Respecting as a basic teamwork process in the operating theatre – A qualitative study of theatre nurses who work in interdisciplinary surgical teams of what they see as important factors in this collaboration

Hege Kristin Aslaksen Kaldheim
Lovisenberg diakonale høgskole

Åshild Slettebø
Universitetet i Agder

Respecting as a basic teamwork process in the operating theatre

A qualitative study of theatre nurses who work in interdisciplinary surgical teams of what they see as important factors in this collaboration

Abstract

Background: Studies show that working as a team in the operating theatre can be a challenge, and that surgical teams are not so cohesive as might be expected.

Methods: A qualitative approach with exploratory design was used, inspired by grounded theory (GT) as a methodology. The data are from semi–structured, open questions, interviews with eight female theatre nurses from four Norwegian operational units.

Results: The study shows that the most important factor in the social process between theatre nurses co-operating with other team members, is respecting. This includes interactions where: the attitudes expressed make team members feel valued; team members show an understanding for each other; team members communicate constructively. The leader's role is to encourage the right attitudes, focusing on respect for one another.

Conclusion: The study shows that cooperation is an inter-human process, which requires the presence of multiple factors in the relations between professionals. Organizational factors also play a decisive role in enhancing the quality of inter-disciplinary work. Strengthening teamwork can be a complex task in a multidisciplinary surgical team where conflicting professional identities exist. Here, organisational factors play a crucial role in improving the quality of interdisciplinary collaboration.

Key words: Professions, social structure, team communication, interdisciplinary collaboration and respect.

Introduction

Operating theatres are high-intensity, often high-stress, environments where team members must work together to provide patient-centered care. The working day for interdisciplinary surgical teams is often characterized by heavy workloads and demanding requirements for efficient use of time and resources (1 - 4). An interdisciplinary surgical team is composed of a selection of specialized nurses (one to two nurse anaesthetists and two theatre nurses), physicians (one anaesthetist physician), and surgeons (one to two operators) (5). These teams are typically put together ad-hoc. Team memberships do not carry over from day to day (5). Salas et al. (6) define a team as "a distinguishable set of two or more people who interact dynamically, interdependently, and adaptively toward a common and valued goal, objective or mission, who have each been assigned specific roles or functions to perform, and who have limited life span of membership" (6, p. 4). Team members perform dynamic and interdependent tasks, sharing and adapting to common goals and carrying out specified roles and functions (7). Teamwork is an essential component of patient safety (1,8). Collaboration happens when multiple health workers from different professional backgrounds work together to deliver the highest quality of health care (9).

Studies show that collaboration as an interdisciplinary surgical team in the operating theatre can be a challenge. "Group norms, roles, and the way one treats each other says something about how well the group works" (10, p. 92). Baker et al. (11) emphasise that "Teamwork depends on each team member being able to anticipate the needs of others; adjust to each other's actions, and have a shared understanding of how a procedure should happen" (11, p. 1579). The shared understanding element also connects with the common goals in Salas et al.'s (6) definition. Other components of teamwork are team skills such as leadership, problem solving, communication, and decision-making (12 – 14). Studies have described collaboration as essentially an interpersonal process, which requires the presence of a series of

elements in the relationships between the professionals in a team. These elements are willingness to collaborate, trust in each other, mutual respect and communication (8, 15 -16). Weller and Boyd (8) found that team must have a common understanding of the tasks, goals, and capabilities of the team.

Communication is a major component of teamwork processes and involves the exchange of information between the team members (17). Studies show that failures can frequently occur and that surgical teams are not as cohesive as might be expected (18 – 19). Gittell's (20,21) research explores the communication and relationship patterns through which front-line employees coordinate their work, and how these patterns are shaped by organizational practice. She uses the power of relationships to achieve quality, efficiency and resilience in teamwork and names it relational coordination. Values of the team are that each member cares about the others. Openness and honesty are fundamental values in a team (22). Rydenfält et al., (19) conclude in their study that organizing work to promote cross-professional interaction can help the creation of social relations and norms, providing support for a common view. It can also help to lower communication thresholds and establish stronger relations of trust. Good teamwork is associated with better job satisfaction (23), and less sick time taken from work (24). Patient safety is improved when the team members work well together and trust each other (3 - 4,15). Carney et al. (1) and Gillespie et al. (3) address how to improve teamwork by practising cooperation. Team training is a tool that can be used to improve teamwork and to make it easier to reach the goals the team is striving toward. Team training is best explained as an activity which can help remove obstacles to good teamwork. To carry out such training, one is dependent on available resources and organizational understandings (3).

To create the necessary conditions for success, organizational determinants also play a crucial role (15 – 16), and leaders' behaviour is considered an important factor in shaping organisational cultures: what the current standards and ethics of the business are to be (8, 25).

Aim

The aim was to acquire knowledge about what theatre nurses perceive as important factors in collaboration with other team members to see what factors are needed to strengthen interdisciplinary cooperation.

