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Reflection as a Skill-Clinical Supervision as a Prerequisite for Professional Development to Ensure Patient Safety

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Abstract

This study is set in the context of the final phase of nurse specialist students' (NSS) postgraduate education in surgical, oncological, anaesthesia and intensive care nursing at the University College in June 2015. The aim was to explore NSSs' experiences of clinical supervision (CS) during their postgraduate clinical education. 46 NSS answered open-ended questions and their responses were analysed by means of a qualitative content analysis. The response rate was 82%. One main theme emerged: CS as a prerequisite for professional development and two domains: A reflective way of growing and learning through CS and The meaning of being and acting in a reflective and professional manner to ensure patient safety (PS). The results indicate that reflection is a crucial part of the NSS' experiences of CS during their postgraduate clinical education. The supervisor's ability to confirm the students, mutual trust and feeling safe in the relationship with the supervisor are of great importance. The students highlighted the value of continuity in CS and being supported yet challenged. The supervisor has great responsibility for the NSS' development of professional clinical competence. The supervisor's personal and professional skills, in addition to her/his ability to provide CS are important for PS as well as for professional and interdisciplinary teamwork. Acting in a reflective and professional manner is of great importance for ensuring PS. Although most of the students reported being sufficiently competent to ensure PS and agreed that CS and reflection are of great importance for PS, they wanted more time to reflect on their actions together with their supervisor. In conclusion, CS has the potential to lead to quality improvement. However, in order to enhance reflective practice, which is a prerequisite for CS and PS, we recommend closer cooperation between the university college and clinical supervisors, as well as a formal master level education for clinical supervisors.

Keywords

Clinical Supervision, Nurse Specialist Student, Postgraduate Education, Patient Safety, Reflection

1. Introduction

According to the Norwegian White Paper No. 16 (2016-17) "Culture for Quality in Higher Education" [1], the overall goal of nursing education is to produce reflective practitioners. Educating nurse specialist students (NSS) who possess these capabilities is complex. Reflection and reflective practice in nurse specialist education are considered essential for specialized professional competence. The students should be able to act and think professionally, integrating theory and practice from the outset. Reflective practice was increasingly focused upon in the literature from the 1990s [2]. According to Atkins [3] and Duffy [4], reflective practice is defined as a learning and development process that includes self-examination of one's professional practice, experiences, thoughts, emotions, actions and gaining knowledge that can enrich it. Clinical practice is a crucial part of the postgraduate education of NSS in Norway, comprising 50% of the education.

The focus of this study is the final part of the NSS' postgraduate education in anaesthesia, intensive care, surgical and oncology nursing at the University College in June 2015. Specialist nursing practice entails encountering people in vulnerable and exposed situations. Specialist nurses have to function in complex health care systems, continuously refresh and update their skills and knowledge, in addition to framing and solving complex patient and healthcare problems [5]. At the same time, their work has become significantly more complex and they are under pressure to be efficient, making patient safety (PS) a hot topic. In Norway, most clinical nurse supervisors have no formal qualifications or training for supervision. However, the supervisors' skills are significant for the quality of supervision and they are in a unique position to facilitate learning processes and promote the students' professional growth and identity building as specialist nurses [6]. To enhance the students' professional development, a systematic structure can lead to positive outcomes in terms of quality and PS [7].

Healthcare delivery today comprises many benefits and challenges. Clinical supervision (CS) is one of the keys to maintaining and improving the overall quality of care, the professional development of personnel as well as patient and staff retention [8].

CS is increasingly recognized as a vital part of effective, modern healthcare systems [9]. There are several definitions of CS in the literature. Proctor [10] includes three elements in his definition of the supervision process: formative, which means development, normative, which implies a standard setting and restorative, which indicates the provision of support. According to Severinsson

[11], three main concepts should be established in nursing supervision: confirmation, meaning and self-awareness. The general target of clinical supervision is to support the development of the supervisee's job identity, competence, skills and ethics. The purpose of CS is to improve the quality of the nurse-patient relationship in terms of identifying and fulfilling a patient's care needs in order to achieve a positive change that can be observed and measured. In such a process, the supervisee together with a more experienced practitioner can reflect on practice using case material in order to learn and refine skills [12]. In this paper, we adopted the definition from Bishop's study, as it explains the importance of reflection and the fact that the focus of CS should be to ensure a safe and supportive environment that promotes the delivery of quality of care: "Clinical supervision is a designed interaction between two or more practitioners within a safe and supportive environment, that enables a continuum of reflective critical analysis of care to ensure quality patient services, and the well-being of the practitioner" [13] (p. 113).

Bishop's study highlights reflection as a skill and a core area of CS. A search of the literature revealed that while there are many articles on the subject of reflection, few studies have linked it with NSS. Carroll *et al.* [14] claim that there is no clear definition of reflection or reflective practice and that the plethora of terms used interchangeably in the literature make the phenomenon difficult to utilize within nursing education. However, the present study first demonstrates that reflection leads to a new understanding and the intention to act differently in the future (an iterative dimension). Secondly, it shows different levels of reflection on experience. In general, the surface level is more descriptive and less analytical than the deeper level, which appears more difficult to reach. Dewey [15] focused on the depth and quality of reflective thinking, which is termed a vertical dimension. Dubé and Ducharme [2] also refer to the definitions of Boud *et al.* [16], Dewey [15], Mezirow [17], Reid [18] and Schön [19]. Dubé and Ducharme [2] found that in all the studies the definitions of reflective practice identified the experience as the basis for new learning. In most studies, the process refers to Schön's [19] reflection-in-action which means reflection during a clinical experience and reflection-on-action in the sense of reflection on a clinical experience after the fact. The work of Mezirow [17] indicates that the reflection process can operate at various levels of intensity: habitual action, thoughtful action, reflection or critical reflection. Studies by Callister *et al.* [20], Cooper *et al.* [21], Honey *et al.* [22] and Glaze [23] show that student nurses managed to develop reflective skills such as self-awareness, openness to others and their practices by following reflective practice in an academic context, as well as the various emotions experienced in a learning context, such as fear or anxiety.

NSS are educated and trained to work in high-tech departments with a strong focus on PS. Nowadays PS is increasingly recognized as a key dimension of quality care and has been integrated into the education of healthcare professionals [24]. Jha *et al.* [25] claim that despite the traditional principle of "do no harm",

unsafe medical care seems to cause significant morbidity and mortality all over the world. In particular, surgery and anaesthesia present substantial safety risks. In the US, estimates suggest that surgical adverse events account for 48% of all adverse events. The relevance of PS has expanded internationally [26]. With the complexity of today's healthcare system, the successful treatment and outcome of each patient depend upon a range of factors. Many different types of healthcare professional are involved and it is difficult to ensure safe care unless the system is designed to facilitate timely and complete information and understanding by all. Accordingly, numerous factors such as understaffing and inadequate structures contribute to unsafe patient care [27]. The strategy includes the specific goal of improving PS and the quality of the healthcare services. The main dimension in PS and safety culture domains is respectful communication, which implies sharing experiences. Furthermore, the most important dimensions in the multidisciplinary capacity building domain are collaboration and teamwork, coordination and risk management, knowledge sharing and patient-centred communication [26].

2. Methods

2.1. Design

The study has a qualitative design [28]. In 2015, we conducted a quantitative survey that included qualitative questions focusing on how NSS experienced CS from their supervisors in relation to PS [29]. These qualitative questions constitute the empirical material in this study.

2.2. Sample

The study included all the 56 nurse specialist students (NSS) from four healthcare contexts in the final phase of their postgraduate education at the University College in June 2015 and eligible to participate in the study. In total, 46 NSS (8 anaesthesia, 11 intensive care, 14 operation/surgical and 13 oncological care) completed and returned the anonymous questionnaire to the first and the second author. The response rate was 81%.

The open questions focused on experiences of CS and competencies in order to ensuring PS: a) In CS I am particularly pleased with … b) In CS I would prefer changes to… c) How do you understand the concept of PS? d) Do you have the right competence to ensure PS? e) How can CS be important for PS? The characteristics of the participants are presented in **Table 1**.

2.3. Data Analysis

In order to analyse the questions we applied Graneheim and Lundman's [30] qualitative content analysis, a method for analysing written or verbal communication in a systematic way. A common component of qualitative interpretive content analysis methods is coding operations that translate one set of meanings into the other. The method presented by Graneheim and Lundman [30] consists

Table 1. Demographic characteristics of the students.

Sample characteristics	N = 46
Age, years, med(q1-q3)	36.5 (31.0 - 39.3)
Female gender	42 (91.3 %)
Previous work experience, years, med (q1-q3)	10.0 (6.0 - 13.3)
Speciality, No (%)	
Anaesthesia	8 (17.4 %)
Intensive care	11 (23.9%)
Operation/Surgery	14 (30.4%)
Oncology	13 (28.3%)
Female supervisor	42 (93.3%)

of the following steps: identifying meaning units, condensing, abstracting, coding, categorising and developing themes. In the analysis process of this study, both the first and the second author read the material repeatedly and identified the sense of the whole for each question. Meaning units were then identified through joint reflection and discussion, after which they were categorized into ten subthemes and five themes. All the authors carefully discussed the tentative subthemes and themes. Having moved back and forth several times between the whole and the parts of the text, all the authors finally agreed on the condensing of the domains and key components in accordance with Baxter [31]. According to Baxter [31], interpretive content analysis enables a deeper understanding of the meaning of the content. Finally, we compiled one main theme, two domains, of which one was on the latent level and one on the manifest level, and four key components as presented in **Table 2**.

2.4. Ethical Considerations

The guidelines for research set out in the Helsinki declaration [32] were followed. The study was approved by the Head of the Institute of Nursing and the Dean of the Faculty of a University College on the east coast of Norway. In addition, we applied to the Norwegian Centre for Research Data for approval (No. 53410). The principles of confidentiality, voluntariness and informed consent were adhered to. Information about the aim of the study was provided both in writing and verbally. The participants indicated their consent by giving a completed consent form to their principal tutor. The data were stored securely in a fireproof cabinet in accordance with university college regulations.

3. Results

Overall, the results indicate that reflection is a crucial part of the NSS' experiences of CS during their postgraduate clinical education. The NSS also highlighted the importance of being understood in their role as a student. They re-

Table 2. Main theme, domains and key components of the nurse specialist students' experiences of clinical supervision (CS) during their postgraduate clinical education.

Main theme: *CS as a prerequisite for professional development*	
Domain 1	Domain 2
Manifest level	Latent level
A reflective way of growing and learning through CS	*The meaning of being and acting in a reflective and professional manner to ensure patient safety*
Key components	
Importance of reflection	*Substance of clinical supervision*
Supervisor's ability to provide CS	*Responsibility for patient safety*

flected on the concept of CS in relation to PS and emphasized factors such as safe care, person-centred care, evidence-based practice and teamwork. Most of the students reported that they are sufficiently competent to ensure PS and that CS and reflection are of great importance for PS. Most of the students were especially satisfied with the supervision and their supervisor. One main theme emerged: *CS as a prerequisite for professional development* and two domains; *A reflective way of growing and learning through CS*, (manifest level) with two key components and *The meaning of being and acting in a reflective and professional manner to ensure PS* (latent level), also with two key components (Table 2).

3.1. Clinical Supervision as a Prerequisite for Professional Development

Based on the results, the main theme comprises the NSS' need for more time to reflect together with their supervisor. According to the students, learning to reflect and act in a professional and reflective way through CS is a prerequisite for professional development. The results also show that CS is of great importance for PS.

3.1.1. A Reflective Way of Growing and Learning through Clinical Supervision

This manifest domain concerns key components such as *the importance of reflection* and *the supervisor's ability to provide CS*. The students reported the importance of reflection in practice, that CS is planned and well organized for them. Stability and continuity in the relationship with the supervisor is important in CS. To achieve this they suggested the need for the same supervisor over time, or even two supervisors for each student, which would enable a more nuanced learning situation. Having the same supervisor during the clinical practice period created trust, safety, stability and a close relationship with the supervisor. Most of the students reported a desire for more time together with their supervisor. One student stated:

I would have liked more time together with my supervisor, more time to reflect and discuss patient situations in a setting away from the patient.

In this study, the need for time was consistently expressed as essential. The desire for time to reflect, discuss and summarize together with their supervisors

at the end of each day demonstrates the need for both mental and physical reflection space.

The NSS described PS as encompassing the principles of not causing harm, taking care of the patient when she/he is unable to do so, attending to injuries, preventing infections, decubitus and hypothermia, as well as ensuring that the patient's physical, mental, social and spiritual needs are met in a dignified manner. A high level of nursing competence and expertise, evidence-based practice, user empowerment, good practical skills, in addition to sufficient resources, positive attitudes and good role models at the workplace are of importance. Being encouraged and feeling free to ask questions and call for help were also mentioned as essential.

The NSS described the supervisor's personal and professional skills as crucial for the beneficial outcome of supervision. One student stated: *For me, the supervisor's personal skills, her openness, generosity and kindness to me are important.*

Another NSS expressed: *I appreciate that the supervisor is patient, supportive and willing to teach me. It is ok to be new and inexperienced, because the student and supervisor become familiar with each other and the relationship increases the student's confidence.*

One of the NSS described the supervisor's professional competence as: *For me, professional competence means that my supervisor has knowledge, experience and clinical skills and is willing to teach and communicate.*

The NSS highlighted the supervisor's ability to communicate, as well as professional and interdisciplinary teamwork as important for PS.

3.1.2. The Meaning of Being and Acting in a Reflective and Professional Manner to Ensure Patient Safety

This latent domain concerns key elements such as *substance of CS* and *healthcare professionals' responsibility to ensure patient safety.* The NSS reported that prerequisites for CS are the supervisor's ability to be open, generous and friendly. They wanted to be seen, accepted, respected, appreciated and recognised, which could be interpreted as their need for confirmation. Furthermore, they described the importance of mutual trust and feeling safe in the relationship with the supervisor. The NSS also mentioned the need to be supported yet challenged in the CS process:

As a specialist nurse student, I want to be challenged by my supervisor and given the opportunity to work more independently with patients. The supervisor should have patience, provide support and see me as a person.

The meaning of being and acting in a reflective and professional manner is that the students' experiences constitute the essential substance and core content of CS. The meaning comprises elements such as confirmation, affirmation, trust, being supported yet challenged, dialogue and identifying role models. All of the students wanted more time for dialogue and to reflect together with the supervisor. Some also wanted the supervision to be communicated in a more respon-

sive way and space for asking "silly" questions.

The NSS described supervision as being of great importance for ensuring PS. In the concept of PS, the NSS emphasized areas such as evidenced-based practice, attitudes, safeguarding the patient's dignity, working properly and delivering high quality care and treatment.

It was essential to reflect together with the supervisor in order to learn from adverse events and identify alternative ways of acting. One student illustrated this as follows:

Supervision increases my self-awareness in new patient situations that I did not experience before. Reflecting together with my supervisor increases my understanding and is of great importance for patient safety.

Another student expressed:

Supervision increases my learning, my self-awareness and develops my professional competence and team-working skills. It is important to benefit both personally and professionally from the supervisor's experience and competence.

The result indicates that the supervisor has a great responsibility for the NSS' development and achievement of clinical competence. One of the students expressed:

Supervision is important for patient safety, but it depends on the form of supervision and the supervisor's competence.

Supervisors who assume this responsibility transfer their knowledge and values to ensure the students' development and responsibility for patient safety. Supervisors who do not take responsibility may fail to contribute to the students' professional development.

4. Discussion

The aim of this study was to investigate NSS' experiences of CS during their postgraduate clinical education. The main theme: "CS as a prerequisite for professional development" reflects the interpretation of the NSS' descriptions of what they appreciated in CS and what they would like changed. Two research questions were addressed: 1. What elements of CS do NSS emphasize as essential for their professional development? 2. How does CS support the PS competencies of NSS?

4.1. Elements of Clinical Supervision That Emphasize Nurse Specialist Students' Professional Development

The findings in our study emphasize reflection as a crucial part of the NSS' experiences of CS during their postgraduate clinical education and for ensuring PS. The NSS stated that a prerequisite is educated professional supervisors who can influence their development of a professional identity [38]. The NSS highlighted elements of CS such as the supervisor's ability to be open, generous and friendly. Furthermore, they described the importance of the supervisor's professional and personal competence. In addition, the NSS wanted to be more challenged in the

CS process. A study by Pack [40] underlines the fact that a supervisor's personal qualities such as 'willingness and preparedness to show understanding, bringing out genuine feelings, confirming and being sensitive to the supervisee's needs' are considered important [39]. There are a number of key prerequisites for enriching the environment in which the supervisee's awareness can grow and flourish [40]. Supervisors need to be aware of the purpose of their role, as well as adequately prepared and trained to confirm and find emphatic ways to offer constructive critique of their supervisee's practice but avoid shaming and humiliation [40].

Most NSS were pleased with the supervision they received and they were satisfied with their supervisor. Nevertheless, they strongly emphasized the desire for even more time to reflect with their supervisor. However, finding time and room for supervision and reflection is a challenge. Moreover, NSS particularly pointed out the need for additional time to reflect outside of patient situations. A quiet room without risk of interference would be the preferred location in which to discuss and reflect on their experiences of patient situations, as a means of achieving more strategies for action. Ekebergh [33] claims that to achieve a real reflection one has to distance oneself from the situation and make it possible for the conscious mind to completely turn towards itself and that to achieve self-reflection, one must 'step out' of the situation and actions. Ekebergh [33] also argues that as a consequence, reflection and self-reflection are not possible while acting, but only at a later stage after the action has taken place. This underpins the NSS' need for time to reflect outside patient situations. CS is a prerequisite for professional development and essential for growing and learning and for being and acting in a reflective and professional manner, which highlights the supervisor's ability to provide CS and the substance of CS. The need for both mental and physical reflection space was considered essential.

Furthermore, the NSS stated that the supervisor's personal and professional qualities are vital for both supervision and continuity. A study by Platzer *et al.* [34] found that reflective practice groups for student nurses provided emotional support, reassurance, feedback, encouragement and constructive criticism from peers, in addition to enabling changes in behaviour and attitude among the participants. Reflective practice seems to be a new learning tool for the development of different reflective skills. Gibb's reflective cycle [35] and Mezirow's [17] level of reflectivity demonstrate that reflection consists of different stages or levels and follows a given order [33]. Ekebergh [33] claims that from a lifeworld perspective the use of reflection models might be risky, especially if slavishly followed, because the complexity of reflection can never be reduced to different stages. Reflection is lived and must be supported in an open, sensitive and flexible manner in relation to the learner. Ekebergh [33] states that following a structure or model without any attention to the learner's lifeworld will not enhance learning. Furthermore, Ekebergh argues that this aspect of using reflection models has received little attention in the literature about reflective practice. Lifeworld

experiences concern how each student experiences her/his caring situations, patients and colleagues [33].Ekebergh [36] understands reflection as a comprehensive act of human consciousness, where reflection on thoughts, feelings and experiences creates a meaningful picture of a human being's experience of the world. This perspective highlights the fact that reflection is a way to both grow and learn through CS. A study by Severinsson [37] concludes that spending more time reflecting on individual students' experiences of clinical situations within the nursing education will affect the students' personal knowledge as well as the integration of theory and practice. From this perspective, more reflection will reduce the gap between theory and clinical practice [37].

4.2. How does Clinical Supervision Support Nurse Specialist Students' Patient Safety Competencies?

With regard to PS, the NSS stated that reflection increased their self-awareness and provided them with more options for dealing with unfamiliar patient situations. Reflection has the potential to enable them to learn from mistakes and think critically about their own practice, thus ensuring quality care and treatment. The NSS wanted more constructive feedback and to be challenged in supervision in order to acquire new perspectives and be able to prevent adverse events. Traditionally NSS receive CS with little time for reflection outside the patient situations. At present, the teachers at the university college have had little influence on the substance and structure of the supervision. According to Severinsson [11], three main concepts should be established in nursing supervision: confirmation, meaning and self-awareness. Confirmation concerns being confirmed and can lead to growth of professional identity and increase the supervisees' self-confidence and self-knowledge. The main goal of confirmation is to eliminate doubt and ensure that the supervisee develops a professional identity [38]. To be loved and confirmed is the genuine and deepest wish of all human beings [38]. NSS expressed this very need to be seen as a person and understood in their student role. Holm Wiebe *et al.* [38] point out that confirmation requires active listening and the ability to put oneself in the other person's situation, followed by verbally confirming her/him. If a student is incapable of accepting confirmation from her/his supervisor, it could undermine her/his identity development [38]. Meaning is understood by Severinsson [11] as the meaning of existence experienced in CS which is related to supervisors' competence and moral responsibility. Self-awareness is built on the process of learning through CS and should lead to growth and development [11]. According to Altmiller [6], the supervisor's role is of great importance for the quality of supervision. Supervisors are in a unique position to facilitate learning processes and promote the students' professional growth and identity building as specialist nurses. Berggren and Severinsson [7] concluded that to enhance the students professional development, a systematic structure can lead to positive outcomes in terms of quality and PS. Another prerequisite for professional development is time to reflect,

discuss and summarize together with the supervisor in order to learn from adverse events and increase future specialist nurses' awareness of their responsibility for ensuring PS. In the study by Jølstad *et al.* [29] the researchers concluded that CS is crucial for ensuring PS.

4.3. Limitations of the Study

The 46 NSS received five qualitative open-ended questions. Some students did not answer all the questions and many of the responses consisted of short sentences or keywords. Focus groups could be used to achieve a deeper understanding of how NSS experience CS in relation to PS, as this method permits researchers to enter the participants' world. According to Liamputtong [41], it is an ideal approach for examining experiences, stories, points of view, beliefs, needs and individual concerns. The interaction and the group process assist people to explore and clarify their beliefs and experiences, while at the same time enabling researchers to uncover aspects of understanding that often remain hidden. The results of this study are only valid for the study group. It would be of interest to compare different groups of students at postgraduate educational level and their experiences of CS and possibilities for reflection upon practice.

5. Conclusion

In conclusion, there is a potential for improving the quality of CS in clinical education. We recommend closer cooperation between the university college and clinical supervisors in order to enhance reflective practice, which is a prerequisite for CS and PS. In addition, we recommend that the university college should provide formal education at master level for clinical supervisors in order to increase their supervisory skills and awareness of their responsibility for the professional development of NSS. The competence of future nurse specialists is of the utmost importance, as they will be in a key position to ensure safe healthcare.

