence and Family Involvement
40 staff members said language mismatches and traditional beliefs were challenges. "Families want to use herbs; I find it difficult to explain why we have to use the chart". Family caregivers (n = 47) typically filled in as temporary aides, enhancing monitoring but frustrating formal protocols.

5. DISCUSSION
5.1 Overview of Key Findings
This phenomenological exploration identified four interconnected factors influencing patient safety culture in Osmanabad nursing homes: deficits in formal education about safety, persistent lack of in-the-moment safety resources, fear-based communication processes, and the tenuous place of cultural and familial operations. Recurrent staff mentions of the role of peer learning in making up for missing workshops, nonetheless, could not overcome the problems of uneven content, perpetuated unsafe practices. A shortage of resources even contributed to these educational deficiencies, the (broken) call bell not working, and the crash trolleys not stocked. Communication faltered under punitive norms, which deterred reporting of errors, and language barriers and cultural beliefs enriched and complicated collaborative care.

5.2 Comparison with Existing Literature
The relationship between training deficiencies and adverse events parallels observations from a national U.S. survey in which facilities without formal safety training rated lower in teamwork and overall safety scores. In a similar vein, Miller & Sroka found that departments that used established safety culture surveys in their department had higher reporting rates and the

importance of having secure assessment tools [8]. The infrastructure limitations revealed in this study mirror a pilot in long-term care, where a lack of equipment directly reduced employee and resident safety [11]. The fear of retribution is in line with Castle and Sonon's statement that non-punitive reporting systems are paramount for a mature safety culture [13]. The disjunct function of families, as both informally-insulated ally and protocol-disruptor, also finds echo in wider reviews which highlight the need for cultural competence to foster transparency and trust [14].

5.3 Implications for Clinical Practice

Structured context-sensitive safety training that is embedded in situ in resource-poor rural settings can help de-fragment knowledge and mental models among healthcare providers in emergency response situations. Peer champions need to be given official recognition, trained in adult learning strategies, and incorporated into established professional development. By developing and implementing scheduled equipment inspections and maintenance checks, the infrastructure will be more reliable, ultimately enhancing staff alertness and resident outcomes.

5.4 Implications for Practice and Policy

Minimum PSC training hours must be enforced for personnel of all nursing homes by the policymakers, with subsidised programmes offered for the rural belts. Regulators must encourage reporting of nonpunitive incidents through the use of confidentiality and feedback loops, thereby converting data to knowledge. Management teams should include cultural competence modules encompassing local languages and traditional health beliefs in standard approaches, and should recognize family involvement as a "strategic asset" rather than an obstacle.

5.5 Directions for Future Research

Such future studies might assess the effect of targeted safety culture interventions (eg, simulation-based education, mobile reporting applications) on indices of staff behavior and resident outcomes (falls, medication errors). Ethnographic research would also be instrumental in revealing the underlying assumptions informing risk consciousness across different rural settings. A comparative study in more regions would help ascertain the generalizability of Osmanabad's findings and inform the design of a scalable policy.

5.6 Strengths and Limitations

Phenomenology in this study yielded rich, situation-based insights regarding staff perspectives and purposeful sampling across four different nursing homes increased transferability. Triangulation of interviews with observation and document examination enhanced credibility. Results, however, may not be generalizable to urban or larger facilities. The potential for social desirability bias could have influenced some participants to be less honest about errors. And, the last point: resources constrained the possibility of sustained fieldwork.

6. CONCLUSION

Our phenomenological analysis of patient safety culture affords evidence that there are four convergent dimensions—lack of training, structural inadequacy, communication difficulty, and cultural–family dynamics—that jointly contribute to these staffers' perceptions, enactments, and prioritizations of safety. With no formal education, peer learning has developed as a stop-gap solution, but there was wide variance in quality. As frontline workers faced chronic shortages of critical supplies as well as lapses in maintenance, they and the country's leaders, especially in the months before the election, saw their confidence and vigilance eroded.

Importantly, staff reported that blame culture is endemic, while a culture of silent problem-solving discourages incident reporting. Oral handovers, however, often miss important information, being quick and dirty. Language differences and traditional health beliefs, in the meantime, both deepened relational ties and challenged adherence to routine protocols. Relatives, who commonly acted as informal watchdogs, occasionally brought in unsupervised care practices that staff struggled to accommodate within more formal safety mechanisms.

To tackle these challenges, a multi-pronged approach is necessary. First, the deployment of context-sensitive standardized safety training accompanied by certified peer champions has the potential to synchronize knowledge and practices among all roles. Second, regularisation of infrastructure evaluation and maintenance will guarantee the consistent availability of lifesaving appliances. Third, developing a non-punitive reporting culture, reinforced by closing the loop of confidential feedback, can turn mistakes into lessons. Lastly, integrating cultural competence components during onboarding and ongoing training will leverage parental engagement as a resource, and not a barrier.

The research is based on rural Osmanabad and 70 respondents, but the implications apply to such resource-constrained situations across the globe. Targeted interventions, including simulation-based drills and mobile-based reporting platforms, warrant further study for their impact on facility staff behaviors and resident outcomes. Weaving together concrete resources and humanistic tactics, policymakers as well as nursing home leaders can build a culture of safety that protects

the welfare and dignity of aging residents in the face of structural challenges.

7. Conflicts of Interest

The author has no conflicts of interest related to this study. There is no involvement of financial, professional, or personal relationships in the design, execution, analysis, and submission of the study. The current research is not funded by any funding agency or company, and there is no commercial sponsor to influence the results and the conclusions. Ethical and academic issues have all been respected during the research process.

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