Method

Design

To answer the research question, a qualitative approach is employed using exploratory design, inspired by grounded theory (GT) as a methodology. The researcher must try to understand the participants' experience, as they experience it themselves, learning their world, in order to know and understand their interpretations of themselves in their interactions with other team members. "Behavior is studied from a symbolic perspective and from an interaction perspective "(26, p .92). Grounded theory is derived from a sociological perspective. It explains the sociological reality and identifies the social processes that occur in the data (27 – 28).

Participants and recruitment

First, we approached two operational units at two hospitals in Norway. They declined the invitation to participate on the grounds that it was too costly to remove eight theatre nurses during working hours. At this point, we reconsidered our study by considering more operational units and by using our professional background and contacts in the field. We sent

our request to four more operating units in hospitals in Norway. Leaders of these units were contacted by post and asked to recruit participants for the study. After two days we got positive feedback from all four unit leaders. When permission to conduct the study at the relevant hospitals had been collected, each unit leader asked their staff if there was anyone who would like to participate in the study. Of those who wanted to participate, two were selected from each operating unit by lottery. Those who were willing to participate were provided with an information sheet about the study in advance.

Female: 8 Male: 0
Work position: 100%
Age: 38 – 59
Experience: ½ to 23 years

Figure 1: The participants

The number of operations performed: 3,000 - 11,000.
Specialised units: 2 Carried out all types of operations: 2 Unified management: 3

Figure 2: The units

Before we started the research, we actually chose to include a participant who had just half a year of experience as a theatre nurse. She did not meet the inclusion criteria but, for that reason, could provide us with a valuable variation. The other participants had so much experience: this individual offered us the opportunity to benefit from theoretical sampling. This is the deductive element by inductive coding, data collection and analysis, where the researcher can choose their participants according to the preceding interviews and findings, and can specify their queries (28, p.173).

Procedure and conduct of interviews

The interviews were conducted by the first author during the autumn of 2011. An interview guide, based on the research question, was prepared as a guideline for the interviews. The

main topic of the interview guide was what the participants perceived as important factors in co-operating with other team members. They were asked about their experience working with surgeons, anaesthetists, anaesthetist nurses and theatre nurses. We wanted them to tell us when they experienced good and less good cooperation. One of the questions was, for example, how a leader`s management of the operational unit can affects the way teams work. The participants received the interview guide in advance. This was decided after a pilot interview, as the "test participants" argued the importance of seeing the interview guide in advance. All interviews were conducted in the relevant operating unit. A dictaphone was used to record the interviews and to render the participants' statements as accurately as possible. Each interview lasted from 40 to 65 minutes. The interviews were subsequently transcribed verbatim.

Data analysis

As we wanted to look at theatre nurses in collaboration with other team members in the operating theatre, it was natural to choose grounded theory, "which is suitable for analysing the studies that are intended to describe groups in social interactions" (26, p. 92). In grounded theory, a constant comparative is used, inductive analysis, where data collection and analysis are parallel processes (29 – 30). In this study, the analysis is based upon Glaser's description of the method, where the first step in the analysis is open coding. In open coding, we analysed the interviews line by line. The various codes are conceptualised in the interviews (example of open coding, "listen to each other", "own their duties", "to be heard"). Each event in the data material was coded with one or more tags, which were placed together in a category (example of tag: to be seen and heard). After each interview was analysed, we wrote a memo. Here, events, categories, or relationships between categories were written down. It was while we were writing the memos that we saw the relationships between the various categories. A

memo is a tool for theory development and reviewed our thoughts and ideas. Here categories and their properties and dimensions, relationships, or hypotheses in the theoretical memo make sense as the study continues (31). We compared categories and their characteristics and then they were placed together in larger categories, to form selective codes (example: being recognised) that create theoretical codes (example: feeling appreciated). The theoretical codes appear and the empirical data told us later what the basic social process in our study was, and hence what became the core variable. The goal of grounded theory study is to generate a beginning theoretical explanation that reflects human experiences of everyday life conditions (32).