6. Contributions

The study was designed by E.S. and A.L. A.L. coordinated the research. E.R. and A.L.J. performed the data collection. E.R. and A.L.J. contributed to the study conception and literature search, supported by the specialized librarian at the university college. All authors in the research team participated in the data analysis. E.R. and A.L.J. were responsible for drafting the manuscript. All authors contributed to the intellectual content of the paper. The study was supervised by E.S. and A.L.

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References

[1] Ministry of Education. White Paper No. 16 (2016-2017) Culture for Quality in Higher Education. Solberg Government, Ministry of Education, Oslo.

[2] Dubé, V. and Ducharme, F. (2015) Nursing Reflective Practice: An Empirical Literature Review. *Journal of Nursing Education and Practice*, **5**, 91-99. https://doi.org/10.5430/jnep.v5n7p91

[3] Atkins, S. (2004) Reflective Practice in Nursing. In: Bulman, C. and Schutz, S., Eds., 3rd Edition, Blackwell Publishing, Carlton.

[4] Duffy, A. (2007) A Concept Analysis of Reflective Practice: Determining Its Value to Nurses. *British Journal of Nursing*, **16**. https://doi.org/10.12968/bjon.2007.16.22.27771

[5] Mann, K., Gordon, J. and MacLeod, A. (2009) Reflection and Reflective Practice in Health Professions Education: A Systematic Review. *Advances in Health Sciences Education*, **14**, 595-621. https://doi.org/10.1007/s10459-007-9090-2

[6] Altmiller, G. (2011) Quality and Safety Education for Nurses Competencies and the Clinical Nurse Specialist Role. Implications for Preceptors. *Clinical Nurse Specialist*, **25**, 28-32. https://doi.org/10.1097/NUR.0b013e318201f830

[7] Berggren, I. and Severinsson, E. (2011) The State of the Science of Clinical Supervision in Europe. In: Cutcliffe, J., Hyrkäs, K. and Fowler, J., Eds., *Routledge Handbook of Clinical Supervision*: *Fundamental International Themes*, Milton Park, Abingdon, Oxon, 327-337.

[8] Fowler, J. and Cutcliffe, J.R. (2011) Clinical Supervision. Origins, Overviews and Rudiments. In: Cutcliffe, J., Hyrkäs, K. and Fowler, J., Eds., *Routledge Handbook of Clinical Supervision*: *Fundamental International Themes*, Milton Park, Abingdon, Oxon, 8-19.

[9] Milne, D. (2007) An Empirical Definition of Clinical Supervision. *British Journal of Clinical Psychology*, **46**, 437-447. https://doi.org/10.1348/014466507X197415

[10] Proctor, B. (1991) Supervision: A Co-Operative Exercise in Accountability. Enabling and Ensuring: Supervision in Practice. In: Marken, M. and Payn, M., Eds., *National Bureau and Council for Education and Training in Youth and Community Work*, Leicester, 21-23.

[11] Severinsson, E.I. (2001) Confirmation, Meaning and Self-Awareness as a Core Concept of the Nursing Supervision Model. *Nursing Ethics*, **8**, 36-44. https://doi.org/10.1177/096973300100800105

[12] Severinsson, E.I. (1995) Clinical Nursing Supervision in Health Care. The Nordic School of Public Health, Göteborg.

[13] Bishop, V. (2011) Clinical Supervision and Clinical Governance. In: Cutcliffe, J., Hyrkäs, K. and Fowler, J., Eds., *Routledge Handbook of Clinical Supervision*: *Fundamental International Themes*, Milton Park, Abingdon, 327-337.

[14] Carroll, M., Curtis, L., Higgins, A., Nicholl, H., Redmond, R. and Timmins, F. (2002) Is There a Place for Reflective Practice in the Nursing Curriculum? *Nurse Education in Practice*, **2**, 13-20. https://doi.org/10.1054/nepr.2002.0050

[15] Dewey, J. (1933) How We Think, a Restatement of the Relation of Reflective Thinking to the Educative Process. No. 370.15 D48.

[16] Boud, D., Keogh, R. and Walker, D. (2013) Reflection: Turning Experience into Learning. Routledge.

[17] Mezirow, J. (1991) Transformative Dimensions of Adult Learning. Jossey-Bass, San Francisco.

[18] Reid, B. (1993) "But We're Doing It Already!" Exploring a Response to the Concept of Reflective Practice in Order to Improve Its Facilitation. *Nurse Education Today*, **13**, 305-309.

[19] Schön, D.A. (1984) The Reflective Practitioner: How Professionals Think in Action. Vol. 5126, Basic Books.

[20] Callister, L.C., Luthy, K.E., Thompson, P. and Memmott, R.J. (2009) Ethical Reasoning in Baccalaureate Nursing Students. *Nursing Ethics*, **16**, 499-510. https://doi.org/10.1177/0969733009104612

[21] Cooper, C., Taft, L.B. and Thelen, M. (2005) Preparing for Practice: Students' Reflections on Their Final Clinical Experience. *Journal of Professional Nursing*, **21**, 293-302.

[22] Honey, M., Waterworth, S., Baker, H. and Lenzie-Smith, K. (2006) Reflection in the Disability Education of Undergraduate Nurses: An Effective Learning Tool? *Journal of Nursing Education*, **45**, 449-453.

[23] Glaze, J.E. (2002) Stages in Coming to Terms with Reflection: Student Advanced Nurse Practitioners' Perceptions of Their Reflective Journeys. *Journal of Advanced Nursing*, **37**, 265-272. https://doi.org/10.1046/j.1365-2648.2002.02093.x

[24] Okuyama, A., Martowirono, K. and Bijnen, B. (2011) Assessing the Patient Safety Competencies of Healthcare Professionals: A Systematic Review. *BMJ Quality & Safety*, 1-11. https://doi.org/10.1136/bmjqs-2011-000148

[25] Jha, A.K., Prasopa-Plaizier, N., Larizgoitia, I. and Bates, D.W. (2010) On Behalf of the Research Priority Setting Working Group of the WHO World Alliance for Patient Safety. Patient Safety Research: An Overview of the Global Evidence. *Quality Safe Health Care*, **19**, 42-47. https://doi.org/10.1136/qshc.2008.029165

[26] Severinsson, E., Haruna, M., Rönnerhag, M., Holm, A.L., Hansen, B.S. and Berggren, I. (2017) Evidence of Linkages between Patient Safety and Person-Centred Care in the Maternity and Obstetric Context—An Integrative Review. *Open Journal of Nursing*, **7**, 378-398. https://doi.org/10.4236/ojn.2017.73030

[27] Walton, M. and Barraclough, B. (2011) Patient Safety Curriculum Guide Multi-Professional Edition. World Health Organisation, Malta.

[28] Polit, D.F. and Beck, C.T. (2013) Essentials of Nursing Research: Appraising Evidence for Nursing Practice. Lippincott Williams & Wilkins, Philadelphia.

[29] Jølstad, A.L., Røsnæs, E.R., Lyberg, A. and Severinsson, E. (2017) Clinical Supervision and Non-Technical Professional Development Skills in the Context of Patient Safety—The Views of Nurse Specialist Students. *Open Journal of Nursing*, **7**, 253-267. https://doi.org/10.4236/ojn.2017.72021

[30] Graneheim, U.H. and Lundman, B. (2004) Qualitative Content Analysis in Nursing Research: Concepts, Procedures and Measures to Achieve Trustworthiness. *Nurse Education Today*, **24**, 105-112.

[31] Baxter, L.A. (1991) Content Analysis. Studying Interpersonal Interaction, 239-254.

[32] World Medical Association Declaration of Helsinki (2008) Ethical Principles for Medical Research Involving Human Subjects. Adopted by the 59th WMA General Assembly, Seoul. http://www.wma.net

[33] Ekebergh, M. (2007) Lifeworld-Based Reflection and Learning: A Contribution to the Reflective Practice in Nursing and Nursing Education. *Reflective Practice*, **8**, 331-343. https://doi.org/10.1080/14623940701424835

[34] Platzer, H., Blake, D. and Ashford, D. (2000) An Evaluation of Process and Outcomes from Learning through Reflective Practice Groups on a Post-Registration Nursing Course. *Journal of Advanced Nursing*, **31**, 689-695. https://doi.org/10.1046/j.1365-2648.2000.01337.x

[35] Gibbs, G. (1988) Learning by Doing: A Guide to Teaching and Learning Methods.

[36] Ekebergh, M. (2001) Assignment of Health Science Knowledge: The Importance of Reflection for Learning. Doctoral Dissertation, Department of Health Sciences, Åbo Academy, Vasa.

[37] Severinsson, E.I. (1998) Bridging the Gap between Theory and Practice: A Supervision Programme for Nursing Students. *Journal of Advanced Nursing*, **27**, 1269-1277. https://doi.org/10.1046/j.1365-2648.1998.00644.x

[38] Holm Wiebe, A.K., Johansson, I., Lindquist, I. and Severinsson, E. (2011) Nurses' Experiences of Core Phenomena in the Supervisor Training Programme. Routledge Handbook of Clinical Supervision. Fundamental International Themes, New York, 241-249.

[39] Severinsson, E.I. and Hallberg, I.R. (1996) Clinical Supervisors' Views of Their Leadership Role in the Clinical Supervision Process within Nursing Care. *Journal of Advanced Nursing*, **24**, 151-161. https://doi.org/10.1046/j.1365-2648.1996.17321.x

[40] Pack, M. (2009) Clinical Supervision: An Interdisciplinary Review of Literature with Implications for Reflective Practice in Social Work. *Reflective Practice*, **10**, 657-668. https://doi.org/10.1080/14623940903290729

[41] Liamputtong, P. (2011) Focus Group Methodology: Principle and Practice. Sage Publications.

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Mental Disorders and Associated Factors among Adolescents in Juvenile Detention, Dar es Salaam, Tanzania

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Abstract

Introduction: The number of children and adolescents admitted in Dar es Salaam juvenile centers due to misbehavior and criminal offences has risen from 20 to 30 per month. Increasing aberrant behaviors in children have been linked to mental disorders. Assessment of presence mental health disorders as the main cause of these behaviors would be important to restore mental health of children and assist the system to impose a fair trial. **Objective**: This study aimed to determine the presence of mental disorders and associated factors among children and adolescents within Dar es Salaam juvenile systems and explore factors that may affect their mental health while in juvenile home. **Methods:** The mixed research method was used to estimate prevalence of mental disorders by a cross-sectional study and a qualitative method was applied to evaluate mental disorders according to DSM IV TR criteria. **Results:** The overall prevalence of mental dysfunction by mental status evaluation was 3%: 95% (CI; 25.3 - 43.2; *n* =37 out of 108). The younger age group (13 - 15) years presented with a prevalence of 30%: 95% (CI; 14.7 - 44.5) while the older adolescents (16 - 17 years) had a prevalence of 55%: 95% (CI; 43.3 - 67.1). Attention deficit disorder was found in some children, some had history of drug and alcohol abuse, with few sexual disorders, depression and brief psychotic reaction and was found to be common among adolescent with unstable family situations such as death of parents, divorce of parents, and single parented children. **Conclusion:** Findings are suggestive that there is a presence of underlying mental disorders in some of the adolescents in the juvenile detention. Thus mental health screening for children in juvenile homes should be made mandatory in order to identify causes of aberrant behavior as well as provide treatment, prevent complications and maintain mental health of these children. Mental health screening for such children would also assist in conducting a fair trial for these emancipated children.

Keywords

Mental Disorders, Adolecents, Juvenile Detention

1. Introduction

The presence of unrecognized mental disorders in children may likely influence inappropriate behaviors and may lead them to commit criminal offences due to unsound mind. The existence of juvenile centers is a service put in place to cater for children who have committed crimes or socially sanctioned behaviors. The juvenile detention, or locally known as remand homes, is the domicile for children for a period extending from awaiting trial and for the duration or after the trial for the purpose fulfilling a sentence for a committed crime or offence.

The Tanzanian mental health act of 1983 stipulates very clearly that it is the Client's right to receive rightful sentence after a comprehensive mental status evaluation is performed. The evaluation establishes client to be of sound or unsound mind at the time when the crime or offence was committed. According to the criminal law, when an offence is committed by a person of unsound mind, the sentence is changed from imprisonment to admission to Isanga institution in Dodoma. However, we are not certain at this point that mental status evaluation is usually performed for children who have committed crimes. This concept underscores the importance of exploring this information with a view to conduct an in-depth situational analysis to determine the prevalence of mental disorders among children within juvenile justice systems in Tanzania. The analysis may provide a true state of affair in regard to mental illness amongst children and afford an avenue for deliberating and formulating adequate intervention to contain the problem.

Tanzania, like most poor resource countries, has an estimated prevalence of mental disorders ranging from 15% - 20% [1] [2]. Despite the burden of mental illness, few people may have access to specialist care for their disorders whereas the rest may resort to other non-conventional treatment. The children and adolescent services are outpatient services since inpatient care is yet to be developed in Tanzania. The absence of inpatient care for children with mental disorders disregards the priority of such care in the country. It is imperative that such disregard should now be improved since the increase in numbers of adolescents in these centers is highly suggestive that this problem is escalating. The diagnostic challenges of childhood mental disorders, the lack of mental health specialists in both the nursing and medical professions, and specifically, the lack of child and adolescent psychiatric specialist further impound the right of treatment and fair trial for children that have socially undesired behaviors that end up in juvenile justice systems. It is also essential that the care givers and mental health practitioners need to have expertise in the related legal matters in order to improve care of children and adolescents at juvenile justice systems [3]. Identifying association of mental disorders in children and adolescents at juvenile justice system will contribute towards information that may be used to develop optimal standards of mental health care for these members of the society and to link services between justice, health, and education needs of children and adolescents for improvement of their future adulthood.

2. Problem Statement

Several studies have shown that there is a relationship between crime and mental disorders in children and adolescents in juvenile centers [4]. Approximately 50% of children on the child welfare system have mental disorders and 67% of adolescent in the juvenile justice system have mental disorders [5]. It is possible that some of these children commit these misdeeds due to mental problems rather than flaw of character.

However, in Tanzania little has been documented about how mental disorders in children and adolescents contribute to committing offences that would lead them to juvenile justice centers.

The incidences of crimes conducted by children and adolescents have increased dramatically and the number of children and adolescents admitted in Dar es Salaam remind home has also risen from 15 to 30 per month. It is necessary to identify the link between mental disorders and crimes committed by children and adolescents. Once the link is known optimal standard of mental health services can be provided to children and adolescents at juvenile justice systems. Understanding other factors that contribute to children and adolescents to commit crimes would also be important to promote early prevention and interventions to avoid complications. On the other hand, the involvement and linkage of mental health practitioners, parents/guardian and the justice system is important to keep balance between justice, mental health care, and social needs of the children and adolescents.

Children and adolescents are involved in several crimes including domestic violence, stealing, rape, drug abuse, unnatural offence; disturb passengers, lying and so on. This study describes the relationship between mental health status of children and adolescents and projected antisocial behaviors.

2.1. Rationale

The identification of the presence of actual or potential mental disorders, mental health challenges, and co morbid physical illness among children and adolescents at juvenile justice systems is important to promote mental health of these children, provide a fair trial and also ensures successful prevention of adulthood mental disorders among this group so that they grow to be functional members of society. The study provides additional information for mental health practice for this special group as well as for policy makers and practitioners. The author will disseminate research report to the department of social welfare of the ministry of health, care givers in the remand home, lawyers and social welfare officers in the juvenile court, mental health practitioners and government officials working with ministry of health.

2.2. Research Objectives

2.2.1. Broad Objective

To assess the presence of mental disorders and associated factors among children and adolescents in remind home, and explore factors that may affect their

mental health while in juvenile centers.

2.2.2. Specific Objectives

1) To determine the magnitude of mental disorders of children and adolescents in Dar es Salaam remind home.

2) To identify the link between mental disorders and crimes committed by children and adolescents.

3) To determine factors that may affect the mental health of children while in juvenile center.

2.2.3. Research Questions

1) What is the mental status evaluation of children and adolescents who have committed crimes and are in juvenile justice systems?

2) Is there an association of mental health disorders among children and adolescents with the crimes they committed?

3. Methodology

3.1. Design

The researcher used two methods, a cross-sectional method to estimate the prevalence of mental disorders among children in juvenile centers (cross section means at one point in time). The researcher had questionnaires of 53 items using Likert Scales. Qualitative method was applied [6] to evaluate the mental disorders. In qualitative method, in-depth interviews and focus group discussions of children, parents, and care givers were used to assess mental disorders among children and adolescent at juvenile systems by using DSM IV TR [6] multiaxis, and bio psychosocial formulation to elicit diagnosis and causes that led children and adolescent to appear before juvenile justice systems.

3.2. Study Setting

Dar es Salaam remand home which is situated in Upanga West, Alykhan road. This center was established in 1962 under the caption no 21 of the law of the child Act which was amended in year 2009. This remand home work hand in hand with juvenile court situated at Kisutu adjacent to Kisutu high court building.

3.3. Study Population

All children and adolescents in Dar es Salaam juvenile systems between May, to August, 2010 (study period). Children age 6 to 12 years old and adolescents age between 13 to 17 years old within Dar es Salaam justice systems.

3.4. Sample Size

Due to the nature and paucity of such institutions in Dar es Salaam, the researcher deployed convenience sampling so the study invited to participate, all children and adolescents that were found in the remand home during the study

period that was from May to August, 2010. Children/adolescents were consequently invited to participate and were enrolled only once (those who were discharged and readmitted during the study period were enrolled only once) and the final number of participants was one hundred and eight (108).

3.5. Data Collection

Self-administering questionnaires were used for quantitative data to estimate the magnitude of mental disorders. These questionnaires focused on the theory of planned behavior [7], where attitude, subjective norms, and perceived behavior control may influence behavior, which were used to assess reasons of young people to abscond from school and other delinquency behaviors. In qualitative data mental status evaluation, multiaxis, descriptive formulation and bio psychosocial formulation were used as interview guide to identify mental state of participants and possible causes of mental dysfunction. Focus group discussion to participants, parents and care givers were also used to collect qualitative data.

3.6. Data Analysis

The web based statistical software was used to calculate the proportions (age, sex, residential area, education level, and parent's marital status), prevalence of mental disorders and their confidence interval. The software was accessed on http://dimensionresearch.com/resource/calculators/conf_pro.html. Results are summarized in tables. The qualitative content analysis was used to analyze main categories and themes from qualitative data.

3.7. Ethical Considerations

The following are the main ethical considerations that were implemented to preserve dignity, safety, and privacy of participants. Study participants were minors, therefore they are not at the legal age for giving consent, and instead there was involvement of parents/guardians for informed consent to participate to the study. Apart from that the investigator also gave adequate information to the study participants in order to give assent to children and adolescents as an agreement to participate to the study. A payment of 5000/= (Tanzanian shillings) as reimbursement for transportation of the parents or guardians who were involved in the focus group discussions. Signed consent forms and information gathered stored in locked cabinets. Autonomy of the research participants were preserved by eliminating their names and identities from the field notes, only the investigator who have the names of the subjects. Research study materials were preserved appropriately to maintain confidentiality. There was no discomfort or risk associated with this study. Physical and mental disorders diagnosed among children and adolescents at Dar es Salaam juvenile justice systems were referred to appropriate health setting for further investigation and management. In case in the future other researchers needs to access to the information that gathered during this research to answer questions related to it. If so, an ethical review board will first review the new study to ensure that they use the information ethically.

4. Results

4.1. Demographic Characteristics of Children and Adolescents in Remand Home between 2010

The study enrolled all one hundred and eight (108) children and adolescents that were found at the remand home during the study period. Children aged 13 to 15 were 45 (41%), while adolescents were 63 (58%).

Children and adolescents who lost their parents through death and divorced were more frequent than those who were living together with their parents. Either it was noted that those whose parents were divorced were reared by single parents, father or mother or extended families of uncles, aunt and grandparents. Those participants whose parents had died were living on the streets and the main catchment area was Ubungo bus terminal. They migrated from up country regions and when they arrived in Dar es Salaam they engaged themselves in petty businesses and carrying passenger's luggage to get some money for living.

4.2. Parents Living Situation

Children and adolescents in remind home 58.7% their parents died, while 44% their parents had divorce. Only 6% found to have parents who are living together. The age group of children and adolescents is between 13 to 17 years old as shown in Table 1.

Table 1. Demographic characteristics of children and adolescents in the remand home from May to August 2010.

Variable	N (%)	95% CI
Age	37 (34.23)	8.95 (25.31 - 43.21)
13 - 15 yrs	61 (56.5)	9.35 (47.13 - 65.83)
16 - 17 yrs		
Sex	100 (92.59)	4.94 (87.65 97.53)
Males	8 (7.4)	4.94 (2.47 - 12.35)
Females		
Residential area in Dar es salaam	92 (85.19)	6.7 (78.49 - 91.89)
Street	16 (14.8%)	6.7 (8.11 - 21.51)
home		
Present education level	10 (9.26)	5.47 (3.79 - 14.73)
Primary school	6 (5.56)	4.32 (1.24 - 9.88)
Secondary (O'level)	92 (85.9)	6.7 (78.49 - 91.89)
School drop out		
Parents marital status		
Married	6 (5.56)	4.32 (1.24 - 9.88)
Divorsed	44 (40.74)	9.27 (31.47 - 50.01)
Died	58 (53.7)	9.4 (44.3 - 63.1)
Total	**108**	

4.3. Signs of Mental Dysfunction

The second part of the study was qualitative and to be able to assess mental dysfunction of these participants, mental status examination was performed. Table 2 below shows the summary of the examination. The examination focused on

Table 2. Mental status evaluation of children and adolescents.

