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Research Article

Perioperative Safety Determinants in Ethnic Patient Groups an Interview Study in High Risk Surgery Patients

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Abstract

Objective: To study patients experiences regarding their perioperative safety in a hospital where we unexpectedly found safer care in non-western ethnic minority patients compared to Dutch majority patients.

Methods: By purposive sampling nine Dutch majority patients and eight non-western ethnic minority patients were semi-structured interviewed.

Results: In the first theme 'Nurse and physicians' behaviour', positive determinants related to an attitude of experienced Nurse and physician' that provide patients with trust. On the other hand, negative determinants provide patients with experiences of unsafety. In the second theme 'Team performance', positive determinants involved effective communication and coordinated care of the Nurse and physician'. Negative determinants related to visible disagreement about the treatment. In the third theme 'Patient behaviour', positive determinants related to seeking support from Nurse and physician' and family to recover and to endure an anxious period. Negative determinants related to missing appointments or not consulting the information provided.

Conclusion: Nurses and physicians behaviour, team performance and patient behavior are relevant factors that contribute to patients' trust and experiences of safe care. More attention should be paid in engaging patients to participate in their own safety. Through stimulating an active attitude of patients in seeking support they contribute to experiences of safe care. Stimulating situational awareness on all levels (society, organisational, team, individual and patient level) may help to improve perioperative safety and safety experience. These results can be used by nurses and physicians to improve patients' experiences of safe care, for both non-western ethnic minority and Dutch majority patients in an uncertain and vulnerable perioperative period.

INTRODUCTION

Perioperative safety risks, safety experiences and ethnicity

Patients with a non-western ethnic minority background and low language proficiency may be at increased risk for adverse events [1-3]. Patients indicate that nurse or physician-patient interactions, relationships, and trust are the most important determinants in their experience of safety [4,5]. Deficiencies in this respect contribute significantly to racial disparities in outcomes after coronary artery bypass graft surgery [6]. But a significant fraction of this racial disparity remains unexplained. Efforts to decrease racial disparities in health care should focus on centres of care which are both under-performing, and also treating relatively high numbers of non-western patients [6]. In a previous study - performed in one Dutch hospital -we found no difference in perioperative safety guideline adherence between non-western ethnic minority patients [further minority patients] and Dutch majority patients [further Dutch patients] and even better outcomes for minority patients [7].

Exploring both patients, nurses and physicians experience of patient safety

To explain these unexpected better outcomes for minority patients and to get insight in determinants of patients' perioperative safety experiences. We wanted to investigate what had contributed to these results. It is known that patient satisfaction is strongly associated with good communication

and information transfer. Confidence and trust in the clinical team as well as use of mutual understanding, social support, trust and adherence as intermediate outcomes, are important determinants for patient experience and health outcomes [5,8]. We interviewed trauma and oncology nurses, an ICU nurse, an or-nurse, a surgeon, and an anaesthesiologist to explore their views on patient safety. It was concluded that nurses and physicians who could bridge the language barrier may have prepared patients better for anaesthesia and surgery which may, in turn, have contributed to better health outcomes [9]. Nurses and physicians payed particular attention to patients with limited language skills because they consider this essential for adequate communication and understanding. Bridging a language barrier is an important condition for safe perioperative care for patients from minority groups with foreign language as well as for native Dutch patients with low language proficiency.

Research aim

In this study we investigated the patients' perspective using the following research questions: How do high risk surgery patients experience safety in the perioperative period? What influences their safety experiences? What strategies do patients use to ensure and improve their own safety? Perioperative nurses, physicians and other Nurse and physician' can use the knowledge to engage patients to be a partner in their (perioperative) safety.

MATERIALS AND METHODS

Study design

A qualitative grounded theory design was applied. In order to understand the patient's perspective on the needs and safety in the perioperative period we choose to interview patients in depth and face to face.

Setting and participant selection for the interviews

The Maasstad Hospital in Rotterdam has an above-average amount of minority patients and therefore much intercultural expertise. Non-western minority and Dutch patients, undergoing high risk surgery (mortality risk >1%) (10) in the period from January 2012-January 2014 were eligible to participate in an interview; the same group as in a former study about the impact of ethnicity on safety guideline adherence and health outcomes (7). The interviews took place after the decision for discharge from the hospital had been made. After patients had given their informed consent, they were interviewed at their bedside in their own room if possible, or a quiet location was sought. All interviews were carried out by GB, recorded with a digital voice recorder and transcribed verbatim with F4- transcription software. Field notes made directly after the interview were used during the interpretation of the results. One patient was interviewed by telephone on request of the patient.