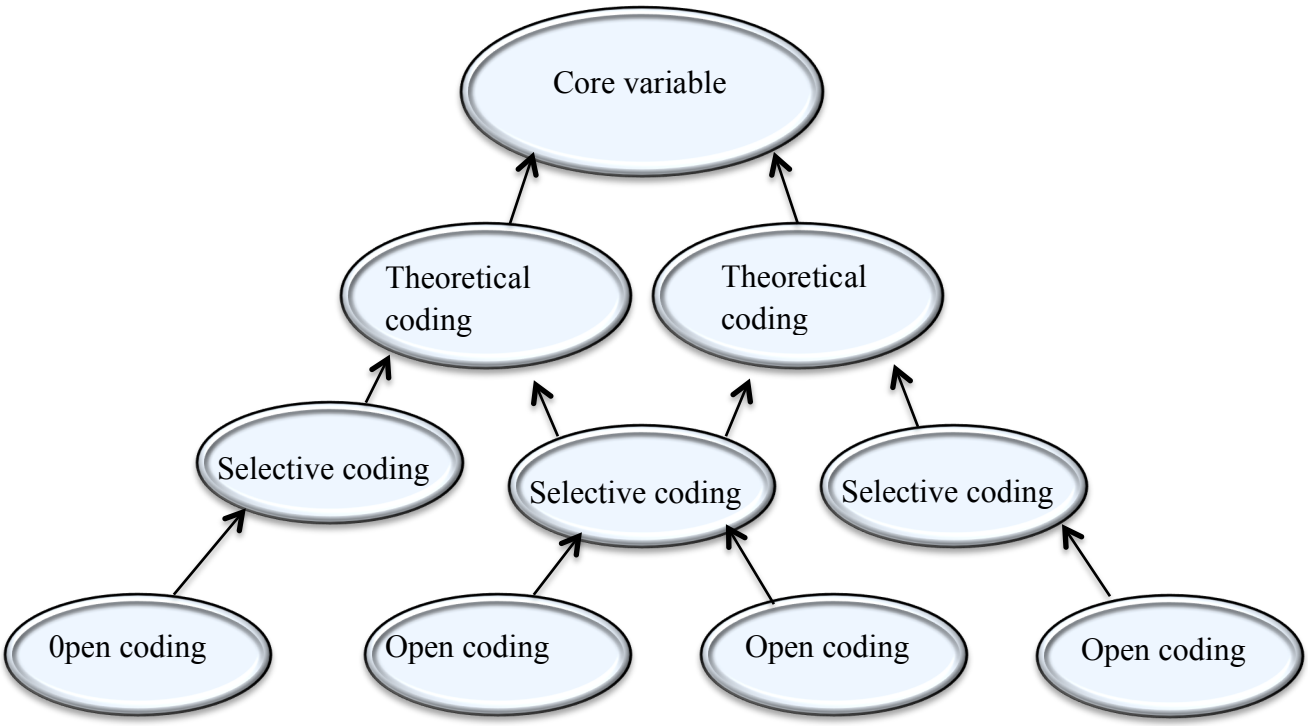

Figure 3 Analysis stages of grounded theory: The analyst asks three general questions of the data: What is this data a study of? What category does this incident indicate? What is actually happening in the data (28, 29)?

Ethical considerations

The study was approved by the Ethics Committee of the Faculty and Norwegian Social Science Data Services (NSD). Consent was also obtained from the Data Protection Officer at the hospitals. Informed, written consent from all interviewees was obtained prior to the interviews. The participants' right to voluntary participation and to withdraw at any time was emphasised before each interview. Furthermore, they were informed that if they were going to talk about a colleague, they had to avoid using names. Privacy and confidentiality were emphasised, as was the fact, that the information would not be used other than for the proposed study.

Findings

Respecting

The basic social process between theatre nurses in collaboration with other team members in the study is respecting: respect for the patient, for the team members and for themselves. Addressing one another with respect can form the basis for cooperation, creating vibrant and active links between those working in the team. It creates an environment where team members can take the risk of disclosing oneself to the other, initially as professional partners who will work together, but also to set a personal dimension in the cooperation.

> *You should trust those who you are with, and continue to dare to ask, dare to really be there. But it is not always easy.*

Respecting is a core variable and it embraces interactions that makes the team members feel valued. Furthermore, they have an understanding for each other, they communicate constructively. The leader's role is to be the attitude creator in a team environment, focusing on respect for each other.

Respect for the patient

All of the participants have the patient as the most important focus and goal in this study. For them, using collaboration to create patient safety was the most significant factor in their work.

> *And everybody in the team has one goal, and that is safety for the patient.*

Feeling valued

The participants talked a great deal about feeling valued in the same way that others in the team are valued.

> *The theatre nurses are a bit like that, I feel sometimes, like we're just a technical matter, which is there.*

The theatre nurses want to be accepted as having skills and duties that are equal to the other members in the team. They want to been seen and heard by the others in the team as people with tasks that are meaningful.

> *Yes, we are taught very early that in a way the surgeon has a strenuous workload, work that involves concentration, and that we shall, in a way, be careful of what we say.*

> *I practise closing the door behind me after work, and it`s important to be able to do that. Because when you have to "walk a little bit on tiptoes" for a lot of the day, it does something to you. I just feel that I have to get out to exhale from time to time.*

When the participants feel appreciated, it appears to provide increased comfort. Collaboration is described as "hand in glove".

Positive feedback itself is described as a good experience. One feels meaningful and self-esteem is improved.

Because I think that positive feedback can make you blossom, it can make you grow.

All feedback does not need to be positive in itself. It can be constructive feedback that can improve a team member`s knowledge of the subject. What is important is the way in which it is given.