Variable	N (%)	Mental status Examination		Unadjusted OR (95% CI)
		Abnormal (0)	Normal (1)	
Age group:				
13 - 15 yrs	37 (34.3)	11	26	8.9 (25.3 - 43.2)
16 - 17 yrs	61 (56.5)	33	28	
Appearance				
a. General appearance		6	31	11 (4.34 - 28.1)
b. Attitude to situation and examiner				
c. Motor behavior				
Speech				
a. Rate		5	32	11.01 (2.5 - 24.52)
b. Volume				
c. Quantity of information				
Mood and affect				
a. Mood (glad and sad)		30	7	12 (68.46 - 93.7)
b. Affect (congruent and incongruent)				
Thought of form				
a. Amount and rate.		1	36	5.22 (- 2.52 - 7.92)
b. Flow of idea				
c. Disturbance in meaning				
Content of thought				
a. Delusion		24	13	15 (49.48 - 80.24)
b. Suicidal thought				
c. Homicidal thought				
Perception				
a. Hallucination		19	16	16.11 (35.24 - 67.46)
b. Illusion				
c. Detached from reality				
Sensorium and cognition				
a. Level of consciousness		8	29	13.26 (8.36 - 34.88)
b. Memory recent and remote				
c. Orientation: time, place and person				
d. Concentration				
e. Abstract thinking				
Insight				
a. Extent of participant on awareness of the problem		30	7	12.62 (68.46 - 93.7)
Total	**108**			

evaluating eight parameters as seen in the table. Each parameter of evaluation had had subcategories which each was evaluated as "normal" = 1 if no abnormality was observed and "abnormal" = "0" if abnormal. Based on these scores, odds ratio of each category was calculated to evaluate what MSE category was most prominent for these participants.

The overall 37 children/adolescents were found to have mental dysfunction by the mental status evaluation. This gives the prevalence of mental dysfunction 34.3%; 95% (CI; 25.3 - 43.2). The younger age group (13 - 15) years presented with a prevalence of 30% (CI; 14.7 - 44.5) as presented in Table 3.

Table 3. Prevalence of mental dysfunction based on the mental status evaluation.

Age group	N (%)	95% CI
13 - 15 yrs	11 (30.0)	(14.7 - 44.5)
16 - 17 yrs	37 (55.2)	(43.3 - 67.1)

Descriptive formulations based on Diagnostic Statistical Manual IV Text Revised (DSM IV TR) diagnostic criteria

CASE STUDY NO 1

Child X is 13 years old, school dropout when he was standard three. His father did not want to have a child with his mother they were just friends. His father arranged to do criminal abortion of his pregnancy. His mother did not accept the plan and such his father decided not to take care of his mother and he denied all responsibilities and consequently.

X was born in 1997, grew up and taken care by his mother of Kawe in Dar es Salaam. He started primary school in 2004 and when he reached standard two teachers reported some abnormal behaviors shown by X. There was also a lot of complains coming from his peers that he is violent and do not cope with others in playing. He disappeared from home and school when he was standard three. He went to a place where he got involved in the selling illegal drugs like heroin, cocaine and cannabis. He was also using these drugs.

Family history—Parental side, X's father is not married but he has about seven children from different mothers living with their mothers. His father and grandfather both had history of violence during their childhood up youth.

Maternal side, X mother grow up in a very strict religious house she changed religion when she met X's father. Since then she has been miscommunicated with her relatives. Currently she is living with man who doesn't want to stay with step children and in particular X. This led X resort to street life because he had no other alternative.

Chief complaints

He is alleged to have stolen 300,000/= Tanzania shillings from his aunt.

Excessive cannabis smoking

Heroine smoking

Unnatural offence (used to be sodomised)

DIAGNOSIS—DRUG ABUSE (HEROINE AND CANNABIS) SEX DEVIATION (HOMOSEXUAL)

CASE STUDY NO 1

DSM IV TR MULTIAXIS

AXIS I: MEDICAL DIAGNOSIS—CANNABIS AND HEROINE ABUSE

Sign and symptoms

Excess smoking of cannabis; Heroine smoking

Stealing money from relatives and other people; Aggressiveness; Abusive language

Selling cannabis and heroine; Symptoms are in severe form

AXIS II: MENTAL RETARDATION—None

PERSONALITY DISORDERS—rule out conduct disorders

AXIS III: PHYSICAL ILLNESS—None

AXIS IV: PSYCHOSOCIAL ENVIRONMENTAL SRESSORS

Parents not married reared by single parent (mother)

Father convinced his mother to do criminal abortion of his pregnancy

School dropout standard three

AXIS V: GLOBAL ASSESSMENT FUNCTION OF THE CLIENT—70%

Social functioning is fair, he is able to create and maintain good interpersonal relationship, able to maintain eye to eye contact.

Occupational functioning, he is able to do domestic activities within the remind home with minimal supervision.

School functioning, he can do simple mathematics and he passed in standard two examinations. The biopsychosocial formulation of case study no 1 is presented in Table 4.

Table 4. Biopsychosocial formulation case study No 1.

Factors	Biological	Social	Psychological
Predisposing	Genetic loading for violence (strong family history), sadness feeling from mother	Can't interact well with others	Single parented, his father has neglected him
Precipitating	Use of street drugs (cannabis and heroine)	Mother is chasing him away because her current boyfriend does not accept him	Dropped out from school when was standard three
Perpetuating	Unrecognized mental illness	No social support available	Low self esteem, sadness, he wanted to go home, his mother is reluctant
Protective	General physical health is good, will be advise to undergo psychosocial rehabilitations	Mother can be counseled to accept her child and give social support	He is intelligent above average if get treatment and psychosocial rehabilitation can resume school

CASE STUDY NO 2

DSM IV TR MULTIAXIS

AXIS I: MEDICAL DIAGNOSIS ATTENSION DEFICITY HYPERACTIVITY DISORDER (ADHD)

CO MORBIDITY—ALCOHOL ABUSE

Signs and symptoms

Unable to pay attention in one focus

Restless

Bedwetting

Stealing

Drinking alcohol

Abscond from home

Warming around on the streets

Unable to maintain body and environmental hygiene

Symptoms are in severe form

AXIS II: MENTAL RETARDATION—None

PERSONALITY DISORDERS—Rule out conduct disorders

AXIS III: PHYSICAL DISORDERS—None

AXIS IV: PSYCHOSOCIAL ENVIRONMENTAL STRESSORS

Parents separated, he was living with grandmother and grandfather

At first, his father denied to be responsible with his pregnancy

His grandfather died last year

School drop out

AXIS V: GLOBAL ASSESSMENT FUNCTION OF THE CLIENT—60%

Social functioning—he is not playing well with his peer group unable to maintain eye to eye contact.

Occupational functioning—cannot maintain body and environmental hygiene. Can do domestic work at remind home with very close supervision.

School functioning—can do simple calculation but he is not unable to pay attention for quiet longer.

DESTRIPTIVE FORMULATION CASE STUDY NO 2

Y is 13 years old and was born in Ifakara, Morogoro region. His mother was not married to his father they were friends. His father denied having pregnated his mother. When Y was born parents from paternal side realize that Y was so resembled very much to his father so they decided to go and see Y's maternal side for negotiations. After successful conclusion of an agreement, Y was two years old was taken by grandfather and grandmother from the paternal side. He grew up with this new family until he started primary school when he started abnormal behaviors. He used to beat his peers, stealing others belongings and of times he pretended to act as beggar on the streets posing as if he has no one to support for his primary school studies. He eventually dropped from school when he was standard three. Since then he has become a very difficult boy to an extent that everyone got tired of him. His mother tried to stay with him when she fail to

contain his ill behaviors she returned him to his grandfather after she stayed with him for only one week.

Chief complaints

Y is now a fully flagged thief who steals money from home and absconds; he would then go out in the streets spending the money until it is finished. He spends money for buying foods and drink alcohol with friends. When the money is finished he would then hang around assisting food vendors in the market and on the street and get some food and little money in return which he uses for survival. He would not return home until captured by member of the family. Y lacks concentration and as such cannot focus on one thing for quiet long instead do a lot of thing at ago.

These abnormal behaviors started when he was six years old. The biopsychosocial formulation of case study no 2 is presented in Table 5.

DIAGNOSIS—ATTENTION DEFICITY HYPERACTIVE DISORDER
CO MORBIDITY—ALCOHOL ABUSE

Table 5. Biopsychosocial formulation case study No 2.

Factors	Biological	Sociological	Psychological
Predisposing	Father denied pregnancy, mother got frustrations	Difficult in relating with peers	Lack of paternal and maternal love
Precipitating	Used of alcohol	School drop out	Unable to concentrate
Perpetuating	Unnoticed biological disturbances	Failure to have good friends	Unable to go back to school
Protective	Physical Health is good, if avoid using alcohol and get treatment and psychosocial rehabilitations	He has very stable extended family to give him psychosocial support	Above average intelligence

CASE STUDY NO 3

AXIS 1: MEDICAL DIAGNOSIS—BRIEF PSYCHOTIC REACTION

Sign and symptoms

Abnormal behaviors soon after watching America against Afghanistan war movie; Aggressiveness; Tendencies of paying revenge; Suicide ideations; Suicidal ideations; Symptoms are in severe form

AXIS II: MENTAL RETARDATION—None

PERSONALITY DISORDRER—None

AXIS III: PHYSICAL ILLNESS—None

AXIS IV: PSYCHOSOCIAL ENVIRONMENTAL SRESSORS

Death of both parents lives with his aunt, Poor economic status

AXIS IV: GLOBAL ASSESSMENT FUNCTIONING OF THE CLIENT—70% Social functioning—able to create and maintain good interpersonal relationships, maintain eye to eye contact during interview and had very good cooperation; Occupational functioning—he is able to do domestic activities at remind

home with minimal supervision

Can do simple and complex mathematical calculations

CASE STUDY NO 3

Z is fifteen year old. Before he was put in the remand home Z was attending secondary education in one of the secondary schools in Dar es Salaam. He was in form three. His parents both died when he was very young. He had normal behaviors throughout his milestone. He had no problems with learning to such a way that his performance at school was good. He is a hip hop music singer and together with his friends, they used to write some poem and sang in concert before the audience of other peers. They used to fond America and hip hop singers from America.

Chief complains

One day he was watching a CD of American air strikes towards Iraq and Afghanistan, he witnessed a bombardment which left behind a lot of innocent children who are suffering due to American insurgence. When he finished watching the CD, he ran to his friend and try to convinced him that they should not like Americans any more instead they should do some sort of revenge since they are making troublesome to their fellow young men in Arab countries. His friend asked him "what *are you intending to do*" *he replied* "*I have to bomb American embassy so that I can kill some of them too".*

His friend said I support you but I cannot go with you in your mission. Z continued with his plan. He made some bombs and went to American embassy. He entered inside American embassy in Dar es Salaam but he was captured by security guards before he attempted to bomb. He was found with some erosive equipment's and from thence was kept under police custody and consequently put in remind home. The biopsychosocial formulation of case study no 3 is presented in Table 6.

DIAGNOSIS—BRIEF PSYCHOTIC REACTION

Table 6. Biopsychosocial formulation case study No 3.

Factors	Biological	Sociological	Psychological
Predisposing	Genetic loading his uncle had mental illness	Had few friends	Loss of both parents when he was very young
Precipitating	Cannabis smoking	Unable to mixed up with many people	Failed to have good secondary support
Perpetuating	Unnoticed biological imbalance	Her aunt had poor income	He was not close him
Protective	General physical health is good	Canbe taught psychosocial skill at school	His intelligence is above average so can understand well psychosocial skills and cognitive behavioral therapy

CASE STUDY NO 4

AXIS I: MEDIACAL DIAGNOSIS—POST TRAMATIC STRESS DISORDERS

Signs and symptoms

Severe flash back about the trauma event—Mbagala bomb, burst

Excessive worries; Sometimes experience heart, palpitations; Lack of sleep; Nightmares; Sadness

Symptoms are in severe form

AXIS II: MENTAL RETARDATION—None

PERSONALITY DISORDER—None

AXIS III: PHYSICAL ILLNESS—None

AXIS IV: PSYCHOSOCIAL ENVIRONMENTAL STRESSORS

Death of both parents, school dropped out after displacement from Mbagala bomb burst; Poor living circumstances

AXIS V: GLOBAL ASSESSMENT FUNCTIONING OF THE CLIENT (GAF)—70%

Social functioning—able to create and maintain good interpersonal relationships; Occupational functioning—can do domestic activities with minimal supervisions at remind home; School functioning—he is struggling to do simple mathematics and he is relearning how to write during class at remind home.

DESCRIPIVE FORMULATION CASE STUDY NO 5

Q was born 1998 in Mbagala, Dar es Salaam. His parents both died in 2007 and 2008 respectively. He was living with his uncle who is also staying at Mbagala area. He dropped out of school last year after the Mbagala bomb blast. He grew up well till his parents died. He was taken care by his uncle after the death of his parents and he still was cared for by the uncle…

Apparently Q was having normal behaviors since birth. He started to isolate himself and not mixing with peers after the death of parents. His school performance was average. After Mbagala bomb blast his mental health deteriorated and dropped and consequently he quieted from school. During Mbagala bomb blast he was displaced from home for three days. He was found along the river hanging around. He was taken to Mbagala police station by Good Samaritan. His uncle recognized him after heard that some missing children have been brought to plaice station. As a results of the incidence Q behaviors which ultimately forced him to quit the area. He stolen some money from his uncle and vanished.

Chief complains

He stolen 200,000 Tanzanian shilling from his uncle and disappeared from home.

He was found in Ubungo bus terminal doing petty trade business. He was also staying in Ubungo bus terminal. He hesitated to go home and he said "when I slept athome severe flash back feelings about the bomb came in up and then I felt heart palpitations, sweating and excessive worries. I don't want to go back to Mbagala". The biopsychosocial formulation of case study no 4 is presented in Table 7.

DIAGNOSIS—POST TRAUMATIC STRESS DISORDERS

Table 7. Biopsychosocial formulation case study No 4.

Factors	Biological	Sociological	Psychological
Predisposing	Genetic loading his father had history mental illness	Not mixing with others	Lost of both parents when he was very young
Precipitating	Smoking cannabis	Had no friends	His school performance was poor
Perpetuating	Unrecognized biological disturbances	Had poor primary and secondary social support	Unable to make efforts to improve his school performance
Protective	Good general physical health	He is staying nearby Mbagala Kuuprimary School. It is easily for him to go back to school	He has interest of continues with studies

CASE STUDY NO 5

AXIS I: MEDICAL DIAGNOSIS—SEXUAL DIVIATION (HOMOSEXUAL) CO MORBIDITY—ALCOHOL/DRUG ABUSE

Sign and symptoms

Demand to be sodomized by others

Takes excessive alcohol and smoke cannabis Feel shy when he is sober

Unable to maintain eye to eye contact

Suicidal ideations

Symptoms are in severe form

AXIS II: MENTAL RETARDATION—None

PERSONALITY DISORDERS—None

AXIS III: PHYSICAL ILLNESS—None

AXIS IV: PSYCHOSOCIAL ENVIRONMENTAL STRESSORS—Parents divorced

He is homeless living on the street School dropout standard three Live in very difficult situation

AXIS V: GLOBAL ASSESSMENT FUNCTION OF THE CLIENT—70%

Social functioning—can create and maintain good interpersonal relationships, he cannot maintain eye to eye contact.

Occupational functioning—can do domestic activities with minimal supervisions. School functioning—can do simple mathematical calculations.

DESCRIPTIVE FORMULATION

CASE STUDY NO 6

T was born 1997 in Arusha. His parents divorced when he was five years old. His mother went to her home town Musoma and his father went to Nairobi Kenya to look for green posture. T was left with his grandmother from paternal

side. He started standard one at Arusha. He dropped out from the school when he was standard three. He had no problems in learning. His grandmother died in 2009 and from there he became hanging on the street of Arusha town. He had history of sexual abuse as at one time he was given some money and food as rewards he was asked to be sodomized as a payments. Eventually it became a habit.

T travelled to Musoma to look for his mother. When he arrived to Musoma he could not find out his mother so he continued to hang around in Musoma town streets as a street child. He then transferred to Dar es Salaam to look for better life. He was staying at Ubungo main bus terminal doing petty trade.

Chief complaints

T is alleged to have stolen about one hundred thousand from a passenger. He is cannabis smoker and used to drink alcohol. He has a tendency of soliciting others to sodomize him at remind home. T has got suicidal ideations. He is shy and cannot maintain eye to eye contact. The biopsychosocial formulation of case study no 5 is presented in Table 8.

DIAGNOSIS SEXUAL DEVIATION

CO-MORBIDITY—DRUG ABUSE

Table 8. Biopsychosocial formulation case study No 5.

Factors	Biological	Sociological	Psychological
Predisposing	Genetic loading history of mental illness on paternal side	Shy around others, he cannot maintain eye to eye contact.	Parents divorced when he was five year sold. His care taker (grandmother) died when he was nine years old.
Precipitating	Smoke cannabis	He has no strong relationship with peers. School drop out	He is not able to go back to school
Perpetuating	Unrecognized biological disturbances	Had no normal friends apart from those who used to sodomized him	Experience sadness feeling and has very low self esteem
Protective	General physical health is good. Can avoid smoking cannabis and get psychosocial rehabilitations	Can go back to school and taught psychosocial skills	He has average intelligent if motivated can perform well

CASE STUDY NO 6

DSM IV TR

AXIS I: None

AXIS II: MENTAL RETARDATION

Sign and symptoms

Difficult in learning

Impaired self-care
Impaired communication
Impaired social skills
Symptoms are in severe form
AXIS III: None
AXIS IV: PSYCHOSOCIAL ENVIRONMENTAL STRESSORS
Lack of psychosocial skills
AXIS V: GLOBAL ASSESSMENT FUNCTION OF THE CLIENT: (GAF) Social functioning—unable to create and maintain good interpersonal relationship.
Occupational functioning—unable to maintain body and environmental hygiene without assistance.
School functioning—unable to do simple mathematics.

DESCRIPTIVE FORMULATION CASE STUDY NO 6

N was born in 1996, in Dar es Salaam. He grows up in a stable family reared by father and mother. He started standard one when he was seven years old. His had delayed milestone in walking, speaking and cognitive functioning. When he was standard two his teachers complained that N is not a normal child. He had difficult in learning, poor toilet training and lack of self-care.

His parents arranged to a special teacher to come to their home for extra classes in order to offer him tailored tuition to improve his performance. He started to read when he reached standard four. He repeated standard four because he failed national standard four examinations. He is now in standard seven but cannot do simple mathematics.

Chief complaints

He is alleged to rape a girl of nine years. He has difficult in learning, difficult in concentrating, loss of memory and intelligent below average. The biopsychosocial formulation of case study no 6 is presented in Table 9.

DIAGNOSIS: MILD MENTAL RETARDATION

Table 9. Biopsychosocial formulation case study No 6.

Factors	Biological	Sociological	Psychological
Predisposing	Had history of mental illness in the family	Difficult in relating with others	Failed standard four national examination
Precipitating	None	Has few friends	He is still struggle with studies
Perpetuating	None	He is isolated by his peers	He is appearing before court of law
Protective	Good physical health and developmental	Has very good support from his parents and family members	He has mild form of mental retardation with special education and treatment can improve his adaptive behaviors.

CASE STUDY NO 7

DSM IV TR MULTIAXIS

AXIS I: MEDICAL DIAGNOSIS—MOOD DISORDER-DEPRESSION

Signs and symptoms

Sadness

Lack of sleep Isolation

Suicidal ideation

Poor Concentration difficult Feeling of hopeless Headache

Symptoms are in severe form

AXIS II: PERSONALIRY AND MENTAL RETARDATION—None

AXIS III: PHYSICAL ILLNESS—None

AXIS IV: GLOBAL ASSESSMENT FUNCTION OF THE CLIENT—60% Social functioning—difficult in relating with others

Occupational functioning—can go domestic work with minimal supervision School functioning—can do simple mathematics.

DESRIPTIVE FORMULATION CASE STUDY NO 7

M was born in year 2007 in Dar es Salam. His parents died when he was six years old. He was taken care by his grandmother and grandfather from paternal side on the outskirts of Dar es Salaam city. According to him life became very tough after the death of his grandfather who died when he was nine years old. His grandmother became terminally sick and as such she could not take care of him. He dropped out from school when he was standard four and ever since he becomes street child.

Chief complaints

He stolen some money and cellular phone belong to his father. He used to isolate himself, feeling of sadness, headache, Loss of hope, lack of sleep, difficult in concentration and suicidal ideation. The biopsychosocial formulation of case study no 7 is presented in Table 10.

DIAGNOSIS—DEPRESSION

Table 10. Biopsychosocial formulation case study No 7.

Factors	Biological	Sociological	Psychological
Predisposing	Had history violence in the family	Unable to mix with others	Loss of both parents when he was five years old
Precipitating	Cannabis abuse	Isolate himself	School drop out
Perpetuating	Unrecognized depressive traits	Poor social support	Low esteem he can not resume his studies
Protective	General physical health is good, can avoid using cannabis in the future	Can be learn social skill through special programme	His intelligence is above average he can do well if given psychosocial support.

CASE STUDY NO 8 DSM IV TR MULT AXIS

AXIS I: MEDICAL DIAGNOSIS—POST TRAUMATIC STRSS DISORDER (PTSD)

Sign and symptoms

Nightmares

Flashbacks

Thinking about the bomb burst

Headache

Sadness

Nervous

Concentration difficult

Memory loss

Believe that bomb burst will happen again

Symptoms are in severe form

AXIS II: MENTAL RETARDATION/PERSONALITY DISORDER—None

AXIS III: PHYSICAL ILLNESS—None

AXIS IV: PSYCHOSOCIAL ENVIRONMENTAL STRSSOR Divorce of parents

AXIS V: GLOBAL ASSESSMENT FUNCTION OF THE CLIENT (GAF)—60%; Social functioning—able to create and maintain good interpersonal relationship; Occupational functioning—able to do domestic activities with minimal supervision; School functioning—able to do simple and complex calculations.

DECRIPTIVE FORMULATION CASE STUDY NO 8

K was born in 1997 in Dar es Salaam, Mbagala area. His parents got separated when he was five years old. His father got married to another wife. Since then K was reared by step mother to gate. He started standard one when he was seven years old. He is now in standard three. His school performance was above average. K was involved in Mbagala bomb blast in 2009. He was at school Mbagala Kuu primary school when bombs erupted. He was displaced for the whole day. His father found him at Mbagala police station late evening. He is still pursuing his primary school studies but as results of the blast K has been experience nightmares which again have forced him to quit the area.

Chief complaints

He is alleged to have stolen some money and cellular phone belongs to his father. He is experiencing nightmare, flashbacks, thinking about the bomb burst, headache, nervous, difficult in concentration, memory loss and he believe that the bomb burst will happen again. The biopsychosocial formulation of case study no 8 is presented in Table 11.

