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Research Article

Enhanced Perioperative Safety in Ethnic Patient Groups: An Explorative Case Study among Professionals in a Dutch Hospital

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- Brief report
- Case study

Abstract

Objectives: Unexpectedly, a previous single center-study showed disparities in high risk surgery (mortality risk >1%) in favor of non-western ethnic minority patients. To explore these findings we analyzed healthcare professionals' perspective on elucidating determinants.

Design: Explorative case study through six semi-structured interviews and a synthesized-member-check-focus- (SMC, six participants). Interviews and SMC were transcribed verbatim and coded by hand. A SMC was subsequently organized to validate and explain previous findings. Results were triangulated into an explanatory model, focusing on differences in safety in favor of non-western ethnic minority patients.

Results: Two key themes emerged: transethnic connectedness and communication barriers. Favoring determinants within the transethnic connectedness theme were: more non-adherence in dealing with rules and restriction, more trust in healthcare professionals, differences in values and culture. The SMC added positive job satisfaction in caring for minorities to this list. Determinants within the communication barriers theme were: time constraints, language proficiency and bridging language barriers. The SMC added checking understanding of information provided and more room for family involvement. Healthcare professionals believed that low language proficiency is more easily recognized (and resolved) in non-western ethnic minority patients than in Dutch majority patients.

Conclusions: In this hospital, with high volume non-western ethnic minority patients, healthcare professionals provide special attention to non-western ethnic minorities in applying efforts to overcome barriers relating to transethnic connectedness and communication barriers. Apart from extra attention to ethnic backgrounds, alertness is also needed to potential language barriers in vulnerable Dutch majority patients.

INTRODUCTION

Patient safety in perioperative care has received increasing attention over the past few years. Guidelines, checklists and instructions have been developed to help prevent errors and adverse events and improve safety in perioperative care [1-3]. There is increasing evidence that patients from ethnic minority groups are more at risk of perioperative complications and death than ethnic majority patients [4,5]. Biological and genetic risk factors in African Americans, low Social-Economical-Status (SES), language and cultural aspects may contribute to a higher risk of perioperative adverse events and poorer clinical outcomes [6-8].

Healthcare disparities refer to differences in access and provision of healthcare between populations. They matter because improvements in overall quality of care, and population health may be unequally distributed [9]. Inadequate language proficiency is a known risk factor and the inability to comprehend the treatment plan may result in poor patient satisfaction, poor compliance, and underuse of services [10]. The quality of patient-provider communication varies in patients with breast cancer with different racial/ethnic backgrounds and lead to ethnic disparities in health outcomes [11].

The diversity in patient population in the Netherlands and the

associated language barriers were therefore expected to hinder the perioperative trajectory and compromise perioperative safety in non-western ethnic minority patients (further: minority patients). To determine the effect of ethnicity on healthcare outcomes, a prospective observational cohort study in high risk (mortality risk >1%) surgical patients was performed in the Maasstad Hospital in Rotterdam. In their adherence region the minority population estimates 37,0%, compared to 11,9% in The Netherlands [12,13]. Unexpectedly, there was no increased risk to patient safety with even fewer complications in the minority group [14]. Therefore, in this study we aimed to explorewhat determinants, from a professionals' point of view, contribute to safe perioperative care for minority patients. From a 'best-practice' perspective, we aimed to learn from this hospital by trying to identify contributing determinants.

MATERIALS AND METHODS

Study design and setting

An explorative case study by semi-structured interviews and a synthesized member check focus group (SMC) was performed in perioperative care professionals in the Maasstad hospital in Rotterdam.The COREQ 32 items checklist for reporting qualitative studies [15] was used.

Interviews, participants and process

Six key figures (Table 1) in the perioperative process were invited to participate. These professionals deliver perioperative care to both minority patients (16,4%) and Dutch patients (83,6%) undergoing high risk surgery (mortality risk >1%) [14]. After verbal informed consent, an appointment for the interview was made.

During the face to face in-depth interviews (mean duration 45 minutes), a topic list compiled on the basis of literature, expert consultation and discussions in the research group was used as guidance [16,17]. The topics addressed were: language proficiency and barriers, safety guidelines, role of ethnicity, cultural aspects and threads in perioperative safety.

All interviews were carried out by GB, recorded digitally and transcribed verbatim.