Having an understanding of each other

Having insight into each other's work creates a greater understanding of each other in a team. The participants expressed that they miss this understanding somewhat. They often experience working situations where there is not always so much tolerance for having to wait for each other, and that their task must be done "quickly and invisibly". The participants want others to understand the importance of their job and to recognise that it also requires time. When team members have knowledge and understanding of each other's work, it is also easier to help each other.

The participants find it safe to have defined roles and responsibilities, particularly in an emergency situation, because then everyone knows what to do. Yet, it is in emergency situations that the participants find that they help each other across these defined roles: in order to get started faster and to save lives. The participants describe how a surgeon may help them to open and cover sterile equipment preoperatively, while he/she waits to be ready for the operation. This provides a good team spirit. Poor collaboration occurs when an individual only sees their own tasks and not those of others.

Understanding is also about seeing the whole person: someone makes sure that another team member gets their break or eats their food and staff relieve one another when they can see that someone is tired.

The participants say that they find it easier to work with people they know.

> *We will always take more responsibility for people we know. It is easier to work with those you know, because you know the person's strengths and weaknesses.*

Then they know a little about each other's behaviour, weaknesses and strengths. Social venues such as courses, meetings or just social gatherings, may provide a basis for good relationships in the team.

> *Yes, just look when we have been on a course together how much nicer it is to work together afterwards when we have got to know each other a little better.*

A forum where all team members could meet regularly did not exist at any of the four operating units. The participants expressed a need for this, and felt that it could have contributed to better cooperation, better understanding of each other and developing relationships.

Constructive communication

In the operating theatre, it is important that communication is constructive and conducted in a professional manner. This is of great importance for the quality of cooperation.

In some situations, it may be harder to relate to others in the team in a rational manner. It may be the way in which things are said, or someone raising their voice and shouting. It

affects the concentration and focus of the participants in the situation, and this affects the quality of the performance of theatre nursing.

> *Yes. There are some situations like that where, for me at least, there will be poorer cooperation when someone gets scolded. For then you will be a little preoccupied in your head that there is a bad atmosphere here. In addition, I lose a little of my concentration.*

Many of the participants justify this lack of constructive communication in that they are in a situation that demands so much of them that they must be allowed to act that way. They say that it is uncomfortable, but they try not to take it to heart. If you let this affect you too much it will break you down and at worst make you unable to work as a theatre nurse.

Management of the team

Some participants said that the anaesthetic nurse and theatre nurses have different leaders, where little cross-disciplinary collaboration takes place and the study shows that when there is no common leader or where staff are not employed in the same unit, there is little space for team members to meet outside the operating room to discuss things or have a community to become acquainted with one another.

The participants said that a leader should be a role model, emphasise attitudes that communicate respect for each other and create a culture for this to take place. The leader should have insight into the team members' tasks and communicate the need for resources upward in the organisation.