DIAGNOSIS—POST TRAUMATIC STRESS DISORDER (PTSD)

5. Emerging Themes from the In-Depth Interviews

The researcher translated data captured from in-depth interviews, focus group discussions, and observations. The main categories and themes were identified according to the meaning as follows:

- Strategies used to cope with stress Theme—Stress coping strategies

Table 11. Biopsychosocial formulation case study No 8.

Factor	Biological	Sociological	Psychological
Predisposing	Genetic loading History of mental illness in the family	Boredom with school environment	Parents divorced
Precipitating	Cannabis smoking	Early separation with his mother	Failed to cope with stress
Perpetuating	Unrecognized biological	Lack of strong Social support	Lack of psychosocial skills
Protective	General physical health is good	He continues with his studies	His level of intelligent is above average

- Living arrangement Theme—Family instability
- How participant relate with others
  Theme—Bad relationship and good relationship
- Feeling of worries, sadness, and overwhelmed Theme—Different emotional experiences
  How participant explain about his/her milestone
  Theme—Background history of the participants
- How does participant view him/herself Theme—Self concept
- Feeling of killing himself or others
  Theme—Suicidal or homicidal tendencies
- What participant see the most important thing in his/her life: Theme—Belief system
- What support system does the participant have: Theme—Psychosocial support

The researcher clustered five main themes from these categories guided by theoretical models of psychosocial support [8]. The first one is gaps in care giving filled by extended, gaps in family support filled by communities, gaps in community support filled by NGO's and government services and the later is belief systems, psychosocial support, self-concept, stress coping strategies and relationship among peer groups.

5.1. Strategies Used to Cope with Stress

In this study the researcher referred stress to psychologist views related to stress. According to them stress is defined as a stimulus, as a response, and as an organism environment interaction.

Most of the adolescents who are in juvenile center used to smoke cannabis and consume alcohol as a coping strategies to relieve stress. This strategy helped them feel very high and allowed them to forget all problems that they were facing. Majority of the participants interviewed were cannabis smokers and they were involved in offences like stealing, rape, unnatural offence and disturbing passengers. Those who were alleged to disturb passengers, they disturbed them at the main bus terminal in Ubungo, Dar es Salaam.

5.2. Living Arrangements

For the purpose of this study, living arrangement embraces the general life situa-

tion at participants home including having parents, or loss of parents, number of siblings, and their status. The general response of the participants was related to the social economic status. Most of these children were street children as they did not have a place to live. They were sleeping at Ubungo main bus terminal. This was the place where they stayed since their arrival in Dar es Salaam from up country regions. They used to carry passengers' luggage and ask for little money which they used for buying food and cannabis. Sometime they saved some money and started doing petty trade business. Most of the time the adolescents were involved in selling chewing gums and groundnuts.

Another place for these street children was the ferry port. The main activity at ferry port was cleaning fishes before it is fried and sold. They were paid one thousand five hundred Tanzanian shillings for cleaning fishes in one bucket of twenty litres. Most of the children had experienced tough life in their original town or villages which made them move to Dar es Salaam to look for a better life. Most of them had either lost their parents or parents were divorced or were reared by a single parent.

5.3. How the Participants Explain about the Present Problem

The researcher sought to find out the reason of participant to be in remand homes. The question was asked, "Why do you have to appear before court of law?" The children and adolescents who were in remand homes were those from the street and who did not have parents or guardians to give them bond to be released from those homes. So they were remained in remand homes while their cases were in progress. They expressed themselves freely when the researcher established a friendship environment. They did agree about the crime that had committed and explained the reason why they had done so.

The in depth interviews revealed the whole story of the crime committed that led them to appear before juvenile court. There were differences in expressions between children at the juvenile court and those at the remand homes. Those at the juvenile court were nervous and they did not give much information during in depth interviews. But those who were in remand home gave a detailed account of their life experience and the offence they were facing.

5.4. How the Participant Relate Each Other

In the remand home children each child develops friendship with others but some used to be very troublesome most of the time fighting each other. The elderly children used to sodomize younger ones. But during in depth interview those who practice used to be sodomized, they admitted that they had this tendency even before they came in juvenile justice systems. However those who used to sodomized others denied during in-depth interview.

5.5. Feelings of Worries, Sadness, and Overwhelmed

Participants explained their experiences after losing their parents, divorce of

parents, and their stay in remand home. Children who had lost their parents at an early age often sustained psychological trauma and when they recalled the incidence they mostly expressed sadness and worries about their future life. Also those participants whose parents were divorced and lead them to displacement experienced sadness and worries in comparison with other children of the same age. Children who used to steal money and other materials they experienced sadness after finishing the money and they were afraid going back home.

5.6. How the Participant Explained about His/Her Milestone

In this research milestone is the period participant grow up from birth up to now. Most of the participants interviewed described their milestone as normal milestone however they experienced lot of difficulties caused either by death of their parents or divorce of their parents. Majority of them had dropped out from school following breakdown of their family or due to their deliquesce behaviors. Most of them were engaged in petty trade business, house work as house maid, assisting businessmen in markets and assisting vendors in selling foods in mark the streets.

5.7. How Does the Participant View Themselves (Self-Concept)

During the interview some of participants said that they viewed themselves as normal persons but others did not. One of the participants who watched CD of American air strikes in Afghanistan and Iraq said, "I think I am not a normal person because I am sure that CD was watched by many people but could not react the way I reacted". Those who said that they were normal they complained that it is due to the instabilities of their family that led them to be in juvenile justice systems.

5.8. Feeling of Killing Him/Herself or Others (Suicidal and Homicidal Tendencies)

During the in-depth interviews, it was revealed that three participants had suicidal ideation while one had both suicidal and homicidal ideation. One participant said, "I just had a thought of killing myself when one of the caregiver here at the remand home called me a gay, so one thing that came up to my mind was that this people have identified that I am a homosexual person [beside the other crime], it means I am going to face another charge". Another participant said, "When my brother, who is a policeman, wanted to sodomize me and I escaped from the room and I had a feeling that there was no need to be living in this world. Because of that incidence my brother and his wife they fabric the case that I am facing".

5.9. Unusual or Outstanding Events Explained by the Participants (Sexual Abuse and Severe Flash Back of Psychological or Physical Traumatic Events)

Those participants who were sodomized for the first time during their childhood

said that it was an unusual or outstanding event they had experienced in their life. All the participants who came from Mbagala said that the last year's Mbagala bomb blast which they heard while they were at school and others were on the street experienced that as an extraordinary event. They said that the majority of the children who were displaced were around when Mbagala military base fell due to bombs blasts. Children were displaced, walked here and there and were unable to find their homes. Two to three days later they were located and were united with their family. Other participants said they normally see people like evils that others cannot see. One participant said that one day he slept at home and the following day he found himself in one of the graves in the grave yard.

5.10. What Participant Sees the Most Important Thing in His/Her Life?

All participants interviewed explained that the most important thing in their lives was education and the most important persons were parents. All participants commented that parents were most important in their growth. However, they admit that there is God and they believed in God. Either there was no participant who had been preoccupied with religious activities and has different belief system.

5.11. Support Systems of Participants

Most of the participants had lost their primary support at one point in time. This was due to family breakdown either due to death of parents or divorce of their parents. Those who were brought up by single parent were mostly by a mother, it was due to the rejection of the responsible father. Whilst those who were reared by father had a step mother taking care of them. There was only one participant, amongst all others, who had a very strong family bond and he is facing a murder case. There was no secondary support noted from the communities they belonged, non-beneficial organizations, and the government.

6. Main Mental Disorders Diagnosed during the Research

Attention Deficit/Hyperactivity Disorder (ADHD)

Attention deficit disorder (ADD) is variation in central nervous system processing characterized by developmentally inappropriate behavior involving inattention [9]. When hyperactivity and impulsivity accompany inattention, the disorder is called attention/hyperactivity disorder (ADHD). ADHD is the most common mental disorder in children affecting 6% to 9% of all school age children [10]. Most of the time parents, care givers, and school teachers seek for medical attention when the symptoms are in severe form otherwise they took as the character of the child. That is why the researcher is in opinion that this trend lead to delinquency behavior and end up in juvenile justice systems. Furthermore, because of this mental disorder led them to school dropout, since they have problems in attention whilst in school they are required to pay attention

and focused.

Attention deficit hyperactivity disorders usually co-exist with different symptoms like aggression, learning disability, and motor disorder. In this regards Children with this disorder have a high chance to posse's delinquency behaviors and kept under police custody Posttraumatic stress disorder (PTSD) one has experienced or witnessed a life threatening event, however, the symptoms of distress continue for more than one month and affect daily live activities. It is estimated that 40% of youth have an episode of trauma the led to PTSD and 6% have symptoms of disorder [10]. It has been stated that 20% of children may experience PTSD after traumatic events if no intervention done; the prevalence can rise to 90% when the trauma is severe [11]. In the city of Dar es Salaam, Tanzania one of military based had bomb burst accidentally. In that area called Mbagala there are two primary schools allocated near the military base. During the bomb burst children were at school. In this research researcher diagnosed two children at remind home having PTSD following Mbagala bomb burst. This results shows that there is a need of find out means of identifying and treat PTSD in children who are victim of Mbagala bomb burst.

Mental retardation is a significant limitation in intellectual functioning and adaptive behaviour. It is manifested in differences in conceptual, social and practical life skills, and begins before the age of 18 years [12]. Mental retardation is classified in three categories severe, moderate and profound mental retardation. The research found one adolescent in juvenile court had mild form of mental retardation that is alleged to committed rape. Substance use and abuse occurs in children and adolescents of all socioeconomic classes and has become a very big mental health challenge in the society. The use of these drugs most of the time pose very serious mental and physical health to children and adolescents. The researcher found that all children diagnosed with mental disorders in juvenile justice systems had co morbidity of substance abuse. These findings are highly suggested that there is link between substance use and delinquency behaviors.

Many children and adolescents interviewed at remind home had depression traits however one found to have major depression according to DSM IV TR criteria. Depression is psychological distresses usually range from mild to severe. Depression has been recognized as clinical condition in children in recently years. The incidence of depression is estimated to be about 0.3% in preschoolers, 2% in pre-pubertal children, and about 5% to 10% in adolescents [13].

7. Discussion

It is an accepted fact that children and adolescents, as human beings, in the pursuit of their life goals, face challenges that need to be surmounted, frustrations to be overcome, and stresses to be calmed, as well as anxiety and panic to be controlled. When it so happens that human beings fail to contain these anomalies they tend to succumbed with psychological, physical, and social predicament

[14]. Matters become worse when and where family, extended family, communities and the society is unable to come for assistance of children and adolescents who have been affected by psychosocial problems [15]. Indeed, this research findings show that children and adolescents who were in their crucial development stages in human life that is burdened with specific concerns, needs, and problems called for guidance and psychosocial support.

Furthermore, all children and adolescents are social beings and are supposed to have attachments, relationships, and affiliations in order to make life smooth and normal. If these relationships and attachments are affected by loss such as death of parents, terminal illnesses or disability, the psychological well-being of two parties become compromised [16].

Characteristics of children and adolescents with delinquency behaviors.

Children and adolescents with delinquency behaviors found to have history of death of parents, divorced parents, or single parent which led them to poor primary psychosocial support. Children and adolescents with very strong community that care (CTC) have very low delinquency behaviors [17]. However, it has been emphasized that when there is a gap in care giving, that is, there is a death of parent/s or sickness, the gap has to be filled up by extended family.

Furthermore, it has been explained that if there is also a gap in an extended family then it should be filled up by communities. In this regard the researcher found that most of the children and adolescents within Dar es Salaam juvenile systems were street children who are orphans or have single parents. This shows that these gaps of psychosocial support have been filled neither by extended families nor by communities. Studies of control of delinquency behaviors and parents support found that there was a very strong link between parent's relationship with their children and delinquency behaviors [18]. In this study the researcher also found more boys were in juvenile systems than girls [19].

7.1. Dysfunctional Families

Family stability contributes to children/adolescents to acquire delinquency behaviors, either primary psychosocial support from parents promote mental health of children and adolescents. In this study finding shows that children and adolescents in remind home are coming from dysfunctional families in terms of death of parents, parents' divorce and single parents.

7.2. Exposure to Traumatic Event

The researcher found that children who came from Mbagala area in Dar es Salaam, who were exposed to Mbagala bomb blast in 2009, were now experiencing severe flash back about the bomb. During the in-depth interviews, the researcher found that they had traits of post-traumatic stress disorders [20].

7.3. Underlying Mental Disorders

When mental disorders remain undiagnosed, will lead to untreated and the

course of particular abnormal behaviors cannot be established. Taking an example of Attention deficit hyperactive disorders as identified in this research, their main complaints is to pay attention now since these children are in school age they are sent to school without their mental health to be addressed. Eventually they ended up with school dropout because somebody is being forced to pay attention while his problem of paying attention is not tackled.

7.4. Drug Abuse

In this study, children and adolescents, who consumed illicit drugs and alcohol, were noted to have high chance of delinquency behaviors like stealing, rape, abusive languages, disturbing passengers, and unnatural offence. Also it was noted similar kind of behavior in their study with youths who abused Nitrate inhalant [21]. These children have high demand of expenditure including purchasing these drugs. Since they do not have income they are subjected to stealing and other illegal businesses.

Children and adolescents usually imitate whatever they come across with, it could be bad or good behaviors. Since most of juveniles are street children they have high chance of acquiring delinquency behaviors such as drug abuse from the peer groups [22].

8. Conclusions

In this study, the researcher examined the mental health characteristics of children and adolescents who have committed crimes and demonstrated a correlation of mental disorders and crime committed. In this regard, they have allegations or have committed offence and they have appeared before court of law.

The results show that the children and adolescents at remind home came across very difficult psychosocial environmental stressors which led them to commit offence. Their parents had died, divorced, or if alive, they are not living together. Therefore, the children and adolescents were reared by a single parent or extended family. However, there were some problems in taking care of these children; as a result, they ended up to be street children.

There is evidence that these children and adolescents experienced worries, sadness, and some had experiences of abnormal perceptions of hearing voices, suicide ideations, and homicidal tendencies. The diagnosis made by using DSMR IV TR of some of the participants revealed to have; drug abuse, alcohol abuse, depression, brief psychotic reaction, sex disorder, and mild form of attention deficit hyperactivity disorders. The findings from this research are not confined into cases in the juvenile justice systems alone; they are also relevant and applicable to the great population in our society. In this regard, therefore, it is important to replicate the findings to also cover those who are out of the juvenile justice systems.

The researcher is tempted to make recommendations to cover areas outside the scope of the research. Mental disorders amongst young persons are prevalent

and spreading very fast. It is a factor that calls for national concern and appropriate interventions to address the pandemic. It is a factor, if not arrested, may get off hand and lead this nation into crisis. It is with apprehension in mind that the researcher wishes to call for all stakeholders' involvement in the formulation of relevant policies and strategies in the implementation of activities that will address the problem. Therefore the researcher has the following recommendations that he wishes to put across for considerations.

The society should be aware and be sensitized to appreciate the prevalence and the magnitude of the problem, so that at the end of the day they may own the problem and be willing to effect interventions. A meaningful social interaction can come about where the society is fully involved and the community is prepared to respond positively and holistically. A holistic intervention is one that addresses or aims at addressing the prevention of further spread of the problem and the provision of care and support to the effected and affected. This phenomenon is achievable more effectively where the society is fully involved in the formation of the interventions through the participatory approach.

Recommendations

The government and local Authorities have to assume responsibilities over this matter and be ready to spear head various initiatives to curb the problem. A forum such as National dialogue on mental health to young persons can be put in place to provide an avenue for in-depth discussion and formulation of interventions at national level. The outcome of such forum could trickle down to lower level of the government machinery for implementation. There is a need for cultivating an enabling environment where stakeholders will be taken aboard and get involved. A political will is essential if the development partners are to be invited. The political will can only come about where the top enclose of the Government machinery is made to apprehend the magnitude of the problem.

Parents must be made to leave up to their responsibilities and factors that are contributory to family separation must be eliminated. Things like males denying their partner pregnancies, marital conflicts, brutal and general unpleasantness in the family hood are supposed to be address so that children are protected from these anomalies and likely be saved from becoming street children.

To those mentally affected, it is essential that they are being treated and psychosocially rehabilitated in an appropriate nurturing environment. It is recommended that a centre for treatment and provision of psychosocial rehabilitation of youth mentally disorder be put in place and be equipped with the essential facilities for care and support. Those who have received treatment and rehabilitation will have to be given follow up psychosocial support in terms of skills and materials. This is very vital as a way to protect them to rolling back to the problem.

Through this research, the researcher is giving a humble contribution to efforts that will be exerted by all concerns on attempt to tackle the problem of

mental health to young society. The researcher hope that many other will join in doing further research on this aspect and find ways and means to solve this critical challenge.

References

[1] Harper and Cetin (2008) Child and Adolescent Health Policy.

[2] Fabiano, G.A. and Pelham, W.E. (2006) Evidence-Based Psychosocial Treatments for Attention-Deficit/Hyperactivity Disorder. *Journal of Clinical Child & Adolescent Psychology*, **37**, 184-214.

[3] Mullen, P.E. (2000) Mental Health and Criminal Justice. A Review of the Relationship between Mental Disorders and Offending Behaviors and on the Management of Mentally Abnormal Offenders in the Health and Criminal Justice Services.

[4] Eileen, P.-Y. and Jones, M.A. (2000) And Justice for Some. National Council on Crime and Delinquency, Davis.

[5] Cooper, J.L., Masi, R. and Vick, J. (2009) Social-Emotional Development in Early Childhood. What Every Policymaker Should Know.

[6] DSM IV TR (2000) American Psychiatric Association.

[7] Ajzen, I. (2006) Theory of Planned Behavior.

[8] Richter and Foster (2009) PEPSSI Psychosocial Wellbeing for all Children.

[9] Ball, Binder and Cowen (2010) Child Health Nursing: Partnering with Children and Families. 2nd Edition.

[10] Floehlich, T.E., Lanphear, B.P., Epstein, J.N., Barbaresi, W.J., Katusic, S.K. and Kahn, R.S. (2007) Prevalence, Recognition, and Treatment of Attention-Deficit/Hyperactivity Disorder in a National Sample of US Children. *Archives of Pediatric and Adolescent Medicine*, **161**, 857-864. https://doi.org/10.1001/archpedi.161.9.857

[11] Caffo, E. and Belaise, C. (2003) Psychological Aspects of Traumatic Injury in Children and Adolescents. *Child and Adolescent Psychiatric clinic of North America*, **12**, 493-535.

[12] American Association of Mental Retardation (2004) Definition of Mental Retardation.

[13] Dophiede, J.A. (2006) Recognizing and Treating Depression in Children and Adolescents. *American Journal of Health Systems Pharmacy*, **63**, 233-243. https://doi.org/10.2146/ajhp050264

[14] Lorber, M.F. and Egeland, B. (2009) Infancy Parenting and Externalizing Psychopathology from Childhood through Adulthood: Developmental Trends. *Developmental Psychology*, **45**, 909-912.

[15] Gatti, U., Tremblay, R.E. and Vitaro, F. (2009) Iatrogenic Effect of Juvenile Justice. *Journal of Child Psychology and Psychiatry*, **50**, 991-998. https://doi.org/10.1111/j.1469-7610.2008.02057.x

[16] Trentacosta, C.J., Hyde, L.W., Shaw, D.S. and Cheong, J. (2009) Adolescent Dispositions for Antisocial Behavior in Context: The Roles of Neighborhood Dangerousness and Parental Knowledge. *Journal of Abnormal Psychology*, **118**, 564-575. https://doi.org/10.1037/a0016394

[17] Hawkins, *et al.* (2009) Youth Risk Behavior Surveillance—United States.

[18] Keijsers, L., Frijns, T., Branje, S.J. and Meeus, W. (2009) Developmental Links of Adolescent Disclosure, Parental Solicitation, and Control with Delinquency: Mod-

eration by Parental Support. *Developmental Psychology*, **45**, 1314-1327. https://doi.org/10.1037/a0016693

[19] Plattner, B., Steiner, H., The, S.S., Kraemer, H.C., Bauer, S.M., Kindler, J., Friedrich, M.H., Kasper, S. and Feucht, M. (2008) Sex-Specific Predictors of Criminal Recidivism in A Representative Sample of Incarcerated Youth. *Comprehensive Psychiatry*, **50**, 400-407.

[20] Kerig, P.K., Ward, R.M., Vanderzee, K.L. and Arnzen Moeddel, M. (2008) Posttraumatic Stress as a Mediator of the Relationship between Trauma and Mental Health Problems among Juvenile Delinquents. *Journal of Youth and Adolescence*, **38**, 1214-1225. https://doi.org/10.1007/s10964-008-9332-5

[21] Hall, M.T., *et al.* (2009) Nitrite Inhalant Abuse in Antisocial Youth: Prevalence, Patterns, and Predictors. *Psychoactive Drugs*, **41**, 35-43. https://doi.org/10.1080/02791072.2009.10399906

[22] Ellis, W.E. and Wolfe, D.A. (2008) Understanding the Association between Maltreatment History and Adolescent Risk Behavior by Examining Popularity Motivations and Peer Group Control. *Journal of Youth and Adolescence*, **38**, 1253-1263. https://doi.org/10.1007/s10964-008-9318-3

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Features of Suffering Perceived by Japanese Patients in a Stable Condition: A Text Analysis

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Abstract

Objectives: We performed a text analysis of telephone consultation content regarding features of suffering (thoughts that patients cannot express to nurses) perceived by Japanese patients in a stable condition. **Methods:** Semi-structured interviews were conducted by 8 telephone counselors who listened to patients' suffering. Interview content was recorded verbatim, text was organized, and a text and association analysis was conducted (cluster analysis, bubble plot analysis, and a co-occurrence network analysis). **Results:** Seventy-two conversations were obtained and analyzed. It was confirmed that suffering as perceived by stable, Japanese patients had consistent concerns such as "lack of inference," "privacy issues," and "nurses' not intervening on patients' behalf." Additionally, expectations of patients when patients are suffering are extremely diverse and were not characterized by specific tendencies. **Conclusions:** Emotions have a complicated influence in the context of Japanese patients' suffering. It is necessary to consider the cultural background of expression in Japan to treat patients' suffering.