Data collection & analysis

A topic list compiled on literature [11-13] was used to interview the patients (Table 1). After some questions about patient characteristics (Table 2) the interview started with questions that were primarily focused on the preoperative intake by the anaesthesiologist and the period of postoperative stay at the surgical nursing ward. We also asked patients about the strategies they took to ensure and improve their own safety. We focused on perceived barriers to care, and the role of nurses and physicians, family and religion. We asked for examples of situations, interactions, and communication with nurses and physicians as well as other determinants that may have influenced their safety. Finally, patients were asked to describe their experiences about safety of care during the perioperative phase

The principles of grounded theory were used to analyse the data [14]. Data analyses started as soon as the interviews were transcribed. The interviews were coded and analysed by hand (GB) and also independently read and coded by TB to check whether the same codes were derived from the data. The codes were compared and the differences discussed. This process was repeated and after recoding the interviews, the definitive codes were structured and grouped into categories and themes. Data saturation was reached in both patient groups.

Definition and determination of ethnicity

Country of birth, used to determine patient's ethnicity, was recorded from the patients' passports on the day of admission. Patients were categorised as Dutch patients, minority patients or 'unknown', using the definition of the Dutch Center of Statistics [15]. The category 'minority' patients includes persons with a non-western background, with a Turkish, African, Asian and Latin-American background, following the definition and classification of the population with a foreign background in the Netherlands [16]. Based on their social and economic position in the Dutch society, patients with a Japanese and Indonesian background were classified as western. Patients not born in the Netherlands and not born in a 'non-western country' were subsequently excluded [15,16].

Ethics

The research ethics committee of the Radboudumc and the scientific committee of the Maasstad hospital approved the research proposal and informed consent procedure.

RESULTS AND DISCUSSION

Eight minority patients and nine Dutch patients who underwent high risk surgery in the Maasstad Hospital in Rotterdam were interviewed. From the transcripts three themes emerged: "Nurse or physician behaviour", Team performance" and "Patient behaviour". In each theme two categories could be distinguished, namely positive determinants and negative determinants.

Looking at different ethnic backgrounds of participating patients we did not find indications of differences in the experiences of safety.

Theme 1: Nurses and physicians' behaviour

Positive determinants: Respectful, polite and friendly behaviour of nurses and physicians create an open and positive atmosphere between the patient and themselves. This make you feel like a person and not a number. Patients appreciate the friendly 'welcome with a smile' in this hospital. They feel that they are treated in a personal way. Nurses and physicians are

Table 1: Topic guide for the interviews with patients (abstracted).	
Safety	Did you feel safe during your stay? Can you explain? Are risks and potential complications of surgery &anesthesiology explained? How did you feel? Did the rules and restrictions help you to prepare and recover? Can you explain? Role of ethnicity in safety: Did ethnicity affect your safety? Can you explain?
Language & Information	Dutch language: Assistance, Tools & Translation. Language proficiency: How to bridge language barrier? Family or interpreters?
Strategies & expectations	Expectations and results: Did the surgery meet your expectations. Can you explain? Expectations: What do you expect from the Nurse and physician? Please explain? Problems: What problems did you meet? What were solutions?
Family, Social support, Ethnicity, Culture & Religion	Role of family: How was the support of your family? (Before and after surgery) Role of religion: People help from Church, Mosk or temple? Role of Culture and religion: Impact on health and recovery? Role of ethnicity: Did your ethnicity influence the care that was given? And the ethnicity of the caregiver? When? How? Situations? Explain.

Table 2: Patient characteristics (Non-western minority patients).

Non-western minority patients n=8				
Patient	**P1**	**P5**	**P6 Interviewed via telephone**	**P7**
Type of surgery:	Gastric bypass	Gastric sleeve	Gastric Bypass	Oesophagus resection
Age:	29	57	53	70
Sex:	Female	Female	Female	Male
Country of birth:	The Netherlands	Iraq	Surinam	Surinam
Country of birth, father :	Cape Verde	Iraq	Surinam	Surinam
Country of birth mother:	Cape Verde	Iraq	Surinam	Surinam
Marital status:	Not Married	Divorced	Not Married, single	Single
Children:	1 daughter	7 (4 sons and 3 daughters)	0	1 daughter
Education level:	MBO[2]	Secondary school	MBO[2]	MBO[2]
Occupation:	?	No	Desk job	Financial law
Religion	Catholic (former Jehovah)	Islam	Budhism	Catholic
Speaks Dutch language:	Yes	No	Yes	Yes
Understands Dutch language:	Yes	No	Yes	Yes
Interpreter:	Not necessary	Daughter	Not necessary	Not necessary
Patient	**P9**	**P14**	**P15**	**P17**
Type of surgery:	Cholecystectomy	Removal of pancreas Stone	Vascular surgery	Bile duct bypass
Age:	65	61	52	44
Sex:	Male	Male	Male	Male
Country of birth:	India	Surinam	Surinam	Cape Verde
Country of birth, father :	India	Surinam	Surinam	Cape Verde
Country of birth mother:	India	Surinam	Surinam	Cape Verde
Marital status:	Widow	Divorced	?	Divorced, single
Children:	1 son	1 daughter	4	4
Education level:	MBO[2]	Primary school	LBO[1]	LBO[1]
Occupation:	Administrative harbor	Welder	Welder	Electromechanic
Religion:	Catholic	Hinduism	Catholic	Pentecostal church
Speaks Dutch language:	Yes	Understanding, not speaking	Yes	Yes
Understands Dutch language:	Yes	Yes	Yes	Yes
Interpreter:	Not necessary	Not necessary	Not necessary	Not necessary