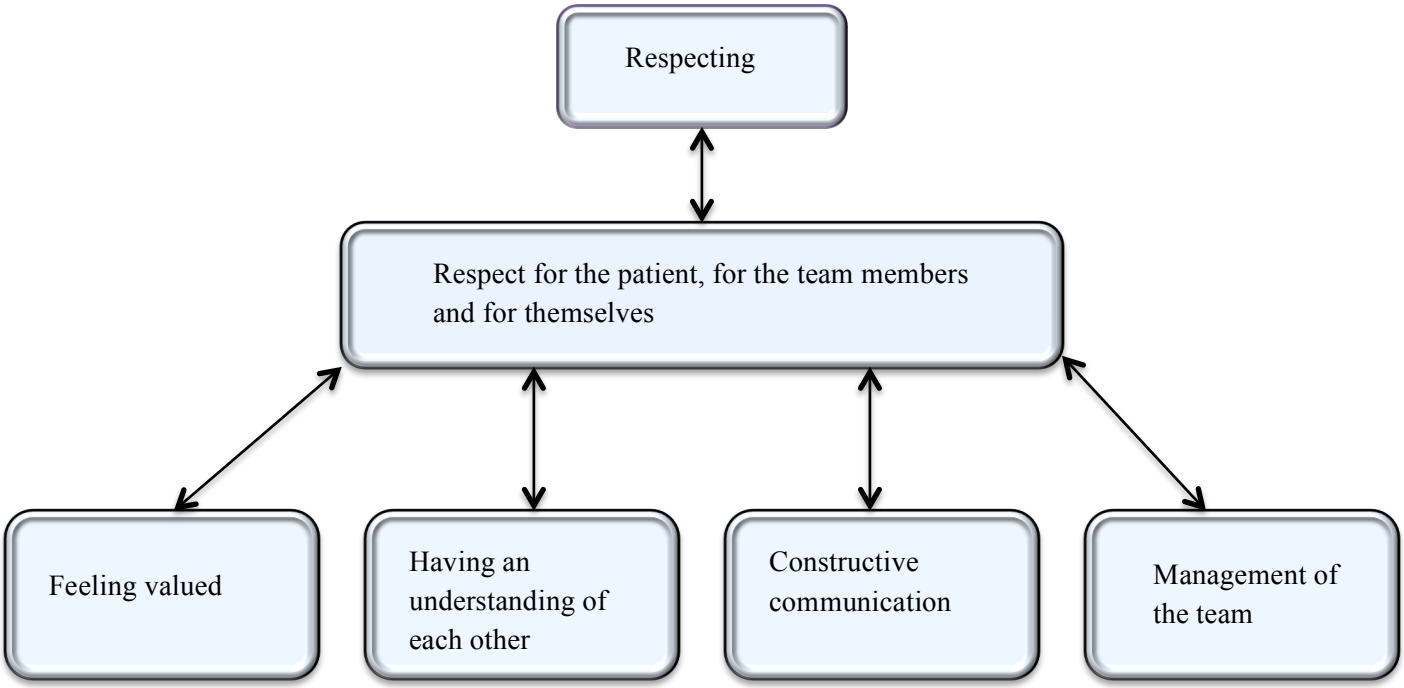

Figure 4 Theoretical codes with the core variable.

Discussion

Respecting

The findings indicate that respecting for the participants in interaction with other team members is important for collaboration in the operating theatre.

Researchers consider mutual respect a determinant of collaboration (15-16, 21). Mutual respect implies knowledge and recognition of the complementarity of the contribution of the various professionals in the team and their interdependence. It involves a shared belief that team members will protect and support the interest of their team and that collaboration is an interpersonal process, which requires factors such as shared understanding, common goals, leadership, constructive communication and trust (6, 12–16).

The participants in our study told us that it is important to feel that their profession is met with attitudes that convey that they are important to the team, and that they are seen and

heard. It makes them feel valued in the team and equal to other team members. Gillespie et al. (16) identified that when participants felt respected they felt more capable of doing things and to gained confidence. It creates a good working environment when relationships allow for open communication, where questions can be raised and disagreement expressed. The participants in our study said that when they feel respected by their team members, they could more easily disclose information and knowledge, for example about the patient, to the others in the team. The opposite is when they describe that they have to "walk a little bit on tiptoes" and this kind of cooperation can be a challenge. It affects the cooperation in the team, and theatre nurses say that they have to "exhale from time to time". Gillespie et al., (33) identified that building shared understandings through open communication was critical to enhance performance in the surgical team. Studies support this (15,23–24). Open communication is an over-all component of teamwork processes and involves the exchange of information between the team members (8, 12-14, 17). During complex operations, communication failures occur frequently (15–16, 18, 36). Patient safety and interdisciplinary cooperation in the operating theatre is related to how the team communicates with each other (1, 12–14). This makes it important to improve teamwork and communication in the operating theatre and shape a culture for open communication. Group norms, roles and the way individuals treat each other says something about how well the groups works (4,10). Knud E. Løgstrup (34, p. 26-27) states in his major work that the ethical demand is to show confidence, to disclose oneself to others. When the participants show other team members trust, it triggers a demand within the others to safeguard that confidence. Confidence is created in relationships and is influenced by how it is handled by the recipients. Løgstrup can provide perspective and depth to the "life of human relationships" (35, p.21).

In our study the theatre nurses do not always feel respected. They sometimes have to be careful what they say in the operating theatre. Carney et al. (1), write that the surgeon –

theatre nurse differences may be reflection of the traditional hierarchy of the surgical department, which discourages theatre nurses from questing or contradicting a surgeon. The participants says that they are “taught very early that the surgeon has an extremely demanding job, which needs concentration”, and it may be that this affects how they communicate with the surgeon in the surgical team. This can result in poor communication, if theatre nurses feel they have to be careful what they are saying. The theatre nurses may be reluctant to speak up about safety concerns and patient safety may be negatively affected (1). The hierarchy threatened safety because less powerful members had limited input in decision making, and were reluctant to speak up (15,33,39). In our study the theatre nurses feel they lose their concentration and focus when communication is not respectful in the team. The participants felt it affects the quality of their work and this may affect the patient safety. The theatre nurses in this study, excuse this behaviour and says that theatre nurses should be thick-skinned. This may reflect old cultures and today we have to speak up and not tolerate this kind of behaviour. Gittell`s study (20 -21) says that when team members are connected by shared goals, shared knowledge and mutual respect, their communication tends to be more frequent, timely, accurate and focused on problem solving. This allows them to deliver high quality patient care (9).

Positive feedback makes the participants in this study feeling valued, and self–esteem is improved. In surgical teams feedback can lead to effective team performance (11) and team members must be trained to deliver feedback to one another. This may strengthen the team member’s confidence in interdisciplinary collaboration.