Synthesized Member Check Focus Group (SMC)

A SMC was subsequently organized to validate and explain the previous findings [18]. All six interviewed professionals were invited, three were unable to attain. The researcher (GB) informed the participants (Table 1) about the SMC by means of an information letter. A topic list based on the interview results added with questions to better understand the better health outcomes of minority patients was used. Where possible, questions were asked to explore the answers more in depth. At the end of the session, the conclusions were summarized and confirmed by the participants. The SMC recording was transcribed verbatim.

Data analysis

All data were coded by hand (GB), two interviews were independently coded by a trained assistant (TB). The codes were compared and differences discussed. After analysing the interviews and the SMC, the codes were discussed in the research group and grouped into categories (further: 'determinants') and themes.

RESULTS AND DISCUSSION

Results

Themes and determinants: From the interview transcripts three themes emerged which were discussed in the SMC: safe care delivery, transethnic connectedness and communication barriers. Because we aimed at explaining safer care for minority patients the themes transethnic connectedness and communication barriers are described in this article (Tables 2,3).

Determinants within the theme transethnic connectedness

More risk of non-adherence in dealing with rules and restrictions: There are many rules and restrictions for professionals, patients and their family during the perioperative

Table 1: Interviewees and participants of the synthesized member check focus group.

Participants	Inter-views[4]	Member check[5]	Department	Years experience	Gender
Nurse-1	x	x	Nurse department surgery	12	F
Nurse-2	x	x	Nurse department surgery	10	F
OR -Nurse	x		OR-Room	20	F
ICU Nurse	x		Intensive care	15	M
Anaesthesiologist	x	x	Anaesthesiology	>25	M
Surgeon	x		Surgery	>20	F
Recovery nurse and researcher[1]	x	x	Recovery room	34	M
Nurse and senior researcher[2]		x	IQ healthcare	20	F
Professor Anaesthesiology[3]		x	Anaesthesiology	>40	M

[1] Interviewer and organiser member check focus group (GB)
[2] Supporting interviewer (HC)
[3] Moderator (JD)
[4] Invited for interviews and synthesized member check focus group
[5] Participated in member check focus group

Table 2: Theme transethnic connectedness.				
Theme 1	Transethnic connectedness			Extra from the SMC
Determinants	*More risk of non-adherence in dealing with rules and restrictions*	*More trust in care professionals*	*Differences in values and culture*	*Job satisfaction in caring for minorities*
Codes	Check patients understanding	Reassuring and informing contributes to trust in relation.	Respect differences in values. Effect on patient safety	Job satisfaction, experience and education
	Maintaining rules and check compliance	Safer environment through optimal communication	Impossible to know all differences between cultures	
	Problems: Not just ethnic background, but often misunderstanding			

Table 3: Theme communication barriers.					
Theme 2	Communication barriers			Extra from the SMC:	
Determinants	***Time constraints***	***Language proficiency***	***Bridging a language barrier***	***Language proficiency of the Dutch majority patients over-estimated***	***Understanding of information provided was checked.***
Codes	No time pressure, better information exchange	Limited health literacy, more dependency	Professional, family or interpreter	Not recognising illiteracy, reduced time spent on Dutch patients contribute to their poorer health outcomes	Professionals check the understanding. Minorities receive more attention and verbal explanation than Dutch majority patients.
	Interpreters can help but often lack of time	Solutions: translation by professional instead of family interpreter Sign language helps	Mutual effort for bridging a language barrier		Family allowed to accompany minority patients to OR
		Family, reassurance Prolonged admission for intensive care patients with limited language proficiency	Professionals cannot speak all languages		Separate rooms for minority women

Table 4: Comparison of care between non-western ethnic minority and Dutch majority patients, differences discussed in the member check focus group.
Differences discussed in the member check focus group
Information leaflets are available in different languages for minority patients
Minorities get more verbal explanation and attention
Invitepatient to return with a family member or interpreter if a language barrier exists Use interpreter if there is any doubt about patients' understanding of the conversation Minorities more frequently do not respond to questions or they do not take the necessary actions (medication stop, not having fasted) due to lack of understanding (and missed appointments) Bringing bad news to a non-western minority patient is more difficult, or not acceptable
Awareness of cultural differences between minority and majority patients
Separate rooms available for female minority patients
Family and children of minority patients need to confirm that they fully understand what actions are required
Family of non-western minority patients are allowed to accompany patient to Operation Room for translation

period. Often patients and their family are not aware of these rules and how they contribute to the recovery of a patient. Professionals know it is better to check patients understanding of these rules and restrictions, than to assume that the information is understood.