[1]LBO = professional education, lower level
[2]MBO = professional education, middle level
[3]HBO = professional education, higher level

present for you, show personal interest and take time for you but are also to the point and dedicated. They provide justified reassurance, explain everything to you in a personalised way, are gentle, helpful and in for small talk. There are no thresholds in communication. Patients remark that the operation room is managed smoothly. They feel comfortable when nurses and physicians show an attitude of experience and self-assurance. Nurses and physicians are well skilled. They know where they are talking about and give the right answers. These determinants give patients trust and let them feel safe. Trust in the nurses and physicians and the perioperative process they are in (Table 3, Table 4 and Figure 1).

Negative determinants: Contradictory (or conflicting) policy between specialisms was difficult for patients. One patient experienced limited communication between the oncology and surgery departments. The surgical intervention was changed short before surgery without informing the patient on time. Every department has his own director and disagreement is detrimental for patients' interests. Unexpected treatment or late strategy changes create doubts and uncertainty. For instance a sudden cancelling of the operation can cause extreme stress and made one patient introvert. Contradictory information and criticism between nurses and physicians about activities leads to experiences of unsafety and undermines the self-assurance of patients and the trust in nurses and physicians. Nurses and physicians talking negative about colleagues handling also undermine patients' trust and safety experience.

Theme 2: Team performance

Positive determinants: Effective and corresponding communication and optimal coordinated care of the surgeon, anaesthesiologist and nurse contribute to an experience of safety. Patients expect expertise, reassurance, kindness, a smile, and that the nurses and physicians act effectively, self-assured, correctly and in concordance.

Negative determinants: Patients can be anxious, uncertain and worried for the risk of complications, not waking up or dying and leaving family behind. They have worries for inadequate support and follow-up and delay of surgery. With anxiety before surgery, confidence in the nurses and physicians is necessary but you can never know for sure whether it is safe or not. It is safe until something dangerously is happening. If patients don't have a lot of family support, simply because it isn't available, they worry about how to get the help they need. Life becomes more difficult and more limited. If several specialisms are involved in the treatment, visible disagreement about the treatment or poor interprofessional communication let patients experience that they may fall between the cracks. Contradictory information is annoying and confusing and raises distrust. Doubts about a smooth care process and accuracy originate from the speed of the process, a change of policy, and insufficient knowledge of the necessity. On the one hand, patients have to be critical on the preoperative interventions for their own safety, on the other hand they cannot be too critical because they feel to show trust to the nurse or physician. There is extreme relief when an operation is survived and completed successfully. Any distrust triggers anxiety and may influence patients' experiences of well-being negatively during their stay in hospital. Distrust also creates an experience of permanent unsafety. Distrust is not only stressful for patients themselves but may also threaten the relationship between patient and nurse or physician.

Theme 3: Patient behaviour

Positive determinants: Patients need information about planning, procedures, expectations, late complications, treatment, diet, stitches removal, appointments and medication.

Table 3: Themes, categories & codes related to determinants that influence the safety experience of high risk surgery patients.

THEMES:	**Nurses and physicians' behaviour**		**Team performance**		**Patient behaviour**		
Categories	**Positive determinants**	**Negative determinants**	**Positive determinants**	**Negative determinants**	**Positive determinants**		**Negative determinants**
Codes	*-Justified reassurance -Showing experience -Showing personal interest -Provide trust -Create good atmosphere -Personalised explanation*	*-Conflicting information -Information overload -Interprofessional disagreement -Negative about colleagues -Delayed or cancelled surgery -Discharge uncertainties*	*-Trust -Experience safety -Empathy -Comfortable with explanation -Until something happens, it is safe -Your health is your greatest asset -Maximal attention -Reset to zero[2] -Regain self -Relief of pain and physical inconvenience*	*-Anxiety, -Uncertainty -Worries[1] -Inadequate support -Fall between the cracks*	*-Seek trust in professionals -Provide specialist with honest information -Effective in practice -Seek for guidance with professionals -Clear instructions -Seek for family support -Take care of the children -Jump in when necessary*	*-Emotional support -Translate when a language barrier exists -Stay in contact with hospital -Be informed and inform -Listens -Provide and have trust -Seek relief -Back up and follow up when going home*	*-Missing appointments -Guiding rules & restrictions*