For the participants in our study it is important to have an understanding of each other’s work. Sykes et al, (37) write that expert surgical team members have shared understanding of each other`s tasks, roles and responsibilities. Other studies support this (2,8,11,21,). In the

operating theatre, there are a lot of procedures and each procedure takes time. The participants in this study expressed that they miss other team members having tolerance, waiting for each other. When you have a shared understanding of how a procedure should happen, it is easier to understand the time it takes (11). The shared understanding factor is connected to the common goals (6). The common goal for our participants is the patient and patient safety. Collin et al, (2) say that high–quality interdisciplinary collaboration requires components such as collegial support to cross professional boundaries and to maintain an inclusive atmosphere. The participants in our study say it is easier to help each other when team members have knowledge and understanding of each other`s work. An expert surgical team is a team which needs shared understanding of each other`s tasks, roles and responsibilities (37) The participants describes this lack of understanding as poor collaboration with other team members. In emergency situations the participants often find that they help each other across these defined roles. This can seem unexpected, but here we can assume that patient safety comes first and the whole team have a common goal, which is to save the patient's life. Many studies report that teams cooperate toward a common goal (6 - 8, 21). In emergency situations, the common goal is extremely visible. Maybe it is more visible then than in daily routine surgery, so everybody in the team is willing to collaborate.

Surgical team are often put together ad–hoc. In larger operating units, participants may not be so familiar with the other team members. Silén – Lipponen et al. (38), found in their study that familiarity with team members and stability of teams, helped to combine the team members skills and fostered advanced planning, thus promoting safety. It is possible that surgical teams who are more familiar with each other, have a higher level of interdisciplinary cooperation and therefore may increase patient safety. In our study, the participants say that they find it easier to work with people they know and that this makes it easier to care for each other. Studies describes elements that characterize high–quality collaboration in

interdisciplinary team, such as care for each other, collegial support, values of the team and openness and honesty (2, 19, 22).

In the management of surgical teams, organizational determinants also play a crucial role (15 – 16). Gittell (20 - 21) says that high quality relationships between care providers also require high quality collaborative labor–management relationships. None of the surgical units in our study have developed a forum where all team members can meet regularly, and the participants expressed a need for this so they could meet and develop relationships and better understanding of each other. Gittell`s (20 - 21), theory about relational coordination emphasizes the power of relationships and that this is central to personal identities. She says that they shape who we are and are therefore central for creating a collective identity in an organization and for enabling work to be coordinated effectively. Baker et al. (11), says that despite the importance of teamwork in health care, most clinical units continue to function as discrete and separate collections of professionals. For this reason, relationship between professionals or roles in a surgical team and creating collective identity can be difficult because the way surgery units are built up. Some participants said that the anaesthetic nurses and theatre nurses have different leaders, where little cross-disciplinary collaboration takes place. An interdisciplinary surgical team is composed of surgeons, anaesthetist nurses, theatre nurses and an anaesthetist (5) and if all these professions have different leaders, there is a question about who is to lead the team and shape the organizational determinants. The participants in our study said that a leader should be a role model for the team, and should be the one to help members develop relationships within the team by recognising one another, and creating attitudes that convey respect for one another. Studies support this idea and that the leader`s behaviour is considered an important factor in shaping organisational cultures and what the current standards and ethics of the business are to be (8, 25). Baker et al. (11), say that the physicians tend to be at the top of this hierarchy with the case or treatment resulting

from their direction. Therefore, a great deal of coordination is necessary to keep physicians and nurses working together as a cohesive unit. These differences between nurses, surgeons and physicians must be overcome if teamwork is to be improved (1,19).

These factors we have discussed may help to increase team members feeling of respect for each other. To achieve this and to lower communication thresholds, respect and mutual understanding are crucial. The participants in our study need environments for the sharing of mediating norms and conventions and for the creation of work supporting social relations. Team training is also an important tool to improve teamwork (1,3). This may reduce risks and reduce tension between professions during surgery and increase patient safety. A number of studies support the perception that working well together and respecting one another is the key to maintaining patient safety (2 – 4, 15).

Methodological consideration

Four criteria (fit, work, relevance and modifiability) have been used to test the theory's credibility (28, p. 252-253; 29, p. 4-5).

The core variable is generated directly from the participants' statements, and can be related back to these. Hence, the core variable is considered to represent the pattern that matches the empirical data. Extending the study to include the other professions in the team may have strengthened the core variable as it would provide a larger data set, which would describe the other professions' experience of working in multidisciplinary teams. The fact that participants were given the interview guide prior to the interview may have influenced their responses in the study and led to a loss of "spontaneity" in the answers, but it may also have enhanced the responses, as they would have been thought out and relevant. There was a danger of getting too "close" because of our presupposition, and this may have affected the participants' statements when we asked supplementary questions during the interview.

Nonetheless we perceived it as a strength that we could enter into field that was well known to us, and we could ask relevant questions about the topic. We do not rule out the possibility that the theoretical framework can be further modified with new data, and that the social process that takes place between the team members in the operating room can change. It is possible that the theory is transferable to other areas where interpersonal relations take place, especially in interdisciplinary collaboration.