Anaesthesiologist*:…the information should be presented in a way the patient knows what is expected of him. If someone has not fasted, you should always ask why he has not fasted! Did he not receive the letter or did he not read the letter? Is it an illiterate? Did he not understand the terms because he does not speak Dutch?*

Otherwise it is our fault.

Maintaining the rules and checking whether patients and family comply with these rules is sometimes difficult but necessary for recovery of the patients. Study participants pointed out that not just ethnic background, but also personality traits, clashes, and misunderstandings can cause problems concerning rules and restrictions.

More trust in healthcare professionals: Building trust between a patient and a professional is perceived as important by participants. Reassuring and informing patients correctly contributes to trust and the development of a good patient–practitioner relationship. Optimal communication leads to better informed patients and professionals which in turn lead to a safer environment where patient-centred care can be delivered.

Differences in values and culture: Participants say they must respect differences in values when caring for patients with different religious beliefs. This may have implications for patient safety. It is important that patients and family are fully informed and prepared for situations in which for example they don't want to accept a blood transfusion.

Participants point out that it is impossible for them to know all differences between cultures. Colostomy and breast amputations are well-known examples of not acceptable options in some cultures.

Surgeon: *... The most protective, a breast amputation or making a colostomy, that's nevertheless not an option in several cultures, that's what I know. It is not acceptable... I can't take that into account when I give information…*

Extra determinant from the SMC: job satisfaction in caring for minorities

Professionals mentioned that experience and education in caring for surgical patients is seen as being essential. They especially experienced job satisfaction when taking care of minority patients.

Anaesthesiologist: *It is good to see that minority patient are doing well in our hospital. Why is that? If minority had a higher complications or mortality rate, compared to Dutch patients, we had to improve a lot for them. Now we must look to our Dutch patients. We were surprised with that result. Without knowing it we took good care for our minority patients. That's nice.*

Determinants within the theme communication barriers

Time constraints: When there is no time pressure, important information can be exchanged easily, so that nurses, anaesthesiologists and surgeons are optimally informed about the individual patient. If not, patients may receive less information then necessary.

Nurse 2: *Due to lack of time, you quickly hand over some papers, tell your story and you have to go to the next patient. As a consequence, patients may sometimes go home with less information then necessary. There is no room for questions or patients experience that we are in a hurry and they won't bother us.*

Language proficiency: Language proficiency is necessary for patients to understand how to prepare for an optimal perioperative process. Patients are expected to understand Dutch or English, or otherwise they have to be accompanied by someone who can translate on their behalf. Patients' family members or friends are most effective in re-assuring a patient, translating the instructions and in helping the patient to calm down. When the complexity of care increases, a language barrier can create greater problems. For example, when a patient cannot understand the procedures for weaning off mechanical ventilation on an intensive care unit.

ICU nurse: *..they just do not follow the instructions. They quickly panic and then you have to put back the ventilator quickly because they have no idea what is happening.*

ICU nurse: *No, it is difficult to reassure them. You have to wait until family is there. They will translate your explanation and then you notice that things are going better. Then you know, that it is really the language and language barrier.*

Bridging a language barrier: In the postoperative period, family or friends are contacted by telephone when instant translation is needed. Bridging a language barrier requires mutual effort from both the perioperative professionals and the patients. Family and professionals and, if necessary an interpreter, translate conversations between patients and professionals. Contrary to Dutch patients, family of minority patients are allowed to accompany patient to the operation room for translation.

OR nurse: *….In the first instance the professional is responsible to check patients' understanding of the information, but I think that the patient is also partially responsible for understanding what is said. If they know that they do not master the Dutch language then they should bring their son or granddaughter who can translate…. …You cannot expect from a professional that he or she can speak 32 languages…..*

Extra determinants from the SMC: *healthcare professionals believe that low language proficiency in terms of low literacy in Dutch majority patients is not as easily recognized (and resolved) as language barriers in minority patients*

Participants in our study believe that the language proficiency and health literacy of the Dutch majority patients are over-estimated. Vulnerable Dutch majority patients also need more attention and take more time to explain plans, procedures and interventions. Not recognising or neglecting low or illiteracy, together with the reduced time spent on Dutch patients, is believed to contribute to poorer health outcomes.