[1]Worries about not waking up, complications, dying, leaving family behind
[2]Reset to zero: "that you can go on again. They literally gave me a second chance now"

Table 4: Selection of quotes from the interviews that formed codes, categories and themes.

THEMES CATEGORIES AND CODES	QUOTES
THEME 1: Professionals' behaviour	
Positive determinants	
Justified reassurance	….and I told them that I am always very nauseous and have to vomit. She would do something about that as well. Give me something. And she reassured me. That was something they did very well! Yes, don't be afraid Mrs. It's all going to be all right, we're all here. It was the way it was brought to me, which gave me a very quiet feeling. Yes, this time I had a female anaesthesiologist. It was a very pleasant conversation. (P6)
Showing experience	It felt like they're very capable. Because that's how they come across. Well, when I ask a question, they know exactly an answer and they know exactly what they are talking about. They don't have to think about it. The things they say are the same. They also come out like this. So they don't tell things that aren't true. (P6)
Showing personal interest	They sometimes say you're a number in the hospital and eventually, on the bill you're a number, but I still have the feeling that you're a patient after all. With the doctors I've had.... That gives you a certain degree of security. Attention is paid to you. (P14)
Provide trust	No, no, I have faith in that man, I have faith in the doctor, because the doctor told me, it's going to be a tough operation. I say we go for it. Ready. It's a heavy operation, are you going to go for it? I say we're going for it. Ready. You have to get that confidence beforehand (P7).
Create good atmosphere	It was immediate at the intake interview. I had a good feeling about it. I immediately had faith in it. That's because they told me what it was and how it was going to be that came across to me as people who know what they're talking about. Actually constantly, all small things, when you come back from the shower your bed is already made up again, looks like a hotel. You get your medication on time. They come to ask how you feel. Indicate the pain threshold. They are friendly, nice. (P11)
Personalised explanation	No, I've actually already started searching for information on the internet myself. What the operation involved and what is expected of me. No, mainly self-study, self-search. What I do miss is that more information from fellow sufferers, who already had the operation. Yes, I had never had surgery before so I couldn't imagine what it would look like. It was explained in guidelines what would happen, that you must have fasted, that you get an infusion. How the anesthesist would work and that was it.(P1)
Negative determinants	
Conflicting information	Yeah, sure, you'd actually think that whole system is already in preparation. You've already done some preliminary work to apply an ileostomy and then it becomes a colon stoma, which is better what I understand from the surgeon. But, that's all right, then you think of why all these examinations and all these conversations and why does one surgeon say that of that ileostomy. Does he make that up, or has he really thought about it? (P8)
Information overload	Yes, but only information that is strictly necessary. So I have here a whole description of the whole operation. That's what stopped me from reading... Well, it made me feel unsafe There are also many risks described. What if things go wrong? Does the advantage outweigh the disadvantage?(P4)
Interprofessional disagreement	At the meeting I heard that they even had a quarrel about me because it had to happen, but some of them didn't agree, but it really had to happen because I had a lot of problems. And then one of them wanted to, the others didn't, so there was a very big hassle. The nurses were angry at one point. They said yes....what do you do? (P17)
Negative about colleagues	Yes, yes, at a certain point they indicate in your presence that third parties have not done well in their experience. You don't want to hear that in a hospital. I just want to hear about how you are doing.(P4)
Delay or cancelled surgery	And the next day you woke up, took a shower and yes, the operation won't take place there. And then you're on your last adrenaline…. Totally shocked and then you are sent back... Yes, then... ..on the other hand, they weren't ready, they just weren't ready then we'll look at it from the business side again, we're not going to take any risks. They only do this to make the operation as safe as possible. I was angry, I collapsed. That is far too heavy at that moment. (P4)
Discharge uncertainties	I think that the preliminary phase went very well, sometimes unnecessarily repeating a lot of things I already knew. Often coming to the hospital for one meeting, the other meeting twice the psychologist, they have been very good at that, but I think that the aftercare of the discharge has so far been nihil. (P1)
THEME 2: Team performance	
Positive determinants	
Trust	I've felt safe. Yes, I did. Because they have been very clear. They say everything exactly in advance. The nurses here too. They've taken good care of me. I had faith in it. In the doctors and in the nurses. I never had a moment when I thought I knew better. That trust is there right from the start. I had a good feeling about it. I immediately had faith in it. That's because they told me what it was and that came across to me as people who know what they're talking about. (P11)