Implications for practice

Leaders in the operating units must see the importance of, and implement, an attitude that conveys respect, constructive communication, increased understanding of each other and that sees the importance of appreciating each other's profession. Measures should be taken to ensure that all professions involved in surgery pull in the same direction when facing their common goal. It is important to prioritise resources and time for team training, courses and interaction to allow team members to meet and develop relationships.

Implications for education

For education within the field of theatre nursing, there is a need to simulate team cooperation to prepare theatre nurses students for interdisciplinary teamwork.

Implications for further research

Further research could see how the disposition and architecture of the facilities can influence the activity system of surgery in a positive way, promoting useful social interaction.

Conclusion

The results of this study tell us that collaboration is an interpersonal process that requires the presence of a number of factors in the relationships between professions in a team. The

relationships are characterised by how team members acknowledge one another. For our participants, it is important to meet one another with respect, valuing the other's profession, having an understanding of each other and communicating constructively with each other. Strengthening teamwork can be a complex task in a multidisciplinary surgical team consisting of conflicting professional identities. Here, organisational factors play a crucial role in improving the quality of interdisciplinary collaboration.

References

1. Carney BT, West P, Neily J, Mills PD, Bagian J P. Differences in Nurse and Surgeon Perceptions of Teamwork: Implications for Use of a Briefing Checklist in the OR. AORN Journal.2010; 91(6): 722-729. DOI: 10.1016/j.aorn.2009.11.066
2. Collin K, Paloniemi S, Mecklin JP. Promoting inter-professional team work and learning – the case of a surgical operating theatre. Journal of Education and work. 2010; 23(1): 43-63. DOI: 10.1080/13639080903495160
3. Gillespie BM, Chaboyer W, Murray P. Enhancing communication in surgery through team training interventions: A systematic literature review. AORN Journal 2010; 92(6): 642-657.DOI: 10.1016/j.aorn.2010.02.015
4. Thylefors I, Persson O, Hellström D. Team types, perceived efficiency and team climate in Swedish cross-professional teamwork. Journal of Interprofessional Care. 2005; 19(2): 102-114. DOI: 10.1080/13561820400024159
5. Morey JC, Simon R, Jay GD, Wears RL, Salisbury M, Dukes KA, et al. Error reduction and performance improvement in the emergency department through formal teamwork training: Evaluation results of the Med Teams project. Health Services Research. 2002; 37 (6): 1553 – 1581.
6. Salas E, Dickinsons TL, Converce S, Tannenbaum SI. Towards an understanding of teams performance and training. I: Swezy RW, Salas E, author. Teams: Their training and performance. Norwood, NJ: Ablex Publ.1992; p. 3 – 29.
7. Højholdt A. Tværprofessionelt samarbejde i teori og praksis. København: Hans Reitzels Forlag. 2013.
8. Weller J, Boyd M. Making a Difference Through Improving Teamwork in the Operating Room: A Systematic Review of the Evidence on What Works. Curr Anesthesiol Rep. 2014; 4: 77 – 83.

9. World Health Organization. Framework for Action on Interprofessional Education & Collaborative Practice. Produced by the Health Proffesions Network Nursing and Midwifery Office (updated10.06.2015, cited10.06.2015). Available from: http://www.who.int/hrh/nursing_midwifery/hrh_global_standards_education.pdf
10. Harris TE, Sherblom JC. Small Group and Team Communication. 5. edition. Boston: Pearsons Education publishing as Allyn &Bacon. 2011; p. 89 -109.
11. Baker DP, Day R, Salas E. Teamwork as an Essential Component of High – Reliability Organizations. Health Research and Educational Trust. 2006; 41(4): 1576 – 1598. DOI: 10.1111/J.1475-6773.2006.00566.x
12. Catchpole K, Mishra A, Handa A, McGulloch P. Teamwork and Error in the Operating Room. Analysis of Skills and Roles. Annals of Surgery. 2008; 247(4): 699 – 706. DOI:10.1097/SLA.0b013e3181642ec8
13. Wallin C-J, Meurling L, Hedman L, Hedegård J, Felländer – Tsai L. Target – focused medical emergency team training using a human patient simulators: effects an behavior and attitude. Medical Education. 2007; 41:173 – 180. DOI: 10.1111/J.1365 – 2929.2006.02670.x
14. Østergaard HT, Østergaard D, Lippert A. Implementation of team training in medical education in Denmark. Qual Saf Health Care. 2004; 13(1): 91 – 95. DOI: 10.1136/qshc.2004.009985
15. Martin – Rodriguez LS, Beaulieu MD, Ferrada – Videla M. The determinants of Successful collaboration: A review of theoretical empirical studies. Journal of Interprofessional care. 2005;1: 132 – 147. DOI: 10.1080/13561820500082677
16. Gillespie BM, Chaboyer W, Wallis M, Chang HA, Werder H. Operating theatre nurse`s perceptions of competence: a focus group study. Journal of Advanced Nursing. 2009; 65(5): 1019 – 1028. DOI: 10.1111/j.1365 – 2648.2008.04955x

17. Dickinson TL, Mclntyre RM. A Conceptual Framework for Teamwork Measurement. I: Brannick MT, Salas E, Prince C, editors. Team performance assessment and measurement. New Jersey: Lawrence Associates. 1997. p.19 – 43.