Anaesthesiologist: *I have to say, we were very surprised that our minority patients actually do better than our Dutch majority patients. Perhaps we should pay more time and attention to our autochthonous, less developed and illiterate Rotterdam-south patients….*

Understanding of information provided was checked & more room for family involvement

Professionals check the understanding of the information with minority patients but generally not with Dutch majority patients. Minority patients receive an information folder -

available in several different languages - and they are given more attention and more extensive verbal explanation than Dutch majority patients. If there are any doubts about the patient's understanding, either an interpreter is used or patients are invited to return with an interpreter. Dutch patients are asked if they have received an information letter but the understanding of the explanation is not checked. Family members of minority patients may be allowed to accompany patients to the operating theatre. If possible, separate rooms for women are arranged. (Table 4).

DISCUSSION

This explorative case study shows that special attention for language barriers and a culture of transethnic connectedness may contribute to safe care in minority patients. The attention for language and understanding in vulnerable majority patients with low language proficiency is warranted to also improve their perioperative safety.

Previous studies show the negative impact of language barriers on many aspects of healthcare. Language barriers may increase the risk for medication errors, complications, adverse events and less protected rights to informed consent and confidentiality [19]. The Joint Commission International [20] and Meuter [21] conclude that bridging language barriers and improving low health literacy will have a positive impact on hospital and perioperative safety

Van Rosse and colleagues [22] developed a conceptual model to understand the role ethnicity in patient safety. In their model, ethnicity is considered a 'risk factor' that may lead to adverse events. The White-Means study [11] examined the mechanisms and determinants in the patient-provider communication that increases the disparities in health outcomes and the quality of care for breast cancer patients with different ethnic backgrounds. Several factors such as respectful patient-provider interactions, listening to patients, adequate explanations of outcomes and treatment, and adequate time spent in interacting with the patients etc. were determined. It was concluded that in the relationship between professional and patient, ethnicity may influence the quality of communication between professionals and patients.

Professionals should become more aware of the influence of language barriers, including low health literacy – regardless of ethnic background - and its relationship with safety and quality of care [19,23,24].

Ethnicity may be an important determinant, however from our results, patient-care provider interaction problems, may be largely avoidable when low health literacy and low language proficiency is recognized and when existing language barriers can be overcome. In our vision transethnic connectedness - i.e. the ability of a professional to understand, communicate and act conform patients' cultural background - can improve patient provider communication & interactions and will help to reduce ethnic disparities in patient outcomes.

Our study has some limitations. Firstly, all invited professionals for the SMC also participated in the interviews. Only three of the six invited professionals participated in the SMC. So there was no input in the SMC from an intensive care nurse, an operation room-nurse and two surgeons. Nevertheless, an open discussion was held with relevant and valuable contributions from these participants (two nurses and an anaesthesiologist) who had many years of experience in the perioperative setting and were able to share their different perspectives on the topics discussed. Secondly, this is an explorative case study. Healthcare professionals from other hospitals might have other experiences from which different conclusions could be drawn. However, more attention for potential communication problems doesn't harm patients and may be recognized in other hospitals.

CONCLUSION

As far as we know, up to now no other study explored the professionals' views on determinants contributing to safe perioperative patient care in ethnic majority and minority patients. We hypothesize that perioperative safety for both patient groups can be improved by taking determinants such as the assessment and recognition of limited language proficiency, including health literacy, followed by interventions such as bridging a language barrier, family involvement, safety restrictions and checking the understanding of instructions. Transethnic connectedness will help to bridge communication barriers and reduce disparities in health outcomes. Language comprehension seems to be more important than ethnicity as such.

Practice implications

Participants in our study believe that the health literacy and language proficiency of the majority patients may be over-estimated, resulting in possible neglecting a need for more attention and explanation of plans, procedures and interventions. Recognising low or illiteracy is believed to contribute to better health outcomes. Any language barrier is considered an important determinant that can threaten safe perioperative care for all - both minority and majority - patients.

We considered this hospital as a 'best practice hospital' with respect to the safe care delivery for minority patients. Additional research with more participants and different hospitals is needed; extrapolation of the results to other hospitals should be done with caution.

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DECLARATION OF INTEREST

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