Experience safety	Yeah, how do you know it's safe? I already have five or six friends of mine who have had this operation done in this hospital and their stories about the recovery and how they are accompanied. That gave a very safe feeling and that's why I dared to step into it. I walked with it for three years and then I didn't know at all what I wanted and of course you had to grow into it but just like everyone else in my environment and the accompaniment... that's safe. That made me feel safe. (P11)
Empathy	……. then they say you're nervous? They ask you that and she says to you: you'll be all right! They treat me very well, almost all doctors and sisters already know me here. They talk to me, they cry with me…..they comfort me and sometimes tears comes out, both me and the nurse. (P17)
Comfortable withexplanation	He explained it again and I thought, oh yeah….now I understand it better so I'll think about it. (P16)
Your health is your greatest asset	When you break a leg, people see that, but when you're mentally trapped, you look very normal on the outside, but it's the inside that's not right. And I'll be honest: your greatest asset is your health. And I can keep saying that. I don't like being sick (P6)
Until something happens it is safe	If anything happens, there's someone in the hospital right away. So the fact that there are people around you gives you a lot of safe feeling yes. safe... Yes, the people work here, of course. *But how do you know that it is also safe?* Yes, you can't know that....You feel pretty safe, but what is safe really... *Can you say it?* No, I can't. Because as long as you walk and talk, it is safe. If something happens it is unsafe. *So you can't actually test that?*No. (P15)
Reset to zero	I have experienced good things and bad things here, the bad thing is: the stress towards it, the pain you are experiencing now, the annoying things you have to go through and that are all about again. The good thing is that you have the feeling that you have been reset to zero and that you can go on again. They literally gave me a second chance now(P4)
Regain self	It means getting to know yourself again, crossing your pain threshold and rebalancing the power of your mental and physical condition - that's the biggest fight right now. (P1)
Pain and relief of pain	Then I also discussed with him, if I don't want to have pain, yes...then it's epidural, constant pain control. Well, that's very easy then, then we do it. And that's how you come to the conclusion, isn't it? (P16)
Negative determinants	
Anxiety Uncertainty Worries	But there was a risk that you wouldn't wake up. Ready, that risk was there. I knew that. That was my biggest fear. So you have to make arrangements to: What if things go wrong? I have three children. But what happens with them? Their school? With the house? Eh, suppose I hadn't woken up, then that would have to be arranged. For example, I sought for a family coach, in consultation with the children, with signatures and everything in it. It could be that dad doesn't not come back. (P4)
Inadequate support,	I don't have any family at all. At least so, my wife died 7 years ago. And my youngest son of 35 died 5 years ago. My sister who lives in Germany. My other son is on holiday now, but he lives in Dubai. And for the rest I don't have anyone anymore. You get a little older and everything that falls away of course, eh and so on. I don't have anyone anymore (P3)
Fall between the cracks	Look, what you were a little afraid of was actually that you'd fall between the cracks, because you're in these different departments. Surgery and oncology. And if they don't communicate with each other, do they remember that I exist? (P8)
THEME 3: Patients' behaviour	
Positive determinants	
Seektrust in professionals	Now I'm going to let it all go, I'm going to leave it all up to these guys. I'm going to rely on their skills. And it's just going to be okay. (P4)
Provide specialist with honest information	Yeah, of course. Because I have hypertension and that was a concern. So they kept an eye on that every day, even on the day of the operation. I was hoping every time that it wasn't too high. On the day of the operation it was a bit high, then they gave me something and then it was good again. He gave me a compliment that I had filled everything in so neatly. And then my blood pressure, he says we have to be very careful about. Yes, they've been keeping a close eye on that all the time. (P6)
Seek for guidance in professionals	One evening a nurse kneeled next to my bed and told me exactly where I stand and what they plan to do with me. She saw me cry. I didn't see any prospect because I thought it was something of a couple of days. I thought it's a few days and then it's out. And it only lasts and it only costs but and I didn't get a definite answer what it is or what it isn't. That lady explained me in her own easy way. I have come to rest. If you just tell me exactly what's going on you avoid that unrest. (P7)
Clearinstructions	Of course, you can ignore all the regulations that you might be able to tolerate, and then things don't go well. And even if you don't move enough that you have a chance of thrombosis, pulmonary embolism and pneumonia. That it is important that you listen carefully and do not smoke or drink. I didn't do that already, but that's a good thing. (P4)
Seek for family support	I have had a lot of support for my family, my environment, my children and friends. So that too, so the twins and the loner are now alone at home. They just sit at home. (p4)
Jump in when necessary	In addition, there are my parents and my sisters who have full contact with the children and make agreements with each other. In other words, we do that, he relieves me of his worries. That also relieves me of my worries and that really gives me peace of mind (P4).
Emotional support	Family supported me with my decision. They cried with me and supported me. (P11)