18. Makary MA, Sexton JB, Freischlag JA, Holzmueller CG, Millman EA, Rowen L, et al. Operating Room Teamwork among Physicians and Nurses: Teamwork in the Eye of the Beholder. By the American College of Surgeons. 2006; 202: 746 -752.

19. Rydenfält C, Johansson G, Larsson PA, Åkerman K, Odenrick P. Social structures in the operating theatre: how contradicting retionalitie and trust affect work. Journal of Advanced Nursing. 2011; 68(4): 783 – 795. DOI: 10.1111/j.1365 – 2648.2011.05779x

20 Gittel JH. Relational coordination: coordinating work hrough relationships of shared goals, shared knowledge and mutual respect. I: Kyriakidou O, Ozbilgin M, editors. Relational perspectives in organizational studies: Research Companion. Northamptan MA: Edurard Elgar Publishing. 2006. p. 74 – 94.

21 Gittel JH. High performance healthcare. Using the Power of Relationships to achieve quality, efficiency and Resilience. United States: The Mc Grow Hill comparies. 2009.

22. Stenberg JE. Resultat rettet ledelse, utvikling av leder roller, lederteam og Ledelses prosess. Oslo: Cappelen Akademiske Forlag. 1999.

23. Posner BZ, Randolph WA. Perceived situational moderators of the relationship between role ambiguity, job satisfaction and effectiveness. The Journal of Social Psycology. 1979; 109: 237-244.

24. Kivimäki M, Sutinen R, Elovainio M, Vahtera J, Räsänen K, Töyry S, et al. Sickness absence in hospital physicians: 2 year follow up study on determinants. Occup Environ Med. 2001; 58: 361-366.

25. Nordhaug O, Olsen JB. Etikk, ledelse og samfunnsansvar. Oslo: Forlag1. 2010.

26. Bunch EH. Grounded theory – den klassiske metoden. I: Lorensen M, author. Spørsmål bestemmer metoden. Oslo: Universitetsforlag; 1998(p.91 -116).

27. Baker C, Wuest J, Stern PN. Method slurring: the grounded theory/phenomenology example. Journal of Advanced Nursing.1992; 17, 1355-1360.

28. Glaser BG. Att göra groundad teori- problem, frågor och diskussion. Mill Valley California: Sociology Press; 2010.

29. Glaser BG. Advances in the Metodology of Grounded Theory: Theoretical Sensivity. San Francisco: Sociology Press; 1978.

30. Hallberg LR-M. The ‘‘core category’’ of grounded theory: Making constant Comparisons. International Journal of Qualitative Studies on Health and Well-being. 2006; 1: 141-148. DOI: 10.1080/17482620600858399

31. Shirly, S –Y, Ching, Martinson, IM. Psychological Ajustment of Chinese Women With Breast Cancer: A Grounded Theory Study. I: Chesnay,MD, autor. Nursing research using grounded theory. New York: Springer Publishing Company; 2015(p. 91 – 115).

32. Olshansky, EF. Overview of Grounded Theory. I: Chesnay,MD, autor. Nursing research using grounded theory. New York: Springer Publishing Company; 2015(p.1 – 18).

33. Gillespie BM, Gwinner K, Chaboyer W, Fairweather N. Team communications in surgery – creating a culture of safety. Journal of Inerprofessional care. 2013; 27(5): 387 – 393. DOI: 10.3109/13561820.213784243

34. Løgstrup KE. Den etiske fordringen. 4. edition. Århus: Klim; 2010.

35. Martinsen K. Fra Marx til Løgstrup: om etikk og sanselighet i sykepleien. Oslo: Tano. 1993.

36. Hu YY,Arriaga AF, Peyre S, Corso KA, Roth EM, Greenberg CC. Deconstructing intraoperative communication failures. Journal of surgical research. 2012; 177:37 – 42. DOI: 10.1016/j.ss.2012.04.029

37. Sykes M, Gillespie B.M, Chaboyer W, Kang E. Surgical Team Mapping: Implications for Staff Allocation and Coordination. Aorn Journal. 2015; 101(2): 238 – 248. DOI: 10.1016/j.aorn.2014.03.018

38. Silén – Lipponen M, Tossavainen K, Turunen H, Smith A. Potential errors and their prevention in operating room teamwork as experienced by Finnish, British and American nurses. International Journal og Nursing Practice. 2005; 11: 21 -32.

39. Gardezi F, Lingard L, Espin S, Whyte S, Orser B, Baker GR. Silence, power And communication in the operating room. Journal of Advanced Nursing. 2009; 65(7): 1390–1399. DOI: 10.1111/j.1365-2648.2009.04994.x