Keywords

Nurse-Patient Relationship, Emotion, Suffering, Text Analysis, Culture

1. Research Background and Significance

1.1. Patient Satisfaction and Nursing Quality

Patient satisfaction in facilities such as hospitals is related to the quality of nursing care and should be emphasized [1] [2]. Sustained high patient satisfaction is essential for the survival of medical institutions; when patients are unsatisfied, they do not recommend that medical institution to family members, friends, or colleagues [3] [4] [5] [6]. In other words, nurses play a vital role in influencing patients' satisfaction within the health care team [7]. Additionally, nursing is

part of a comprehensive medical system and the process and structural factors influence patients' satisfaction with nursing care [8]-[15].

1.2. Nurse-Patient Relationship

Nurse-patient communication is said to support patient-centered care, evidence-based practice, and the application of quality improvement [16] [17] [18]. Interpersonal relationships based on the nurse-patient relationship are important for nurses when evaluating, planning, and intervening with patients [19]. As Peplau [20] noted in her nurse-patient relationship theory that, nursing is an educational means and a developed strength that promotes the advancement of nursing, and mutual relationships are key. To favorably maintain mutual relationships, it is important to understand patient suffering and nurses' empathic involvement.

1.3. Suffering Arising from Nurse-Patient Conflict

Bissell and colleagues [21] suggest maintaining a positive relationship between patients and medical staff means "to cultivate a mutual relationship and distinguish understanding" and states that conflict will occur if mutual relationships cannot be smoothly maintained. Robbins [22] defined conflict as "a process that begins when one party recognizes that the other party has adversely affected or is about to affect important matters for him/her."

In a series of studies focusing on conflicts between nurses and patients under circumstances where patients' mind-body condition is treated as "stable" (*i.e.*, "not tense," "not in a terminal stage," and "no mental illness" [23] [24] [25] [26], there was an underlying sense that patients were unable to express themselves to nurses. In these studies, suffering was understood as the state of a patient who could not convey his/her thoughts on medical treatment. In other words, suffering occurs when patients cannot express themselves to nurses. To effectively understand suffering, we used interviews rather than scale measurements. Analyzing the contents of interviews was deemed suitable for this study.

1.4. Purpose

We conducted a text analysis of telephone consultation content regarding features of suffering (*i.e.*, thoughts that patients cannot express to nurses) perceived by patients in a stable condition.

2. Methods

2.1. Participants

Among the 20 telephone consultants, participants comprised eight telephone counselors belonging to a non-profit organization based in Osaka, Japan.

2.2. Data Collection

We determined that it would be difficult to interview patients directly and obtain

their real feelings; therefore, we utilized consultation content with telephone counselors.

Semi-structured interviews with telephone counselors were conducted (November 2013-February 2014). We focused on conflict with nurses as events as examples of suffering. Interviews referenced the framework of Robbins' [22] conflict process and primarily comprised the following: 1) Under what situations and conditions did conflict between a nurse and patient arise? 2) What were the underlying factors in the conflict? 3) When conflict arose, what response did the patient desire from the nurse?

Interviews were held in a quiet, private room for approximately 40 minutes. Interview content was recorded with an IC recorder with permission from the participants and all content was recorded verbatim. The data from 40 individuals from prior telephone consultations [27] was also added to the analysis. This additional content was received after a telephone consult with the non-profit organization that acquired the data through interviews. In other words, we added data that was obtained in a comparable way as the interviews in this study. The interviews with the eight counselors and additional 40 examples that were added resulted in 72 episodes. Saturation was observed in the analysis process, resulting in sufficient data.

2.3. Ethical Considerations

We explained that data obtained from this study would not be used for any purpose other than research, that individuals would not be specified, and that data would be strictly managed and destroyed completely after study completion. Cooperation was voluntary and there was no disadvantage to not providing consent, which would also not impact the evaluation of the telephone consultation. This study was conducted with approval from the ethics review committee of our affiliated university.

2.4. Analysis Process

IBM SPSS Text Analytics for Surveys was used for text analysis for Japan and a morphological analysis of sentences was performed. After carefully reading the text, researchers organized the language expression variations containing the same meaning (e.g., the meaning of utterances such as "nurse," "nurses," "staff," "she/he," etc. were unified under "nurse"), which made the morphological analysis reliable. Next, to perform a statistical analysis, words were given a number value based on the number of occurrences. The text-mining analysis software R, KH coder was used and relationships and features among the text that appeared were analyzed through cluster, co-occurrence network, and bubble plot analyses.

3. Results

3.1. Participants' Attributes

Telephone counselors were all aged 65 years or older, female, and had mean ex-

perience of 6.7 years (standard deviation = 4.12 years) in telephone consulting. Obtained data consisted of 32 conversations; therefore, after adding the 40 conversations from a prior study, total data comprised 72 conversations. After confirming that these were consistent with this study's purpose, all were targeted for analysis.

3.2. Analysis Methods and Results

In the hierarchical cluster analysis, words surrounded by squares are characteristically few. Particularly, words low in the hierarchy and in a low position are characteristically connected.

In the bubble plot analysis, the same color indicates the same group. Circle size represents occurrence frequency. In this graph, the intersection of dimension 1 and dimension 2 (0, 0) is the center and the distance from the center becomes a characteristic.

In the co-occurrence network analysis, items with a high occurrence are shown in order of pink, white, and blue (from darker to lighter colors). Items connected by lines have a co-occurrence relationship and thicker lines indicate deeper relationships. Particularly, words connected in isolated positions from the whole are understood as a characteristic.

3.3. Features of Suffering Perceived by Japanese Patients in Stable Conditions

Hierarchical cluster, bubble plot, and co-occurrence network analyses results revealed the following characteristics. The important results in the following figure are indicated with a star and a circle

Features involving setting and situations included the following (**Figures 1-3**): "lack of inference" and "timing problems." An example of a timing problem is "the nurse does not respond to calls in a timely fashion."

Latent factors when patients perceived suffering revealed the following features (**Figures 4-6**): "privacy issues" (e.g., personal information) and "nurses' not intervening on patients' behalf." (e.g., nurses' do not help keep rooms quiet).

Japanese patients' expectations of nurses when suffering in a stable condition revealed no particularly strong relationships (**Figures 7-9**). In other words, results showed that the words were extremely diverse.

Because there are no features, stars and circles are not included in the figures.

4. Discussion

Analysis revealed several situations that were associated with patients' suffering. These are described below.

4.1. Setting and Situational Features

4.1.1. Lack of Inference

Original text case: "*Even if the patient reached the scheduled time for discharge, he/she was unable to be discharged and received no explanation from the nurse*

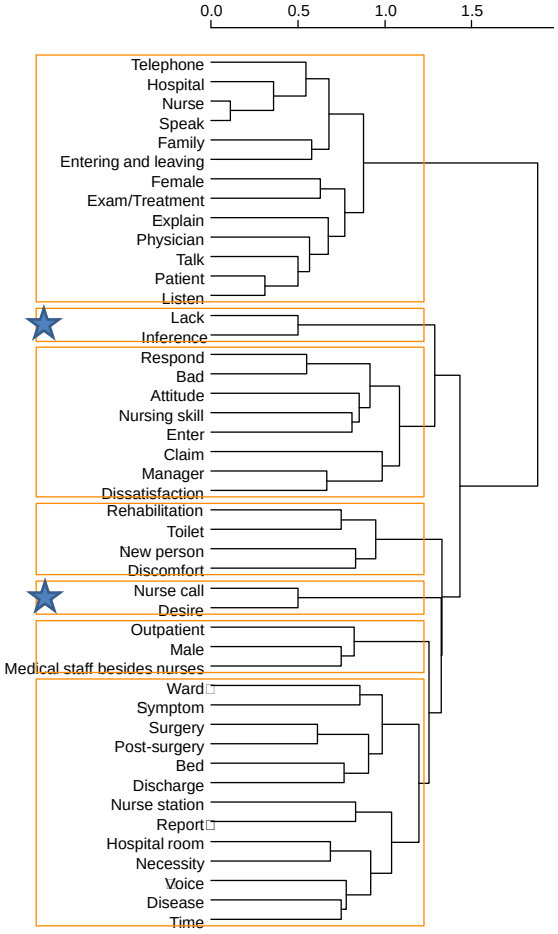

Figure 1. Hierarchical cluster of settings and situations of suffering perceived by patients in a stable condition.

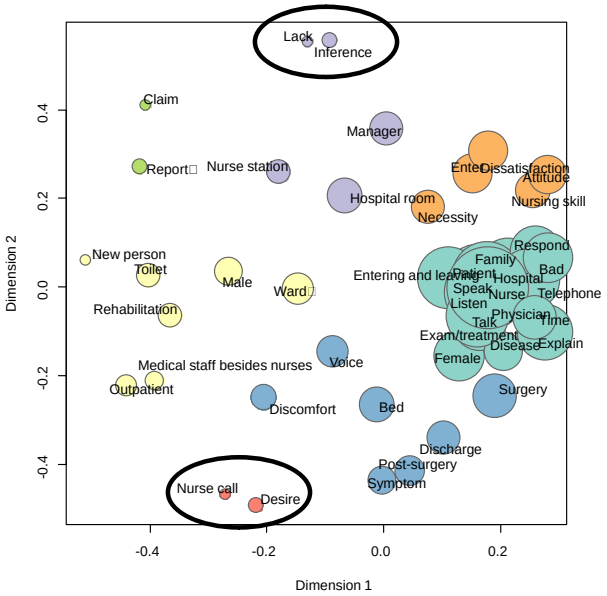

Figure 2. Bubble plot of settings and situations of suffering perceived by patients in a stable condition.

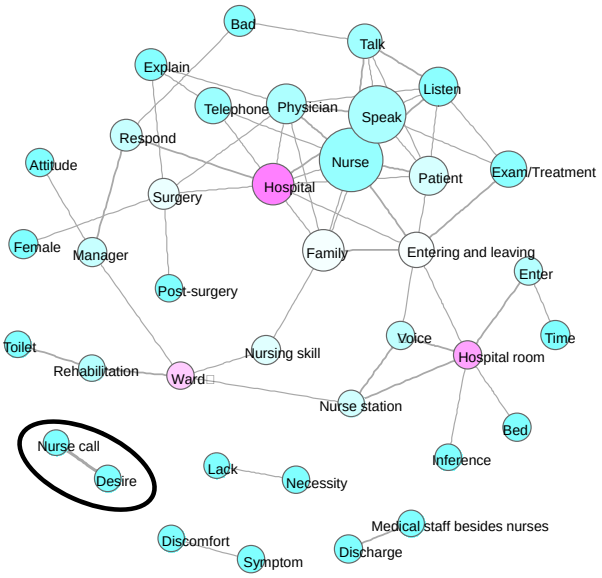

Figure 3. Co-occurrence network of settings and situations of suffering perceived by patients in a stable condition.

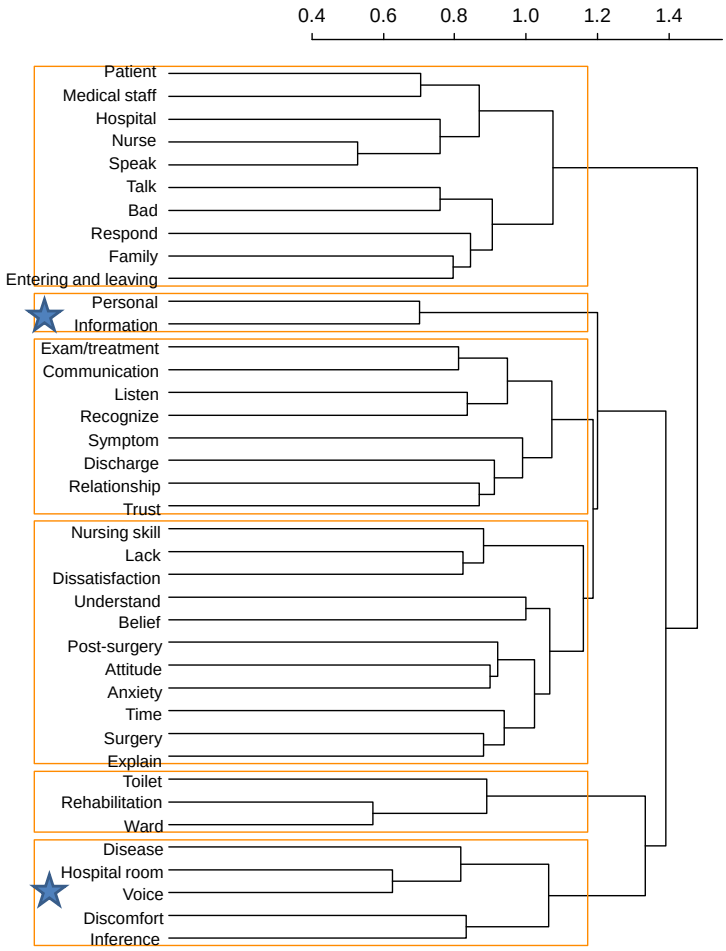

Figure 4. Hierarchical cluster of latent factors in suffering perceived by patients in a stable condition.

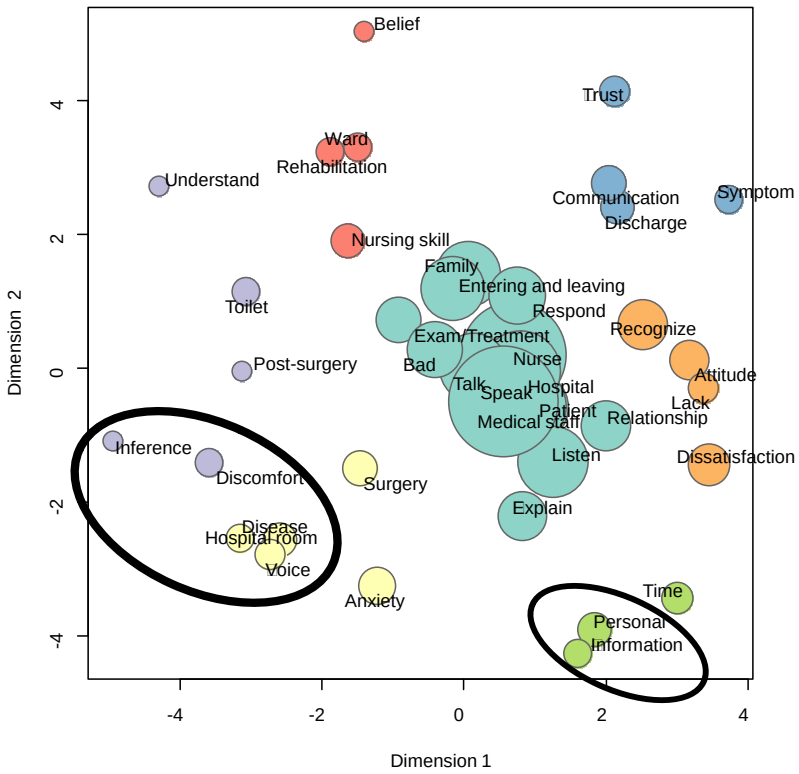

Figure 5. Bubble plot of latent factors in suffering perceived by patients in a stable condition

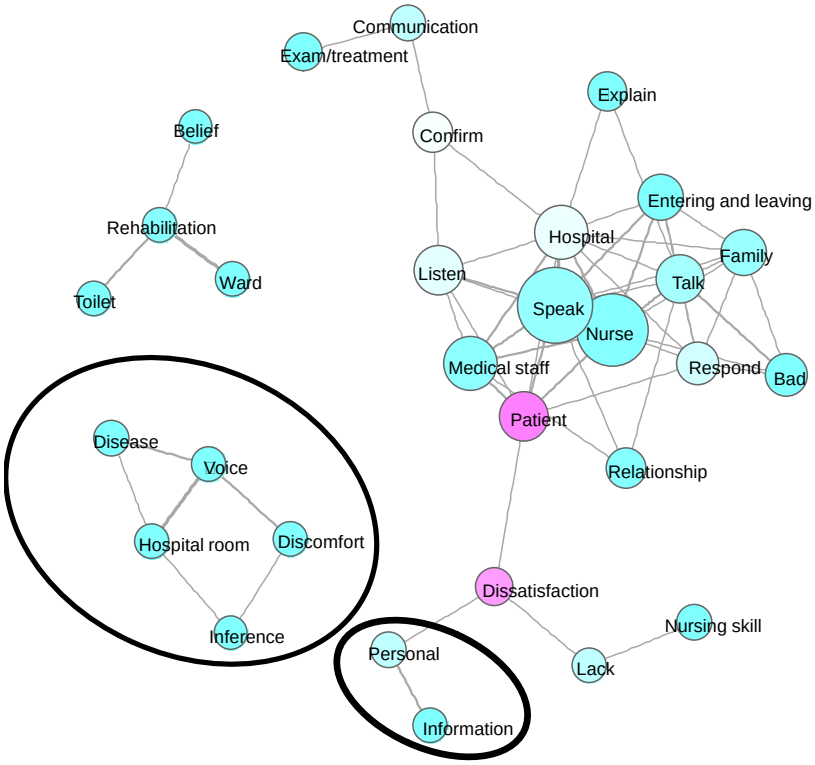

Figure 6. Co-occurrence network of latent factors in suffering perceived by patients in a stable condition.

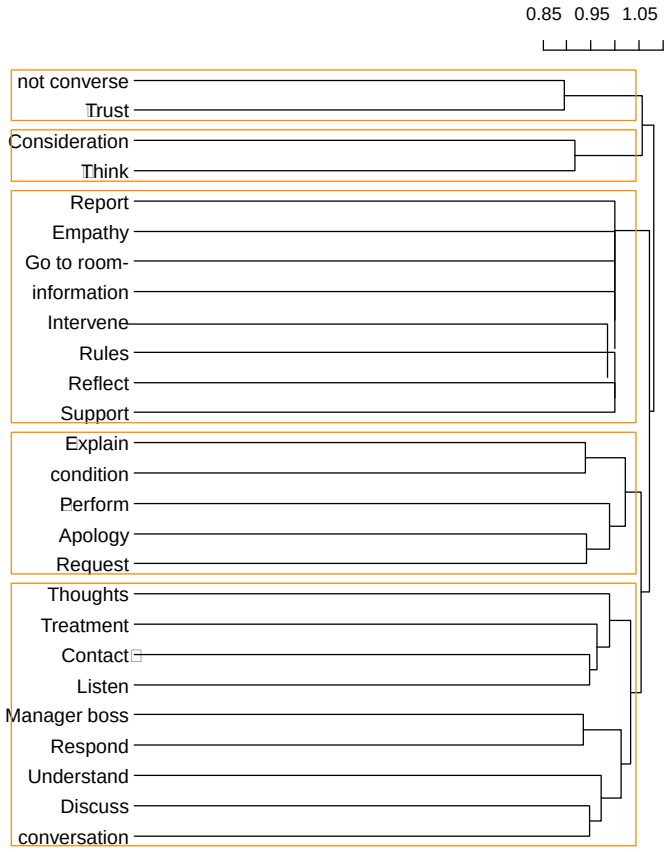

Figure 7. Hierarchical cluster of Japanese patients' expectations of nurses when suffering in a stable condition.

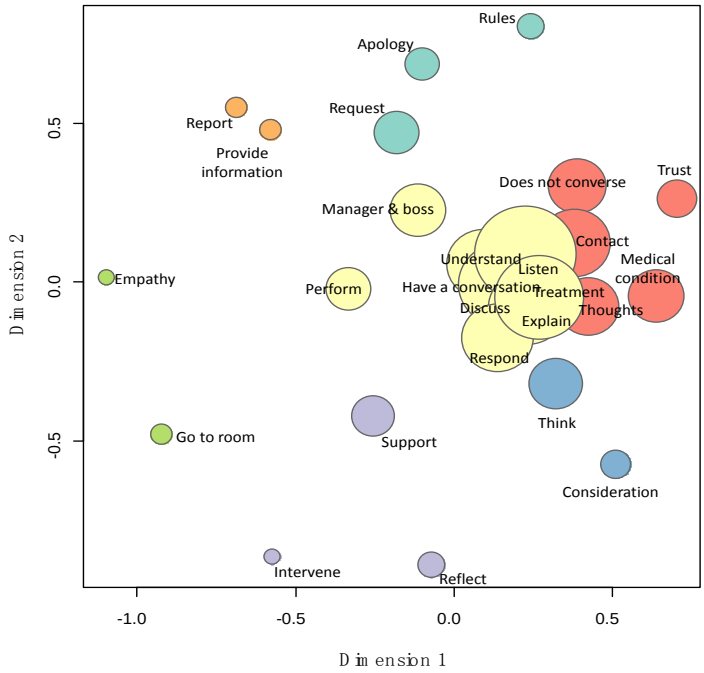

Figure 8. Bubble plot of Japanese patients' expectations of nurses when suffering in a stable condition.

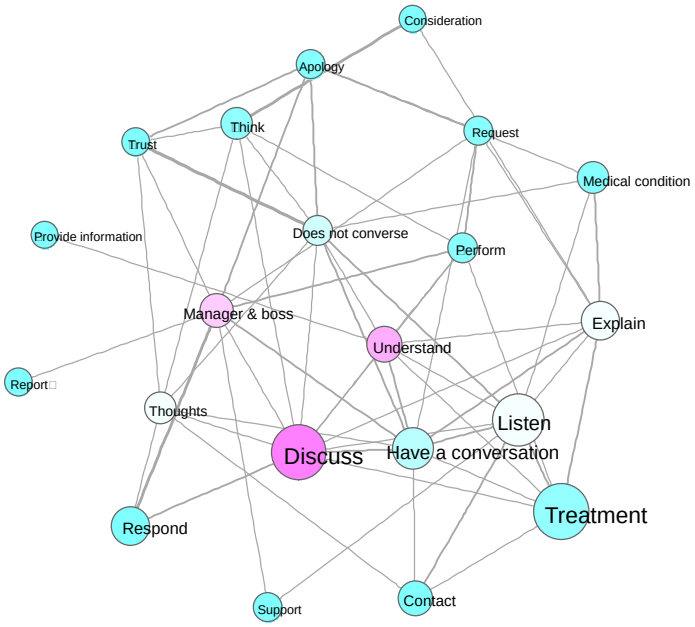

Figure 9. Co-occurrence network of Japanese patients' expectations of nurses when suffering in a stable condition.

regarding this."