Translate when language barrier exist	She went into the operating room and then my sister went with her to the operating room, then they explained things. My sister went out again and when she came out of the operating room my sister was there again. There had always been someone with her, except in the evening. (P5)
Stay in contact with hospital	....Look, you are afraid that you'll "fall between the cracks" because you have to deal with different departments, Surgery and Oncology. And if they don't communicate with each other, do they know that I exist. How do you deal with that feeling? You start calling people and pushing. I was able to bring some appointments forward. I contacted the department and then I said: "I want to bring that appointment forward because I am really suffering. And they agreed. *Did you check the communication between the departments?* Yes, most of the time they inform you if there has been a conversation between Oncology and Surgery. Then I get the feeling that it is ok. I am still on the radar.....You are going to a large organisation so I ask myself am I still in the picture then?.... (P8)
Be informed and inform	Yes a lot of information about the whole process from the beginning. From the phone call until now, everything went so perfectly, they inform you so well, everything. And if you don't know what they're doing, you'll get a neat answer. Yes...very familiar. (P10)
Listens	And I try to listen carefully. I also talk a lot, but I also try to listen well, so that you can usually judge a person well. You can see what it is. Yes, listening well and again....(P6)
Provide and have trust	You have to get that trust in advance. Yes, he is important, he is important. He was relaxed, he came, he says. We see each other again, first yesterday, now today. I say now it comes down to it. He says yes, now we are going to do it. And he stabbed all those needles without pain and he said: you're almost done. Yes, I was almost done and after that I went to the operating room and I looked around and I saw the doctor put on a cap and then he did so in front of me (thumb up) and then I was gone. Yes, you have to show it, you have to say, you and I we are going to do it. It has to be a collaboration. You don't have to say, oh God, he's going to operate on me again. If you have to, you have to. You have to do it together, because it's not easy for him either (surgeon). You have to give him that trust too. Giving confidence to the surgeon. Everything has to be in optimal shape, all the data that surgeon needs to have. Information must be good. He needs to know what he's doing. (P7)
Seek relief	At some point, I started trying things out for myself. I was looking forward to my toast and then I took a bite and then I had to vomit and I was terribly upset because it says in the booklet that I have to eat it and what now? Then in the evening I went to the grocery and went to see what I can do. And then I came up with broth, water things, which isn't mentally satisfying but which at least does keep it inside.(P1)
Back up and follow up when going home	Because it would've just been nice to have someone call or I could have called. They had said it, that if there is something wrong you can always call the hospital back. But then it comes from you that you have to report something and if it goes well then you actually disturb people in their work. (P1)
Negative determinants	
Missing appointments	Missing appointments causes missed information. E.g. about fasting(P6)
Guiding rules and restrictions	Yes, because you have to measure everything, and weigh everything and even if you weigh and you take a bite and then are full, you have to slow yourself down to stop. Because if you can take 125 ml of something and after 1 bite you already feel pain and are forced to stop, while you really don't want to, because the booklet says that you should be able to get that amount. It is more self-discipline that you have to develop at once. It's like a junkie who has to get rid of drugs at once and is expected to stop thinking about drugs. (P1)

Trust depends on whether the information provided is perceived correct, clear and honest.

Patients seek support from nurses and physicians to find guidance to recovery. Unclarity about the best way to recover also leads to feelings of insecurity and uncertainty. Explanations help to give better insight and motivates patients. Regimen, clarity and clear explanations can help to survive. When patients have recovered from surgery, they are prepared for discharge. The discharge information provided ranges from (pain) medication instructions to instructions about treatment, potential short and long term complications and diet. Some patients missed a follow-up appointment from the hospital, a discharge conversation and a formal checkpoint or information about pain medication. They feel a need for contact with fellow patients. A telephone number to call for help if there are problems, and clear advice about actions to be taken will assist patients. One patient missed information and started experimenting with food that she could endure after gastric bypass surgery because she had problems with the food volume and digestion.

Patients also seek for help from their family. Family has several functions for patients: Family thinks with them and supports them. Family provides practical help by going to the hospital, translating and arranging patients' business and they can stand in for them. During visits they share emotions with their relatives. Family takes over; they take care of the children and arrange things that patients cannot do. They bring children to school or sports, do the housekeeping. In other words, family is taking worries away. They are questioning details and help in the shared decision making process and take care. They respect the decision for undergoing surgery.