As an interpretation of this, the patient is preparing for the next scheduled discharge time. However, the nurse does not infer the patient's irritated affect and he/she provides no response (explanation). The nurse is busy performing care for other patients and recognizes that other patients are a priority. Therefore, the patient suffers while waiting patiently without declaring his/her thoughts of the irritation. The patient's irritation becomes the focus. Affect is a generic name indicating various feelings aperson experiences; it is closely related to emotion and mood [28] and clearly indicates how a person feels [29]. Although the patient is irritated (affect), he/she cannot clearly and logically convey this to the nurse. In other words, when a situation cannot be understood objectively, the affect of the involved parties increases. Affect is subjective, and it has been suggested that it is impossible to adequately convey the properties of affect in language [30].

4.1.2. Timing Problems

Original text case: "*The nurse did not notice that a nurse call was made from the toilet and the patient was left waiting in the toilet for quite a long time. There was no apology for this that satisfied the patient.*"

As an interpretation of this, the patient's experience of being kept waiting in the toilet caused fear. However, it was a busy period for the nurse and the nurse recognized that the response was slightly delayed. Consequently, there is a gap between the nurse and patient regarding time. When the patient perceives and inappropriate gap, he/she feels suffering. There is an existing gap between nurses who are actively busy throughout the day and patients whose activity level is de-

creasing due to treatment; this also influences how events are understood. When taking an action-research approach, the process of learning through living experience includes the potential to reduce the gap between theory and practice [31] [32] [33]. By having a real sensation by entering the lives of others, one can move toward a solution. However, it is suggested that if it is impractical to enter a patient's life, nurses must use their imagination.

4.2. Latent Factors in Suffering

4.2.1. Privacy Issues

Original text case: "*I cannot leave my bed and when I mentioned that there was something I wanted to consult with the nurse about, the nurse said in a voice loud enough for the other patients and visitors in the room to hear: 'What's the matter? Please go ahead and tell me, whatever it is.' The nurse didn't consider that I wanted to speak privately.*"

As an interpretation of this, although the patient was asked by the nurse, it was without consideration, and the patient endured feeling discomfort.

4.2.2. Nurses' Not Intervening on Patients' Behalf

Original text case: "*In situations where my physical strength is extremely depleted, such as fever, etc., voices of other visitors in the same room are very noisy. I want the nurse to notice this and warn them* (*on my behalf*)."

Although the patient's condition was stable, he/she had a fever. Therefore, he/she is very uncomfortable when it is too noisy. In this case, the patient was concerned that if he/she warns the visitors, it will harm his/her relationship with the other patients in the room; therefore, he/she would like the nurse, who is neutral, to warn them. The patient recognizes that these warnings are the nurse's responsibility. If this is not enacted, it becomes a latent factor in the patient's suffering.

Therefore, this factor is related to affect control such as suppression; concentration; and retention of a condition, urge, or emotion [34]. Although affect control is a socially necessary skill, it is thought to lead to suffering if its exceeds the patient's personal range of control. Suffering is a personal perception or experience; since humans perceive the experience of suffering in unique ways [35], it may be difficult for another person (in this case the nurse) to notice. Therefore, a "lack of the nurse's awareness" became a latent factor in the patient's perceived suffering.

4.3. Japanese Patients' Expectations of Nurses

Since no particularly strong relationships were shown, it is believed that patients' expectations are thought to be very diverse and without patterns. For patients to receive high-quality care, it is extremely important for nurses to understand patient suffering [36] and Millar [37] points out that communication is a core element of this. In other words, a nurse is required to sense the patients' expectations from communication one who is unable to do so is thought to cause pa-

tient suffering. In contrast, it is also necessary to determine patients' feelings through their non-verbal communication.

4.4. Cultural Factors

In Japan, individuals are taught to coexist and not harm others. They are also taught to avoid expressing affect such as personal thoughts and emotions. Expressing one's thoughts and emotions indirectly rather than directly is an art and uses a variety of expressive methods. Consequently, there is an expectation that one wants to and wants other to infer truth. That is, words such as "attentiveness" and "concern" that express Japanese spirit [38] are at the foundation and the space between people that creates a positive atmosphere (in Japanese, *awai*) is a characteristic of Japanese communication. However, the existing problem is that Japanese nurses are following Western teaching and communication. These cultural factors are not applicable to Japanese patients, and nurses are not perceiving their suffering effectively.

4.5. Clinical Contributions

Patients' in stable conditions have their thoughts easily overlooked. However, by understanding the characteristics of patients' perceived suffering and using basic communication skills, the nurse-patient relationships can be improved and high-quality nursing care can be provided. Communication that reaffirms diverse cultural backgrounds is necessary.

4.6. Study Limitations and Future Prospects

Rather than separately examining the perceptions of nurses or patients, it is necessary to concurrently verify conflicts and other situations that arise between nurses and patients and to conceptualize both nurses' and patients' perception of suffering.

5. Conclusion

Features of suffering perceived by Japanese patients in a stable condition included factors such as "lack of inference," "privacy issues," and "nurses' not intervening on patients' behalf." These were shown through a text analysis, which suggested that emotion has a complicated influence. Moreover, the Japanese culture of expression influences patients' suffering; however, it seems that Japanese nurses tend to forget this.

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References

[1] Otani, K. and Kurz, R.S. (2004) The Impact of Nursing Care and Other Healthcare

Attributes on Hospitalized Patient Satisfaction and Behavioural Intentions. *Journal of Healthcare Management*, **49**, 181-196.

[2] Sharma, S.K. and Kamra, P.K. (2013) Patient Satisfaction with Nursing Care in Public and Private Hospitals. *Nursing and Midwifery Research Journal*, **9**, 130-141.

[3] Ellis-Jacobs, K.A. (2011) A Quantitative Correlational Study on the Impact of Patient Satisfaction on a Rural Hospital. *The Internet Journal of Allied Health Sciences and Practice*, **9**. http://ijahsp.nova.edu/articles/Vol9Num4/pdf/ellis-jacobs.pdf

[4] Lee, M.A. and Yom, Y.H. (2007) A Comparative Study of Patients' and Nurses' Perceptions of the Quality of Nursing Services, Satisfaction and Intent to Revisit the Hospital: A Questionnaire Survey. *International Journal of Nursing Studies*, **44**, 545-555. https://doi.org/10.1016/j.ijnurstu.2006.03.006

[5] Shirley, E.D. and Sanders, J.O. (2013) Patient Satisfaction: Implications and Predictors of Success. *The Journal of Bone and Joint Surgery. American Volume*, **95**, e69-1-4.

[6] Ting, C.Y. and Yu, T.K. (2010) Modeling Patient Perceptions of Service Recovery: The Effects of Perceived Fairness on Health Center Repatronage. *Social Behavior and Personality*, **38**, 395-403. https://doi.org/10.2224/sbp.2010.38.3.395

[7] Dzomeku, V.M., Ba-Etilayoo, A., Perekuu, T. and Mantey, R.E. (2013) In-Patient Satisfaction with Nursing Care: A Case Study at Kwame Nkrumah University of Science and Technology Hospital. *International Journal of Medical Research and Health Sciences*, **2**, 19-24.

[8] Donabedian, A. (1992) The Role of Outcomes in Quality Assessment and Assurance. *QRB—Quality Review Bulletin*, **11**, 356-360. https://doi.org/10.1016/S0097-5990(16)30560-7

[9] Nelson, E.C., Mohr, J.J., Batalden, P.B. and Plume, S.K. (1996) Improving Health Care, Part 1: The Clinical Value Compass. *The Joint Commission Journal on Quality Improvement*, **22**, 243-258. https://doi.org/10.1016/S1070-3241(16)30228-0

[10] Irvine, D., Sidani, S. and Mc Gillis, L.H. (1998) Linking Outcomes to Nurses' Roles in Health Care. *Nursing Economic*, **2**, 58-64.

[11] Duffy, J.R. and Hoskins, L.M. (2003) The Quality-Caring Model. *Advances in Nursing Science*, **26**, 77-78. https://doi.org/10.1097/00012272-200301000-00010

[12] Korniewicz, D.M. and Duffy, J. (2008) Essential Concepts for Staff Nurses: The Outcomes Imperative. American Nurses Association, Continuing Education.

[13] Mark, B., Salyer, J. and Wan, T.T.H. (2003) Professional Nursing Practice: Impact on Organizational and Patient Outcomes. *Journal of Nursing Administration*, **22**, 224-234. https://doi.org/10.1097/00005110-200304000-00008

[14] Yen, M. (2004) A Model for Testing the Relationship of Nursing Care and Patient Outcomes. *Nursing Economic*, **22**, 75-80.

[15] Tzeng, H.M. and Yin, C.Y. (2008) Patient Satisfaction versus Quality. *Nursing Ethics*, **15**, 121-124. https://doi.org/10.1177/0969733007080210

[16] Greiner, A.C. and Knebel, E. (2004) Health Professions Education: A Bridge to Quality. *Journal for Healthcare Quality*, **26**, 54. https://doi.org/10.1111/j.1945-1474.2004.tb00473.x

[17] Institute of Medicine, Committee on Quality of Health Care in America (2001) Crossing the Quality Chasm: A New Health System for the 21st Century. Executive Summary. http://books.nap.edu/catalog/10027.html

[18] World Health Organization (2008) Communication during Patient Handovers. *Patient Safe Solutions*, **1**, 1-4.

[19] Peterson, S.J. (2009) Interpersonal Relations. In: Peterson, S.J. and Bredow, T.S., Eds., *Middle Range Theories*: *Application to Nursing Research*, Lippincott Williams & Wilkins, Philadelphia, 202-230.

[20] Peplau, H.E. (1991) Interpersonal Relations in Nursing: A Conceptual Frame of Reference for Psychodynamic Nursing. Springer, New York.

[21] Bissell, P., May, C.R. and Noyce, P.R. (2004) From Compliance to Concordance: Barriers to Accomplishing a Re-Framed Model of Health Care Interactions. *Social Science & Medicine*, **58**, 851-862.

[22] Robbins, S.P. (2009) Essentials of Organizational Behavior. 8th Edition, Pearson Education, Inc., Prentice Hall, Diamond. (In Japanese)

[23] Uno, M., Tsujimoto, T. and Inoue, T. (2014) Effect of Conflicts in Patient-Nurse Relations. *Nursing Journal Osaka University*, **20**, 47-53. (In Japanese)

[24] Uno, M. (2015) A Study Using SERVQUAL to Evaluate Trends in Patient Expectations when Conflict Arises. *Journal of Yamato University*, **1**, 173-179.

[25] Uno, M., Ikuta, S. and Okamoto, M. (2016) Aspects of Avoidance of Conflict between Nurses and Patients, According to Gold Nurses (or Expert Nurses): A Program for Raising the Quality of Nursing. *Journal of Yamato University*, **2**, 91-97.

[26] Uno, M., Tsujimoto, T. and Inoue, T. (2017) Perceptions of Nurses in Japan toward Their Patients' Expectations of Care: A Qualitative Study. *International Journal of Nursing Sciences*, **4**, 58-62.

[27] Yamaguchi, I. (2011) Anna Nurse, Konna Nurse. Clinical Study, 19-30. (In Japanese)

[28] George, J.M. (1991) State or Trait: Effects of Positive Mood on Prosocial Behaviors at Work. *Journal of Applied Psychology*, **76**, 299-307. https://doi.org/10.1037/0021-9010.76.2.299

[29] Langer, S. (1964) Philosophical Sketches. The New American Library of World Literature, New York.

[30] Rogers, M.E. (1970) An Introduction to the Theoretical Basis of Nursing. *Nursing Research*, **19**, 541. https://doi.org/10.1097/00006199-197011000-00012

[31] Webb, C. (1989) Action Research: Philosophy, Methods and Personal Experiences. *Journal of Advanced Nursing*, **25**, 485-491. https://doi.org/10.1111/j.1365-2648.1989.tb01548.x

[32] Titchen, A. and Binnie, A. (1994) Action Research: A Strategy for Theory Generation and Testing. *International Journal of Nursing Studies*, **31**, 1-12.

[33] Simmons, S. (1995) From Paradigm to Method in Interpretive Action Research. *Journal of Advanced Nursing*, **21**, 837-844. https://doi.org/10.1046/j.1365-2648.1995.21050837.x

[34] Wegner, D.M. (1994) Ironic Process of Mental Control. *Psychological Review*, **101**, 34-52. https://doi.org/10.1037/0033-295X.101.1.34

[35] Travelbee, J. (1971) Interpersonal Aspects of Nursing. *Nursing Management*, **1**, 44. https://doi.org/10.1097/00006247-197112000-00009

[36] Bégat, I.B. and Severinsson, E.I. (2001) Nurses' Reflections on Episodes Occurring during Their Provision of Care—An Interview Study. *International Journal of Nursing Studies*, **38**, 71-77.

[37] Millar, B., Maggs, C., Warner, V. and Whale, Z. (1996) Creating Consensus about Nursing Outcomes. II. Nursing Outcomes as Agreed by Patients, Nurses and Other Professionals. *Journal of Clinical Nursing*, **5**, 263-267.

[38] Haga, Y. (2013) Nihonjin-rasisa-no-hakken. Taisyukansyoten, Tokyo. (In Japanese)

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Approaches to Improving Nursing Handoffs in Surgical Wards

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Abstract

Objective: To propose approaches to improve nursing handoffs for surgical patients, including standardization. **Background**: Handoffs, or the transfer of accountability and patient information, can generate potential risks for patient safety. Standardization has been proposed to help improve handoffs. **Methods**: After observing 333 nursing handoffs in the surgical wards of our institution, we conducted a thematic content analysis, comparing and contrasting the observations. **Results**: Handoff processes, including the use of support tools, varied among the observations. Common themes in the handoff content suggested possibilities of standardization. About half of the 51 interruptions occurring during the observed handoffs were by healthcare professionals. **Conclusions**: Standardization to improve handoffs should address both the content and the process. Interruptions were common and should be avoided whenever possible. Future studies should also consider the use of mobile applications to support handoffs and clinical documentation.

Keywords

Nursing Handoffs, Handover, Nursing Sign-Out, Shift Report, Bedside Handoff

1. Introduction

Continuous 24/24 h patient care in hospital wards requires handoffs between shifts. Handoffs are the transfer of accountability and patient information among care providers [1]. They are moments of potential risk for safety in patient care, with possible adverse events [2]. In prior studies on patient safety and preventable adverse events, about 60% of the events are associated with commu-

nication issues, in particular during handoffs [3]. Improving handoffs has recently become an important focus for safer patient care. Handoffs face several challenges, such as quality of content, time constraints, wide variability between wards and interruptions. Standardization of the handoff process, often with the use of mnemonics, has been effective to improve the quality of the content [4] [5]. Bedside handoffs are another proposed approach to improve the handoff process, in particular for patient safety [6] [7].

The format of nursing handoffs in the 11 surgical wards of our hospital varies according to the time of day and subsequent staffing. The wards have specialties: urology, transplantation, cardiovascular surgery (each one ward), general surgery (4 wards) and orthopedic surgery (4 wards). Each ward requires three or four nurses during the morning shift, two or three nurses in the afternoon with a mid-afternoon handoff, and one or two nurses during the night shift. Nurse assistants, present throughout the 24-hour period, also attend the handoffs. They help with many of the tasks at the bedside, but are not involved for medication, or tests such as blood work or electrocardiograms. In our teaching hospital, surgery wards have up to 20 patients, and handoffs between doctors and nurses occur separately. The duration of handoffs ranges from 15 min at the start of the day (from the night shift team), to 60 min during the mid-day handoff.

The aim of this study is to observe the current nursing handoff process in surgical wards, and to explore approaches for improvement, in particular for standardization, using a qualitative analysis.

2. Methods

This is an observational qualitative study of nursing handoffs. Three investigators (head nurses) observed morning and afternoon nursing handoffs in the different surgical wards. To report the content of the handoffs, they first developed a paper-based observation tool (**Figure 1**): based on preliminary observations of the handoff process, the investigators iteratively compared and extracted common themes covered during the handoff process, such as patient identity, allergies, and medications. This tool allowed the observers to code their observations of the handoffs in real time.

Observers assessed whether these themes were simply mentioned or discussed in detail, and whether the discussed elements were pertinent. They also reported the type of support tools used and potential barriers for handoffs. After 2 weeks of observations, the investigators summarized the coded observations from the paper-based tool, comparing and contrasting the results from the different types of surgical wards. Based on the results, we propose approaches to improve the handoff process.

3. Results

3.1. General Observations

The three investigators observed a total of 333 handoffs during the two-week

Theme	Mentioned	Detailed information provided	Pertinence	Comments
Prior knowledge of the patient				
Patient name - DOB Patient room number and position				
Diagnosis Medical history Surgical procedure Post-operation day				
Infection control information				
Allergies				
Diet/Fasting				
Equipments				
Medication - Premedication - Pain				
Peridural/block anesthesia - level - effectiveness				
Wound & skin				
Lab tests of the day				
Transfusion				
Bowel movements				
Autonomy				
Ins & Outs				
Other information - Problems of the day - Appointments, tests - Results, reports				
Monitoring				
Transfer/discharge/paperwork				
Social situation				
Issues related to workload Issues related to collaboration with doctors Issues related to patient/family				
Interruptions				

Figure 1. Paper-based observation tool.

period. We present the findings from the various handoff features, and then describe the general process and barriers for handoffs.

3.2. Handoff Content

Handoffs typically always began the same way with patient identification (name and age or year of birth). The content then differed by type of surgical ward. The nurses generally used the problem list to structure their narrative with details of the management plan, equipment and comorbidities. Pain management was also a dominant theme, but the intensity of the pain on the visual-analog scale was not often reported. The nurses described the patient's diagnoses and interventions, and provided the admission date or days since surgery. The past medical history was included if the diagnoses were considered pertinent for patient care during the stay or at discharge (*i.e.*, diabetes, or dementia). Certain types of medications such as antibiotics, anticoagulants and insulin were systematically reported in detail, whereas other medications were not always mentioned. Postoperative prescriptions included treatments and surveillance orders. Nurses in general surgery and the other wards then discussed patient equipment. In orthopedic nursing handoffs, the equipment was associated with medications, patient care or monitoring. Some handoffs also discussed discharge plans, monitoring or pressure ulcers. Table 1 provides a comparison of the top 10 handoff

Table 1. Top ten handoff themes discussed by type of surgical ward.

	Orthopedics	General surgery	Other surgical wards*
1	Patient ID	Patient ID	Patient ID
2	Surgery	Medication	Surveillance
3	Days post-op	Equipment	Surgery
4	Medication	Surgery	Age / Days post-op
5	Pain	Age	Equipment
6	Discharge	Diagnoses	Past medical history
7	Equipment	Days post-op	Discharge
8	Daily concerns	Past medical history	Skin condition
9	Age	Pain	Diagnoses
10	Past medical history	Skin condition	Discharge

*Urology, transplantation and cardiovascular surgery.

themes discussed by type of surgical ward.

3.3. Handoff Process and Use of Support Tools

Overall, handoff duration ranged from about 1 to 3.5 minutes per patient. The duration of the handoffs varied according to certain parameters: time of day, type of surgical ward, individual handoff style, training of the receiver, interruptions and prior knowledge of the patient. Morning handoffs tended to be shorter than the afternoon handoffs.

Nurses' handoffs have two components: a verbal, in-person component and a written component in the nursing notes of the EHR. For the verbal component, nurses used several types of supportive tools.

Handwritten notes: Use of personal notes was common. Nurses took notes during the handoffs on blank paper, a printout of the patient list, or a Word or Excel template with patient identity, room number and tasks. They kept these notes in their pockets, and updated them throughout the shift with reminders, such as to fax a prescription. When working consecutive days, nurses sometimes re-used their personal notes, simply crossing off the discharged patients, and adding the new ones.

Printouts of nursing tasks: All nurses had a printout of the task list for each of their patients, with the medication list and other patient care information (*i.e.*, assistance for meals or mobilization). These printouts were generally printed by the handoff giver just prior to the handoff, to have updated medical prescriptions at the beginning of each shift. Some nurses also annotated this print out during the handoffs. Although all wards printed these task lists, they were not all used during the handoffs. Most of the time, nurses documented the main diagnoses, code status, and main concerns for the shift, which are not in the printout.

Postoperative prescription forms: anesthetists made the post operative pre-

scriptions on paper documents that are also used in the recovery room. These postoperative medical orders are not transcribed in the EHR for the wards, but remain valid until the ward physician prescribes new orders, or at most up to 24h after arriving in a ward.

Patient information board: Handoffs took place in nursing offices, which provided an access to the patient information board and to three desktop computers. The patient information board provides an outlay of the ward, with patient and nursing team names, as well as surgical specialty. It also has discharge indications and monitoring requirements, which gives the team an overview of the patient workload. After the handoffs, nurses had team discussions about logistics or complex situations.

EHR dashboard: Another supportive tool used for handoffs was the patient dashboard in the EHR. It provides an overview of a patient's administrative data (name, age or year of birth), past medical history and current diagnoses, vital signs and trends as well as the current medical equipment.

The EHR dashboard contains several sections with different types of patient information, which can support handoffs (Figure 2). 1) Patient identity with the age helps avoid confusion with names that might be similar. 2) This section contains general information about the patient: the reason of admission, past medical history as well as information about the social support and environment of the patient. 3) Section 3 presents a visual overview of the patient's current equipment. 4) A graphical overview of the patient's vital signs with the recent values and trends, as well as the intervention date(s) can be found in Section 4. Clicking on this section opens up the global graphic view of the patient's charts, which includes weight, pain scores and administered medications.

Nurses did not rely on their EHR nursing chart notes for handoffs, mainly because they were often only completed *after* the verbal handoff.

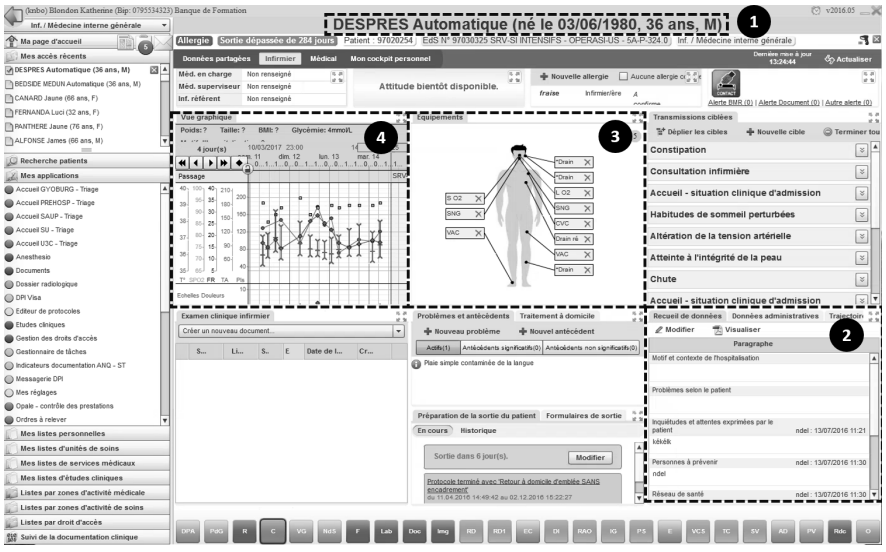

Figure 2. Using the EHR dashboard to support handoffs: (1) patient identity, (2) general medical information about the patient, (3) patient equipment, (4) Vital signs.

The use of the different supportive tools by type of ward is presented in Table 2. In the orthopedics and general surgery wards, nurses relied mainly on their personal notes and on the board in the nursing office. Nurses in the skin surgery wards, however, tended to use the patient dashboard in the EHR as well as their notes and the board. When medications were discussed, they were often simply listed, with little additional information.

Nurses wrote down vital signs on their notes before entering the data into the EHR at a later time. These notes were also used to give the handoff at the end of a shift.

3.4. Barriers to Handoffs

Several barriers to handoffs were identified during the observations. The main barrier was the frequent interruptions. During the observation period, handoffs were interrupted 51 times. Twenty-six interruptions were by colleague nurses, physicians, physiotherapists, or dieticians, and nine were phone calls. Another nine interruptions were for patient transports for planned exams or interventions. Seven interruptions were questions from the patients' visitors.

Another barrier for handoffs and patient care was the presence of substitute-nurses. These nurses are not part of the usual ward teams. Although they are experienced and competent, they may not be familiar with certain equipment, medications, or with certain protocols that are specific to each ward.

Finally, the use of supportive tools for handoffs was more difficult when several people took part in a handoff, such as during morning handoffs, due to screen sizes of laptops or even desktop computers. Moreover, reading the printouts and note-taking occupied the handoff receiver most of the time, and sometimes slowed the flow of the verbal handoffs.

3.5. Other Observations

Observations about the handoff processes revealed other opportunities for improvement. First, there was a tendency to use informal, non-medical language during the handoffs, rather than medical terms (*i.e.*, "he was burning up" rather than "he had a fever"). Although this approach made the tone more casual, precision of the handoff information was sometimes affected.

Second, the location of the handoffs varied among the wards. Most handoffs took place in the nurses' office, some in the corridor in front of the patient

Table 2. Comparison of supportive tools used for handoffs in different wards.

	Orthopedic wards	General surgery and transplantation wards	Other wards
EHR dashboard	0.7%	4.25%	41.17%
Nursing tasks list	2.12 %	3.54%	19.6%
Postoperative prescriptions	1.41%	2.83%	5.88%
Personal notes + information board	95.77%	89.38 %	33.34%

rooms, some in the break room, and a minority took place at the bedside. Finally, handoffs were often delayed, either due to individual tardiness or to on-going team discussions such as scheduling issues.

4. Discussion

Based on the 333 observations in 11 surgical wards of our institution, we described the processes, including the use of support tools and content of handoffs between the teams and content of handoffs. This observation revealed a high variability that has been reported in the literature [8] [9]. A range of factors such as established routines, available resources, and differences in clinical needs across the surgical subspecialties contribute to this variability.

One of the key recommendations for improvement in the handoff literature is standardization, both of the process and the content. In the next part of the discussion, we describe recommendations, based on our observations.

4.1. Standardizing the Handoff Process

Documentation in the EHR was often delayed, with potential transcription errors from the initial annotation on personal notes. Progress notes or other task-related annotations, for example, were often written up at the end of a shift, after giving the handoff. This data collection was delayed until the nurses got back to the nursing office, and logged into the EHR. This delay engenders a potential risk of omitting elements during the handoff and can be shortened with the use of computer on wheels (COWs) at the bedside. Handoffs improvement can help avoid omissions and decrease errors [4] [10].

Our recommendations to standardize the handoff process are to begin the handoffs with a brief (<10 min) overview of the patients in the ward in the nursing office, with patient name and birth date, type of intervention with indication of postoperative day, daily objective. This overview also should include planned admissions and discharges of the day. The detailed patient handoff is conducted at the bedside, using the EHR dashboard as support to reduce errors [11].

Nursing assistants can contribute to handoffs, and also benefit from receiving information about the patients for their shifts. Although patient confidentiality and seating arrangements are better addressed in the nurses' office, bedside handoffs allow patients to be involved in their care, and promote higher patient safety [12] [13].

4.2. Standardizing the Handoff Content

Standardizing the handoff process has been widely explored in the handoff literature, particularly with the development of mnemonics [5] [6] [7] [14]. Nurses tended to have a common structure for verbal handoffs, as they discussed many common themes for their patients. Using a common structure can help the receiver create her own mental model for each patient. In addition to the use of

many common themes among the different wards, the handoffs in our study did seem to follow a general outline with the following themes: 1) identification of the patient and code status, 2) reason for admission, 3) surgical intervention, 4) relevant medical history, 5) current problem list and treatments, 6) daily concerns and 7) discharge planning.

4.3. Standardizing the Use of Support Tools

Our observations showed varied support tool use when receiving a handoff, and when collecting these facts during the shift. This variability was due to two main factors: first, head nurses' recommendations played an important role in EHR use to support handoffs or not (no institutional recommendation) Second, usability and efficiency of the EHR also affect the teams' preferences for this process. Connectivity issues with Wi-Fi for the COWs slowed the navigation between patient charts and discouraged some teams from using this support. Some teams also reported that the design of the EHR did not support the way they conducted their handoffs, and that it took too long to navigate to the required information in the EHR.

We observed high use of personal notes and low use of EHR during handoffs. Printouts were not used systematically during handoffs. Most of the time, nurses documented the main diagnoses, code status, and main concerns for the shift. Although writing down key points can help improve the retention of information, it is also time-consuming, tedious, and a potential source of error. Errors can arrive from transcriptions, miscomprehension, or from the distraction of having to take notes while the colleague continues talking. Beyond the handoff itself, our observations showed that using printouts of the daily task listduring shifts was common to all wards. Prior literature on printouts emphasizes the risk of potential errors when the data is modified in the HER [15].

The dashboard section of our EHR can support and offs, in particular to help standardize the content of the handoff. COWs also provide easy access to the EHR at the bedside. Using the dashboard as support, particularly at the bedside, can help the nurses to improve the precision of the handoff content. It also enables nurses to respond to patient questions at the bedside, and may also help anticipate nursing care.

Another approach for a support tool would be to provide a summary of the task-related annotations, which can be consulted during the handoff to ensure that all relevant topics have been discussed. This type of support could be provided in a mobile app, which could provide access to the task list. The additional advantage of a mobile app in this situation over a COW is its more ubiquitous availability, since COWs cannot be used in all environments (*i.e.*, pathogen-free environments), for example. Reports of mobile tools to support bedside care are appearing in the literature [16] [17], with rapid adoption and high user satisfaction.

There are limitations to our study. First, observers were not familiar with the patient cases, and were therefore not able to judge the pertinence of the handoff

content. Second, the presence of observers may influence the performance. The charge nurses who are often present during handoffs reported that this effect seemed rather modest over all the observations. Finally, our study focuses on handoff processes in the surgical wards of our institution, which may limit its generalizability to other surgical settings or to other medical specialties.

5. Conclusions

Based on our observations, we propose approaches to standardize both the process and content of handoffs. The standardized morning handoff process should occur as a team, based on the EHR synoptic view of all the patients of the ward. The night nurse will present the patients, focusing particularly on recent events and concerns, and concerns or aims for the day. Based on the EHR synopsis of the ward, we propose that the night nurse presents the room number, patient ID, reason of admission and daily concerns. For the mid-afternoon handoff, we propose to begin as a team with an initial 10-min overview in the nurse office, followed by bedside handoffs in smaller teams (nurses and nursing assistants).

Moving the handoffs to the bedside allows the patient and family to be involved, and can help improve comprehension of planned care. It is also an opportunity to introduce the on-coming nurse to the patients. Although bedside handoffs have many benefits, confidential issues may be delicate to address in the presence of other patients in the room, and visitors need to be asked to wait outside. Computers-on-wheels (COWs) allow EHR access during bedside handoffs, and can provide complementary support to personal notes for most of the handoff content. After the bedside handoff, nurses can then briefly discuss how to distribute the tasks before the morning shift workers leave.

References

[1] Solet, D.J., Norvell, J.M., Rutan, G.H. and Frankel, R.M. (2005) Lost in Translation: Challenges and Opportunities in Physician-to-Physician Communication during Patient Handoffs. *Academic Medicine*: *Journal of the Association of American Medical Colleges*, **80**, 1094-1099. https://doi.org/10.1097/00001888-200512000-00005

[2] Starmer, A.J., Sectish, T.C., Simon, D.W., Keohane, C., McSweeney, M.E., Chung, E.Y., *et al.* (2013) Rates of Medical Errors and Preventable Adverse Events among Hospitalized Children Following Implementation of a Resident Handoff Bundle. *JAMA*: *The Journal of the American Medical Association*, **310**, 2262-2270. https://doi.org/10.1001/jama.2013.281961

[3] Commission, T.J. (2013) Sentinel Event Data-Root Causes by Event Type 2013. http://www.jointcommission.org/Sentinel_Event_Statistics/

[4] Arora, V. and Johnson, J. (2006) A Model for Building a Standardized Hand-Off Protocol. *Joint Commission Journal on Quality and Patient Safety/Joint Commission Resources*, **32**, 646-655. https://doi.org/10.1016/S1553-7250(06)32084-3

[5] Nasarwanji, M.F., Badir, A. and Gurses, A.P. (2016) Standardizing Handoff Communication: Content Analysis of 27 Handoff Mnemonics. *Journal of Nursing Care*

Quality, **31**, 238-244. https://doi.org/10.1097/NCQ.0000000000000174

[6] Taylor, J.S. (2015) Improving Patient Safety and Satisfaction with Standardized Bedside Handoff and Walking Rounds. *Clinical Journal of Oncology Nursing*, **19**, 414-416. https://doi.org/10.1188/15.CJON.414-416

[7] Anderson, J., Malone, L., Shanahan, K. and Manning, J. (2015) Nursing Bedside Clinical Handover—An Integrated Review of Issues and Tools. *Journal of Clinical Nursing*, **24**, 662-671. https://doi.org/10.1111/jocn.12706

[8] Ilan, R., LeBaron, C.D., Christianson, M.K., Heyland, D.K., Day, A. and Cohen, M.D. (2012) Handover Patterns: An Observational Study of Critical Care Physicians. *BMC Health Services Research*, **12**, 11. https://doi.org/10.1186/1472-6963-12-11

[9] Riesenberg, L.A., Leitzsch, J. and Cunningham, J.M. (2010) Nursing Handoffs: A Systematic Review of the Literature. *The American Journal of Nursing*, **110**, 24-34. https://doi.org/10.1097/01.NAJ.0000370154.79857.09

[10] Starmer, A.J., Landrigan, C.P. and Group, I.P.S. (2015) Changes in Medical Errors with a Handoff Program. *The New England Journal of Medicine*, **372**, 490-491. https://doi.org/10.1056/NEJMc1414788

[11] Johnson, M., Sanchez, P. and Zheng, C. (2016) Reducing Patient Clinical Management Errors Using Structured Content and Electronic Nursing Handover. *Journal of Nursing Care Quality*, **31**, 245-253. https://doi.org/10.1097/NCQ.0000000000000167

[12] Maxson, P.M., Derby, K.M., Wrobleski, D.M. and Foss, D.M. (2012) Bedside Nurse-to-Nurse Handoff Promotes Patient Safety. *Medsurg Nursing*, **21**, 140-144.

[13] Mardis, T., Mardis, M., Davis, J., Justice, E.M., Riley Holdinsky, S., Donnelly, J., *et al.* (2016) Bedside Shift-to-Shift Handoffs: A Systematic Review of the Literature. *Journal of Nursing Care Quality*, **31**, 54-60. https://doi.org/10.1097/NCQ.0000000000000142

[14] Riesenberg, L.A., Leitzsch, J. and Little, B.W. (2009) Systematic Review of Handoff Mnemonics Literature. *American Journal of Medical Quality: The Official Journal of the American College of Medical Quality*, **24**, 196-204. https://doi.org/10.1177/1062860609332512

[15] Rosenbluth, G., Jacolbia, R., Milev, D. and Auerbach, A.D. (2016) Half-Life of a Printed Handoff Document. *BMJ Quality & Safety*, **25**, 324-328. https://doi.org/10.1136/bmjqs-2015-004585

[16] Motulsky, A., Wong, J., Cordeau, J.P., Pomalaza, J., Barkun, J. and Tamblyn, R. (2016) Using Mobile Devices for Inpatient Rounding and Handoffs: An Innovative Application Developed and Rapidly Adopted by Clinicians in a Pediatric Hospital. *Journal of the American Medical Informatics Association*, **24**, e69-e78. https://doi.org/10.1093/jamia/ocw107

[17] Tang, C. and Carpendale, S. (2008) Evaluating the Deployment of a Mobile Technology in a Hospital Ward. *Proceedings of the* 2008 *ACM Conference on Computer Supported Cooperative Work*, San Diego, 8-12 November 2008, 205-214.

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Perceptions of Nurses on Patient Outcomes Related to Nursing Shortage and Retention Strategies at a Public Hospital in the Coastal Region of Tanzania

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Abstract

Background: There is little disagreement that the shortage of nurses affects patients' outcomes globally. However, within the low and middle income country setting, there is minimal known about the perceptions of nurses on nursing shortages impact the health outcomes of their patients and what recruitment and retention strategies might be appropriate to address some of these challenges. This study explored the perceptions of nurses on the health outcomes of patient related to shortage of registered nurses and the strategies to retain nurses at a public hospital in Tanzania. **Method:** This qualitative descriptive study used semi-structured in-depth interviews with a select group of nurses in a large public hospital. **Findings**: Through an iterative coding process, a series of categories were derived which yielded three major themes—factors contributing to nursing shortage; compromised quality of care; and recruitment and retention strategies. **Conclusion**: A shortage of nurses affects the health outcomes of patients as it potentially hinders timely accomplishment of the optimal nursing. Efforts need to be proactive in recognizing the reasons for nursing shortages which are rooted in individual, institutional (agency), and organizational (systemic) issues. Within the LMIC context, such as where this study was conducted, it became apparent that the nurses wanted acknowledgement and opportunities to work collaboratively towards the resolution of workload issues for the benefit of the patients.

Keywords

Patient Outcomes, Nursing Shortage, LMIC, Recruitment and Retention,

Tanzania

1. Introduction

"Although 24% of the global burden of diseases falls under the African regions it has only 3% of the global health professionals" [1]. According to the Joint Learning Initiative (JLI) report, within the sub-Saharan context in 2004 the imperative was to triple the current number of health workers in order to meet needs [2]. This was revisited in a 2013 WHO document, which indicated that the current shortage of health workers globally stands at 7.2 million with the projection extending to 12.9 million by 2035 [3]. These authors note that 80% of countries presently not meeting the minimum 22.8 health providers per 10,000 population are in Africa, with a real deficit of 1.8 million workers as of 2013 (25% of the global deficit) on a single continent [3]. This deficiency is situated within the reality of a global nursing shortage which challenges the emergence of universal health care posing a potential threat to both patient well-being and the standards of nursing care [4].

Although there is no universally accepted definition about nursing shortage, Oulton [5] defined the nursing shortage as an unequal proportion of the number of patients attended by one nurse per shift. Mitchell [6] suggested the nursing shortage yields an inadequate number of nurses to provide quality nursing care. Shortage of nurses hinders timely accomplishment of activities significant to patient safety and effective nursing care, thereby negatively affecting the quality of nursing care [7]. Quality care serves as a measure of patient satisfactory outcomes and an indicator of safe standards of patient care [7].

A number of research projects have associated nursing staffing levels with patient outcomes [8] [9] [10]. A large cross-sectional study in 181 hospitals on mainland China revealed that a shortage of nurses had a direct effect on patient outcomes, with a sufficient nursing staff contributing to prevention of adverse patient outcomes. Hinno *et al.* [4] reported three subgroups of patient outcomes "adverse events, patient well-being and patient satisfaction" (p. 2). Adverse patient outcomes are complications, such as hospital acquired infections (*i.e.*, urinary tract infections), falls, medication errors) affecting patient health status and increase length of stay [4]. Adverse patient outcomes are also referred to as nursing sensitive indicators as they measure the level of standard of the nursing care in an institution [4].

Despite evidence that hospitals with high patient to nurse ratios experiencing more adverse events, little is known about the perceptions of nurses about the impact of nursing shortages on patient outcomes, generally, and within the low middle income country (LMIC) settings, specifically. A few studies [11] [12] have affirmed similar experiences amongst LMIC respecting patient outcomes and nursing retention challenges. However, there are additional challenges in

nursing in LMIC such as limited remuneration and career mobility, and social acceptability/stigma of the profession (*i.e.*, working conditions; power) [12] [13] [14].

Complicating the workload issues in LMIC has been the significant aggressive recruitment by developed nations [15] challenging governments to develop mechanisms to incentivize and/or retain health workers in lesser developed countries [16].

Nursing staff level along with the type of the health facility and hospital work environment are key factors in determining the quality of care including patient outcomes [7]. General staffing shortages forces nurses to engage in non-nursing activities (such as delivering food, transporting patients) rather than on the nursing tasks (such as medication administration, and wound care) that are crucial to patient recovery [4] [17] [18]. Nurse understaffing was related to high patient mortality in a number of studies [19] [20] [21].

Using data from the American National Database for Nursing Quality Indicator (NDINQI) to determine the link between total nursing staffing level, a recent study associated RN staffing levels and two specific patient outcomes (*i.e.*, hospital acquired pressure ulcers, and falls) [22]. Other studies have been highly suggestive of work overload contributing to increased post-operative complications and lengths of hospital stay [19], and reduced compliance with hand washing (and therefore infection prevention) [23].

High patient to nurse ratios align with higher emotional exhaustion and greater job dissatisfaction among nurses; conversely appropriate ratios contribute to lower burnout and increased satisfaction [23]. Hospital nurses' turnover affects the performance of the remaining nurses, causes chaos in an organization, threatens patient safety resulting in hospital readmission after discharge, increases nosocomial infections, and potentiates unsafe medication administration [9] [24].

This study explores the perceptions of a select group of nurses on the health outcomes of patient related to shortage of nurses and their perspectives on the strategies to retain nurses at a public hospital in Tanzania.

2. Methods

2.1. Setting

A qualitative descriptive design was used in order to gain an in-depth understanding of the phenomena under study in the natural setting [25]. The study was carried out at a public hospitals in Coastal Region of Tanzania. The choice of this hospital was made after reviewing the nurses staffing level, which was found to be a known issue to nurses and the institution at large.

2.2. Sampling and Recruitment

The participants of this study were registered nurses working at this hospital who understood and spoke English with at least two years of nursing experience.

The nurses were informed about the study by the hospital matron during the weekly hospital morning report. The information sheet consisting of researchers' contact details was posted on the notice board to allow any nurse meeting the inclusion criteria and interested to contact the designated research team members. One nurse from each of the units (*i.e.*, Maternity, Pediatric, Surgical, Male and Female Medical wards) was recruited within a purposive sampling strategy, yielding a sample of five participants recruited to the study. Our sampling approach aligned with the intent of qualitative research to sample to attain depth of meaning rather than generalizability of the findings [26].

2.3. Data Collection and Analysis

In-depth interviews were conducted using a semi-structured interview guide to gain understanding of the nurses' perceptions on the impacts on patient health outcomes related to shortage of nurses and their perspectives on the strategies to retain nurses at the hospital. A pilot interview was conducted with one nurse prior to data collection process to determine the length of interview, increase confidence with interview process and types of questions and probes. This interview data was not included in the analysis phase of this study.

Data collection and analysis was completed between January and April 2015. The interview duration was between 30 and 45 minutes. A brief demographic of each participant was collected before the interviews. The interviews were conducted in the conference room of the hospital. The interviews were audio recorded with the permission of participants. In addition to the interviewer, a second research team member took observational notes during the interviews. All interviews were transcribed and re-reviewed for accuracy.

2.4. Ethics

The project received approval from the Aga Khan University Ethical Review Committee and the management of the public hospital. The participants who volunteered were asked to sign a consent form and reminded of their option to withdraw without consequences at any time. Each participant was assigned a participant number to maintain their confidentiality (*i.e.*, P1 to P5).

3. Findings

The transcripts were reviewed and meaningful words and/or phrases were assigned codes manually. The emerging codes were then grouped into several categories or clusters. From these groupings, a number of themes were developed.

3.1. Demographics

Table 1 highlights the demographic information of the five participants. All participants were females, degree prepared, and most were between 41 and 47 years of age. Work experiences were highly variable ranging from 2 to more than 14 years.

Table 1. Characteristics of participant nurses.

Demographic	Participant				
	1	2	3	4	5
Age	41 - 47	34 - 40	41 - 47	27 - 33	41 - 47
Gender	Female	Female	Female	Female	Female
Education	Degree	Degree	Degree	Degree	Degree
Work Experience	>14 yrs	10 - 13 yrs	2 - 5 yrs	2 - 5 yrs	>14 yrs
Unit/Ward	Medical	Maternity	Surgical	Pediatric	Medical
Working hours	6 - 8	8 - 10	6 - 8	8 - 10	6 - 8

3.2. Themes

Seven categories emerged including: nurse: patient ratios; reasons for nursing shortage; effects of nursing shortage; adverse patient outcomes; intrinsic and extrinsic motivation; recruitment and retention strategies; and motivation to work. Subsequently, these categories were grouped into three major themes: 1) contributing to nursing shortage; 2) compromising quality of care; and 3) recruiting and retaining nurses (See Table 2). These themes and sub-components are explored within the following sections.

3.2.1. Theme One: Contributing to the Nursing Shortage

Within this theme, the participants described the existing situation primarily in terms of nurse: patient ratios. Simultaneously, they described their perceptions of the reasons for the nursing shortage at their facility.