Patients use several strategies to endure the perioperative period. Avoiding being a number in the organization, stay in the spotlight and "don't fall between the cracks" is described as a strategy for surviving in running up for admission for surgery in the hospital. To take the decision to be operated, patients listen to experiences of others. They listen well and ask for information when anaesthesia is explained. Dependency is difficult to bear. Have trust in the surgeon, avoid anxiety and stay calm, help patients' to overcome the difficult and insecure period.

Negative determinants: Some patients reported that they missed appointments with their surgeon or anaesthesiologist. Some patients' surgery needed to be postponed because patients

had not fasted.

Differences in experiences of participating patients

We compared quotes and codes of participating patients with different ethnic backgrounds. We did not find indications of differences in experiences mentioned, except for minority patients who reported to be accompanied to the operation room because of a language barrier. This was not the case for Dutch patients **(Table 5).**

DISCUSSION

The purpose of this explorative case study was to describe patients experiences regarding their perioperative safety in a hospital were we unexpectedly found safer care in minority patients [7]. The research questions we tried to answer were: How do high risk surgery patients experience safety in the perioperative period? How and what influences their safety experiences and which strategies do patients use to overcome their perceived problems?

The results from the interviews show that determinants of nurse or physician behaviour influences patients' experience of safety in a positive or negative way. Nurse or physician behaviour contributes to patients' trust or distrust and in that way to a safe or unsafe experience. Therefore patients seek: trust in nurses and physicians, family support, support from nurses and physicians for the optimal guidance to recovery and they use several strategies to endure the uncertainty in the perioperative period. They try to avoid being just a number in the organisation and prefer individual attention by staying in contact with the surgeon. Social support from family and friends is needed to be able to undergo anaesthesia and surgery and to get the help and support that is needed. The patients in the Maasstad hospital felt safe when they were surrounded by nurses and physicians, family and friends who were kind and friendly. Recognition of risks or unsafety, situational awareness and (the courage to) speak up are important determinants for a safe perioperative environment [17,18].

Nurses and physicians behaviour

Patients undergoing high risk surgery face uncertainty and risk for mortality. In three international studies it was concluded that negative nurse or physician behaviour can be disruptive for patients in the perioperative setting and can also have an impact on patient safety [19,21]. Therefore, responsibility and trust are fundamental existential issues concerning both patients and doctors before high-risk procedures [22]. The model based on the results can help nurses and physicians' to behave in a way that patients experience a safe perioperative period.

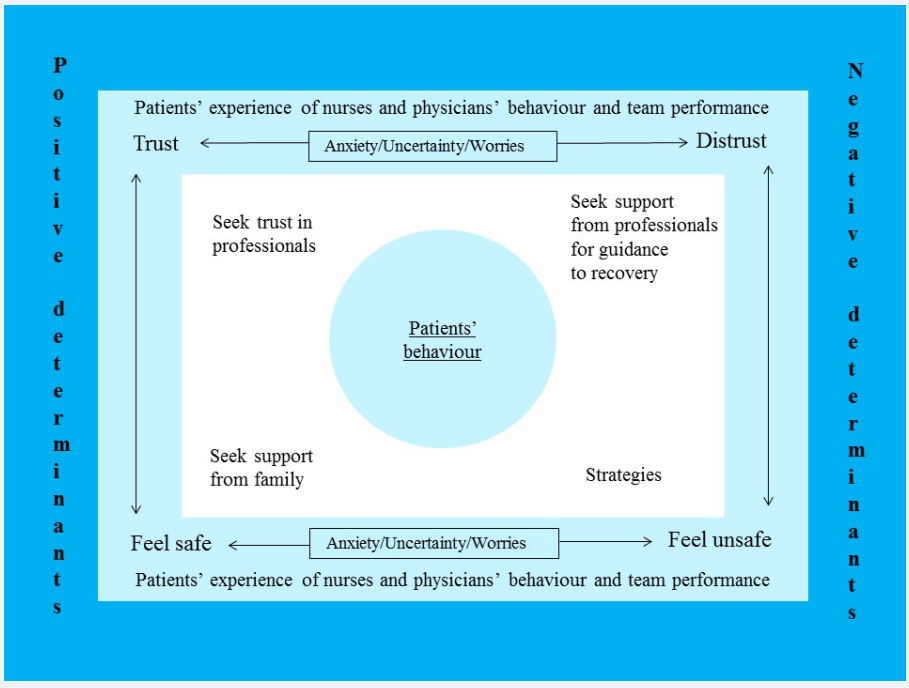

Figure 1 Conceptual model of determinants of nurses and physicians' behaviour and team performance that influence the safety experience of high risk surgery patients and the effects on patients' behaviour.

Table 5: Differences in perioperative care between minority patients and Dutch patients.

Minority patients	Dutch patients
Accompanied by family for translation and support (P5)	Not accompanied
Support allowed if low language proficiency or a language barrier exists (P5)	No extra support if low language proficiency exists.

Team performance

Nurses have an important role in engaging patients in their own safety [23]. Evidence suggests, however, that health care settings are rife with disrespectful behavior, poor teamwork, and unsafe working conditions [23,24] Interactions between nurses, physicians and patients form patients experience of safety. Patient experience is one of the three pillars of quality in healthcare; improving it must be a key aim to improve the overall quality of healthcare [25,26]. Patient satisfaction was strongly associated with experiences of good communication and transfer of information. Confidence and trust in the clinical team is an important determinant of patients' experience [5]. Perioperative anxiety is often overlooked but it is associated with poor surgical outcome [27]

Patient behaviour

Patients are partners in their safety during their hospital stay and it is a right for patients to involve in their own safety [28,29]. There are many ways in which patients can contribute to their safety. E.g. incident reporting, hand hygiene, surgical site marking and medications use are subject's patients can influence their safety and safety experience. But also report self-perceived changes in comfort when talking with nurses and physicians about questions and concerns [30-32]. Patients' perspective on safety is underreported in research [28,33] and little is known how nurses and physicians can support patient engagement as a safety strategy. Patients seek support from nurses and physicians to find the optimal path to recovery. Instructing and guiding patients after surgery is essential for successful recovery. Patients use conversations with nurses and physicians as a strategy to reduce their anxiety [34]. The contribution of ethnicity to this result seems to be limited in this study. Patients undergoing high risk surgery often feel very dependent and restricted when they are ill. They have to regain their sense of self-worth. Although patients are in a dependent situation, they do want to feel safe. Experiences of unsafety may be unbearable. Nurses and physicians have an important role to play in ensuring that patients feel protected and safe.

The strategies and needs of patients reported in this study can help nurses and physicians to create a safe environment and facilitate the experience of safety in patients.

Strength and limitations

Our study has some limitations. Firstly, only one minority patient didn't master the Dutch language and needed translation from a family member. All the other patients were - more or less able - to understand and speak the Dutch language. This may have caused selection bias. Secondly, this study took place in only one hospital with much intercultural expertise. So, it is possible that in a multi-centre study more detailed data could be collected and moreover that the results could be extrapolated more widely. Thirdly, it was difficult to include patients with a minority background in this study. Three times patients agreed to participate in the study, but refused to participate in the interview on the day it was planned. In future studies, contact with multi-cultural institutions and minority organisations can possibly help to improve the data collection of a minority study. The interviews of both patient groups yield rich data. We reached a point of data saturation.

Future research

In the last decade perioperative patient safety has improved vastly because it became the focus of research and development projects in many hospitals. In our opinion, a better focus on patients' experiences of safety in research will help to improve quality of perioperative care. More research on patient's perceptions and perioperative experiences will contribute to better insight in patients safety strategies. With multi-centre research more detailed data could be collected and moreover, the results could be extrapolated more widely.

CONCLUSION

Nurses and physicians behavior, team performance and patient behaviour are relevant factors that contribute to patients' trust and experiences of safe care. More attention should be paid in engaging patients to participate in their own safety. Through stimulating an active attitude of patients in seeking support they contribute to experiences of safe care. Stimulating situational awareness on all levels (society, organisational, team, individual and patient level) may help to improve perioperative safety and safety experience. These results can be used by nurses and physicians to improve patients' experiences of safe care, for both non-western ethnic minority and Dutch majority patients in the often uncertain and vulnerable perioperative period.

Practice implications

Nurses and physicians must become much more aware of the impact that their behaviour and team behaviour has on patients' experience of perioperative safety. Anxiety is a common phenomenon that no longer should be ignored. Reassurance, comfort talk and quick and correct proceedings let patients experience safety. At present several validated questionnaires are available to measure perioperative anxiety. Preoperative counselling and proper education regarding surgery will help in reducing preoperative anxiety and improving the quality of care. Reliability, timely and adequate information without sudden policy changes will improve patients' safety experiences. Many examples and citations in this study show the importance of effective communication between nurse or physician and patient. More public/societal attention should be paid to the role that patients have in monitoring their own perioperative safety. Nurses and physicians can help patients take responsibility in their perioperative safety, through paying specific attention and communicate about safety with patients in the running-up to surgery & anaesthesia.

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