Nurse: Patient Ratios

Most participants, in describing the situation of their nursing units, indicated that the number of nurses compared to number of patients was low. One participant mentioned that there are *"Not enough nurses to attend particular patients in the hospital… two nurses to care for twenty patients"* (P1). Another indicated that the *"low number of nurses… will not fulfill the requirements of the patients"* (P2).

The nurse: patient ratios were also related to the context of this particular hospital. For example, apart from receiving the victims of road traffic accidents along a major transit path, they are also receiving patients from nearby regions, such as Dar es Salaam, Morogoro, and Tanga, which add to large volumes and unpredictable severity of the patients.

This hospital is a special hospital because we are taking care of many patients who have had accidents along Morogoro road-so we have many patients here and other patients are coming from Dar es Salaam, Morogoro, Tanga. (P5)

Reasons for Nursing Shortages

The low nurse: patient ratios were attributed by the participants to a range of challenges, such as sick leaves, deaths, retirements, lack of recruitment planning by management, low salary, and geographical location of the hospital (a significant distance from the Dar es Salaam).

Table 2. Thematic overview.

Theme	Sub-categories	Sub-components
Contributing to the nursing shortage	Nurse: Patient Ratios	None
	Reasons for Nursing Shortage	None
Compromised quality of care	Effects of Nursing Shortage	Delays in Care Intention to Leave Inappropriate Task-shifting
	Adverse Patient Outcomes	Occupational Injuries Patient Satisfaction with Nursing Care
Recruiting and retaining nurses	Extrinsic and Intrinsic Motivation	None
	Recruitment and Retention Strategies	Employing more Nurses Improving Professional Development Activities Increasing Incentives

According to one participant (P3), "*another* (*cause*) *is staff movement*, *others are going for further studies*, *others are moving to other stations because of… may be going with the family.*"

One nurse mentioned that lack of commitment can also be a factor contributing to the nursing shortage.

Sometimes they come at the shift but they are not committed and sometimes there are many reasons which lead the staff or that person not to come to (*the*) *working place*. (P4)

This same participant stated that a major issue is "*they are not committed*, *most of the staff they are not committed*" (P4).

3.2.2. Theme Two: Compromised Quality of Care

As mentioned above, there were number of reasons for nursing shortages cited by the participants. With this range of causes, there are a number of effects, primarily described by the participants as negative impact on nurses and patients leading to compromised quality of nursing care. Within this theme, there were two sub-themes "effects of nursing shortage" and "adverse patient outcomes" embedded.

Effects of Nursing Shortage

Nursing shortages challenge patients, nurses, and institutions alike. The majority of the participants stated concerns of the effects of work overload, delays in patient care, high turnover ratios (*i.e.*, intention to leave), inappropriate task shifting, unsatisfactory patient outcomes, occupational injuries, and malpractice (*i.e.*, failure to attend).

Delays in care. Delay in patient care was a clearly stated effect of the nursing shortage cited by almost every research participant. All nurses acknowledged that it was not possible to administer medication at the right time due to the overwhelming nurse: patient ratio.

For example, "*There are some problems like medication sometimes they don't get at the* [*right*] *time.*" (P2)

In response to effects of nursing shortage, nurse (P1) responded:

Some patients may get treatment [*but not*] *in proper time*, *may have no proper treatment*, *no proper care*. *Maybe other patients have* [*been*] *in the bed for a long time and they may develop bed sores*.

Intention to Leave. Participants indicate that many nurses have an intention to leave their nursing post due to work overload.

Also, *if one is sick and there is no replacement …* [*am experiencing*] *nursing shortage in this hospital because sometimes there is aturnover* (*because*) *one* [*nurse*] *can say that I am so tired I cannot work in a shortage like this*. (P2)

Inappropriate Task Shifting. The shortage of nurses makes it difficult for the patients to receive direct care from the registered or trained nurses, as they are often burdened with the administrative duties which eventually lead to inappropriate task shifting. This hinders timely accomplishment of nursing tasks and reduction in the quality of nursing care as the patient will necessarily be attended by the health attendants who are not qualified nurses.

you find one trained nurse in a ward and a nurse assistant so almost one trained nurse can be doing both, *patient care and administrative issues so it is difficult for the patient to get nursing care directly from a trained nurse*. (P3)

Adverse Patient Outcomes. As a result of nurses' work overload (often due to shortage of nurses at the hospital), numerous life threatening complications have occurred to patients during hospitalization. Commonly cited adverse events included: bedsores, medication errors, patient falls, and hospital acquired infections. Bedsores were attributed to a lack of meeting the standards of treatment with patients being "*in the bed for a long time they may develop bed sores because nobody is going to do the turning measures to those patient.*" (P1) Medication errors were also cited as a threat to the patient safety by a number of the respondents (P2, 3, and 4). Further, P3 indicated "*I can say patient falls and drugs under-dosed*, *most of the time it's drug under dose*."

Occupational Injuries. Nursing shortages were seen as contributing to increased occupational injuries such as needle stick injuries. Despite knowledge and awareness programs on prevention of this needle stick injuries, one study participant mentioned it remains one of the major effects of the nursing shortage at the hospital.

Sometimes there is needle stick injuries due to work load or if you are busy the way you handle this sharp instruments sometimes you may injured yourself due to tiredness and this can cause harm to the patients, *can cause harm to the nurses…* (P5)

Patient Satisfaction with Nursing Care. When the participants were asked about patients' satisfaction with the nursing care, all participants indicated a range from satisfied to unsatisfied. A number of reasons were cited by the respondents as to this variability with a number of reasons were directly linked to the nursing shortage.

Am sorry to say that some patients are not satisfied and this is because it is not

easy to attend one patient at the right time because there are many patients and we are few. (P5)

… sometimes if the patients were supposed to be given an injection atmaybe2 pm and the patient [*get*] *is going to be given at* 2.30 *or* 2:45, *they do ask why are you not giving me the injections at the right time?* (*P*3)

The number of patient admitted in the ward on a particular day was seen as a possible determinant of patient satisfaction. According to P2, if the ward has many patients on a particular day the patients' satisfaction may be lower.

…it depends, *if there is a lot of admission on that day they* [*patients*] *will not be satisfied but if the number of patient are low they get a bit better*. (*P*2)

In addition to number of patients in the ward, length of stay at the hospital was mentioned as a measure of patient satisfaction and also attributed at times to the quality of care deliverable within the nurse: patient ratios.

… if patient who is staying in a hospital for two to three days most are satisfied but the patient who is staying longer at the end they are not satisfied with the nursing care. (P3)

3.2.3. Theme Two: Recruiting and Retaining Nurses

When the participants were asked about possible ways to recruit and retain nurses, they focused on various extrinsic and intrinsic motivational factors and retention strategies for improving quality patient care. These were encapsulated under the third theme of "recruiting and retaining nurses".

Extrinsic and Intrinsic Motivation

Throughout the interviews, nurses spoke of the challenges of working under nursing shortages, as has been reflected in the previous two thematic patterns. Despite these challenges, the nurses felt that there were still doing their best in the provision of care to the patients. Commitment to their work and internal motivation to nursing was cited by some participants.

Even with the shortage, *the nurses are working*, *it is only a few of them those who are not committed but those who are committed they never mind about the appreciation*. (P1)

This same participant indicated:

What makes me to be motivated to work in this hospital is my inner feeling to work in this hospital so as to assist and to give care to those well people and sick people.

Permanent job contracts with good terms and conditions were described as one of the key factor that keeps nurses to continue working at this public hospital. Job security was one of the major aspects of retention commonly cited by almost every participant in this study. As P3 stated, "*What I can say first of all is job security and another one I can say the team working making patients' feel better motivates me*".

The majority of the participants have worked at this public hospital for a long time and have established their permanent residences close to the hospital. This sense of belonging to the community and being a part of the community was al-

so cited as one of the factors that motivate the nurses to continue working at their hospital despite of all the challenges. Accordingly,

I have been [*working*] *here for so long, I am used* [*to working at this hospital*] *I think it is enough to me … and I have a house nearby, I have a family nearby, am not expecting to move*. (P2)

Traffic jam is a headache to me so to work at this (*hospital*) *…because am living nearby helps me remain at this hospital*. (P5)

Recruitment and Retention Strategies

A number of suggestions were offered by the respondents to retain nurses at their hospital. The main suggestions included: employing more nurses (improving human resource management plans), increasing professional development for long and short courses/seminars, increasing incentives (such as allowances and salaries) and simply showing appreciation. Lack of these factors was viewed as hindering nursing recruitment and retention at this hospital.

Employing more nurses. The participants suggested recruiting more nurses. One of the nurses charged "*the management of the hospital to look for nurses or to call qualified nurses to come and do an interview so that the nurses can be employed*" (P1).

Improving professional development opportunities. According to P2, recruitment incentives such chances for professional development will help to retain nurses at the hospital.

If they increase the number of nurses, employ others and some motivation incentives such as night allowances, extra duty allowances, and chance for going to school. (P2)

Increasing incentives. Many nurses understand that the hospital has limited funds, so if the management is not able to motivate the staff by giving money, they can at least provide appreciation letters to nurses to make them feel recognized or valued. She said:

Motivation is not [*only*] *money, even to write a letter to someone* [*to say*] *you have done a lot of work, you have done such and such we are glad to, to some sort of appraisal, some sort of appreciation that someone has done something good not only money*. (P1).

Similarly, other participants suggested recognition by administrators is very important in motivating staff. For example,

What I think motivation is very important, motivation it can be even when our bosses appreciate what we are doing that is motivation and other motivation is incentives such as extra duty allowances, night allowances, uniform allowance, risk allowance, we need that so that we can be motivated to work. (P4)

Another participant (P3) suggested offering an extra day off so that they can have a time to rest with their families.

4. Discussion

This study led to three thematic groupings—"Contributing to the Nursing

Shortage", "Comprising the Quality of Care", and "Recruiting and Retaining Nurses". The relationship of these themes was one of close articulation and a system in motion. For example, the elements which contributed to the nursing shortage potentiated the compromising of quality care and, in turn, generated the imperative for nursing recruitment and retention. As a result a simple diagram (see **Figure 1**) was used to depict the cog-like articulation of these three themes. Not only does this diagram emphasize the inter-relationship of these three themes, but also shows a system in motion, both of which were indicated by the input of the participants. No theme was articulated independently, such that the nursing shortage generated concerns for care which made recruitment and retention a need.

Low nurse: patient ratios (*i.e.*, indicative of the nursing shortage) were seen as hindering the provision of quality patient care. The nursing shortage was seen as contributing to delays in patient care, increasing medication errors, work overload, and inappropriate task shifting. These findings are similar to the other studies suggesting the low nurse: patient ratios impact on nursing activities that are considered as significant to patient safety and effective nursing care [7] [24]. The major causes of nursing shortages in the sub-Saharan region are migration of nurses seeking better opportunities, higher standards of living, salary increments, and more favorable working conditions, early retirement and the burden of HIV/AIDS [1]. In this study, a number of these issues were mirrored, however, no reference to HIV/AIDS patient burden was mentioned. The reasons for nursing shortages described in this study were directly linked to *individual nurse's issues* (*i.e.*, sickness, retirement, death), *institutional issues* (*i.e.*, geographic location), and *organizational/administrative issues* (*i.e.*, lack of recruitment planning, leaves, low salary).

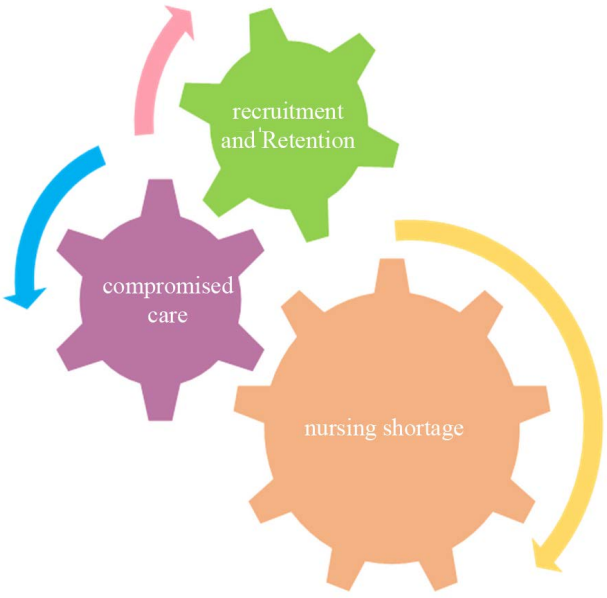

Figure 1. Thematic linkage diagram.

Again, the effects of the nursing shortage as described by this group of nurses were described as related primarily to patient or practice outcomes. Shortage of nurses affects both patients' outcomes and nurses' health in many ways such as work overload, delays in patient care, high turnover rates, inappropriate task shifting, unsatisfactory patient outcomes, and needle stick injuries. Many of these findings were reported by previous researchers [5] [27] [28]. The participants indicated that, as the shortages increased, they were being required to do more non-nursing activities, especially administrative activities. This finding is similar to a study by Jackson, *et al.* [18] which suggested that a shortage of nurses forces nurses to engage in more non-nursing activities which are out of their scope of practice rather than concentrating on nursing care and other tasks that are crucial to improving patient outcomes. Further, the nurses indicated that patients were not satisfied with the nursing care when it caused delays of service or when they were being attended to by health attendants rather than registered nurses, similar to the work of Scott [29].

Adverse patient outcomes identified by participants in this study included bedsores, medication errors, patient falls, and hospital acquired infections. Nurses perceived these outcomes as threats to patient outcomes, directly affecting patient health status, satisfaction, and lengths of stay. The evidence affirms what these nurse informants suggested. For example, addressing nursing shortages may reduce length of stay [19] [30], fall rates [31], nosocomial pressure ulcers [32], and overall adverse events (*i.e.*, medication errors and infections) [28].

Of interest was the range of recruitment and retention strategies provided by the participants. There was a clear message that both intrinsic and extrinsic motivators need to be attended to in order to overcome the nursing shortage. It was also made apparent that there is awareness on the part of the nurses of the challenges for the organization in meeting the human resource needs due to funding limitations. This study's participants, as in the study by Duffield Roche, Blay, & Stasa [33], indicated that nurses' satisfaction was associated with recognition and praise by their managers while lack of recognition lowers morale and productivity. Also, professional development was noted as highly desired by nurse participants as a means to retention.

Recommendations and Conclusion

Shortage of nurses affects the health outcomes of patients in many ways, as it hinders timely accomplishment of the tasks that are considered as significant to patient safety and effective nursing care. Steps are required by the management to recruit more nurses to cover this shortage and improve the patients' health outcomes. Good retention strategies are a key to nurses' shortage eradication, thereby contributing to improved patient health outcomes and nursing staff's satisfaction. These efforts need to be proactive in recognizing the reasons for nursing deficits are rooted in individual, institutional, and organizational issues. Within the LMIC context, such as where this study was conducted, it became

apparent that the nurses were wanting acknowledgement and opportunities to work collaboratively towards the resolution of workload issues for the benefit of the patients. There is a need for ongoing research in the area of the impacts of the nursing shortages in the LMIC context which may or may not mirror the findings in developed contexts. Inclusion of the voices of nurses is imperative in articulating and appreciating the issue of nursing shortages and patient outcomes in order to validate the possible solutions including meaningful recruitment and retention strategies.

References

[1] Tabatabai, P., Prytherch, H., Baumgarten, I., Kisanga, O., Schmidt-Ehry, B. and Marx, M. (2013) The Internal Migration between Public and Faith-Based Health Providers: A Cross-Sectional, Retrospective and Multicenter Study from Southern Tanzania. *Tropical Medicine and International Health*.

[2] Chen, L., Evans, T. and Anand, S. (2004) Human Resources for Health: Overcoming the Crisis. *Lancet*, **364**, 1984-1990. https://doi.org/10.1016/S0140-6736(04)17482-5

[3] Campbell, J., Dussault, G., Buchan, J., Pozo-Martin, F., Guerra Arias, M., Leone, C., Siyam, A. and Cometto, G. (2013) A Universal Truth: No Health without a Workforce. *Forum Report—Third Global Forum on Human Resources for Health*, Recife, Geneva, Global Health Workforce Alliance and World Health Organization.

[4] Hinno, S., Partanen, P. and Vehviläinen-Julkunen, K. (2012) Nursing Activities, Nurse Staffing and Adverse Patient Outcomes as Perceived by Hospital Nurses. *Journal of Clinical Nursing*, **21**, 1584-1593. https://doi.org/10.1111/j.1365-2702.2011.03956.x

[5] Oulton, J.A. (2006) The Global Nursing Shortage: An Overview of Issues and Actions. *Policy, Politics, & Nursing Practice*, **7**, 34S-39S. https://doi.org/10.1177/1527154406293968

[6] Mitchell, G.J. (2003) Nursing Shortage or Nursing Famine: Looking beyond Numbers? *Nursing Science Quarterly*, **16**, 219-224. https://doi.org/10.1177/0894318403016003011

[7] Zhu, X.W., You, L.M., Zheng, J., Liu, K., Fang, J.B., Hou, S.X. and Zhang, L.F. (2012) Nurse Staffing Levels Make a Difference on Patient Outcomes: A Multisite Study in Chinese Hospitals. *Journal of Nursing Scholarship*, **44**, 266-273. https://doi.org/10.1111/j.1547-5069.2012.01454.x

[8] Aiken, L.H., Sermeus, W., Van den Heede, K., Sloane, D.M., Busse, R., McKee, M., *et al.* (2012) Patient Safety, Satisfaction, and Quality of Hospital Care: Cross Sectional Surveys of Nurses and Patients in 12 Countries in Europe and United States. *British Medical Journal*, **344**, 31717. https://doi.org/10.1136/bmj.e1717

[9] Carlesi, K.C., Padilha, K.G., Toffoletto, M.C., Henriquez-Roldan, C. and Juan, M.A.C. (2017) Patient Safety Incidents and Nursing Workload. *Review Latino-American Enfermagem*, **25**. https://doi.org/10.1590/1518-8345.1280.2841

[10] Schubert, M., Glass, T.R., Clarke, S.P., Aiken, L.H., Schaffert-Witvliet, B., Sloane, D.M. and De Geest, S. (2008) Rationing of Nursing Care and Its Relationship to Patient Outcomes: The Swiss Extension of the International Hospital Outcomes Study. *International Journal for Quality in Health Care*, **20**, 227-237. https://doi.org/10.1093/intqhc/mzn017

[11] Khamisa, N., Oldenburg, B., Peltzer, K. and Ilic, D. (2015) Work Related Stress, Burnout, Job Satisfaction, and the General Health of Nurses. *International Journal*

of Environmental Research and Public Health, **12**, 652-666. https://doi.org/10.3390/ijerph120100652

[12] Baykal, U., Seren, S. and Sokmen, S. (2009) A Description of Oncology Nurses' Working Conditions in Turkey. *European Journal of Oncology Nursing*, **13**, 368-375.

[13] Awases, M.H., Bezuidenhout, M.C. and Roos, J.H. (2013) Factors Affecting the Performance of Professional Nurses in Namibia: Original Research. *Curationis*, **36**, 1-8. https://doi.org/10.4102/curationis.v36i1.108

[14] Kanchanachitra, C., Lindelow, M., Johnston, T., Hanvoravongchai, P., Lorenzo, F.M., Huong, N.L. and Wilopo, S.A. (2011) Human Resources for Health in Southeast Asia: Shortages, Distributional Challenges, and International Trade in Health Services. *The Lancet*, **377**, 769-781.

[15] Aluttis, C., Bishaw, T. and Frank, M.W. (2014) The Workforce for Health in a Globalized Context—Global Shortages and International Migration. *Global Health Action*, **7**. https://doi.org/10.3402/gha.v7.23611

[16] Brennan, C.W., Daly, B. and Jones, K.R. (2013) State of the Science: The Relationship between Nursing Staffing and Patient Outcomes. *Western Journal of Nursing Research*, **35**, 760-794. https://doi.org/10.1177/0193945913476577

[17] Mathauer, I. and Imhoff, I. (2006) Health Worker Motivation in Africa: The Role of Non-Financial Incentives and Human Resource Management Tools. *Human Resources in Health*, **4**, 24. https://doi.org/10.1186/1478-4491-4-24

[18] Jackson, M., Chiarello, L.A., Gaynes, R.P. and Gerberding, J.L. (2002) Nurse Staffing and Health Care-Associated Infections: Proceedings from a Working Group Meeting. *American Journal Infection Control*, **30**, 199-206. https://doi.org/10.1067/mic.2002.123416

[19] Cho, S.H., Ketefian, S., Barkauskas, V.H. and Smith, D.G. (2003) The Effects of Nurse Staffing on Adverse Events, Morbidity, Mortality, and Medical Costs. *Nursing Research*, **52**, 71-79. https://doi.org/10.1097/00006199-200303000-00003

[20] MacPhee, M., Dahinten, V.S. and Havaei, F. (2017) The Impact of Heavy Perceived Nursing Workload on Patient and Nurse Outcomes. *Administrative Sciences*, **7**, 7. https://doi.org/10.3390/admsci7010007

[21] West, E., Barron, D., Harrison, D., Rafferty, A.M., Rowan, K. and Sanderson, K. (2014) Nursing Staffing, Medical Staffing and Mortality in Intensive Care. *International Journal of Nursing Studies*, **51**, 781-794.

[22] He, J., Staggs, V.S., Bergquist-Beringer, S. and Dunton, N. (2016) Nurse Staffing and Patient Outcomes: A Longitudinal Study on Trend and Seasonality. *BMC Nursing*, **15**, 60. https://doi.org/10.1186/s12912-016-0181-3

[23] Cimiotti, J.P., Aiken, L.H., Sloane, D.M. and Wu, E.S. (2012) Nurse Staffing, Burnout, and Health Care-Associated Infection. *American Journal of Infection Control*, **40**, 486-490.

[24] Dawson, A.J., Stasa, H., Roche, M.A., Homer, C.S. and Duffield, C. (2014) Nursing Churn and Turnover in Australian Hospitals: Nurses Perceptions and Suggestions for Supportive Strategies. *BMC Nursing*, **13**, 11. https://doi.org/10.1186/1472-6955-13-11

[25] Brink, H. (2006) Fundamentals of Research Methodology for Health Care Professionals. 2nd Edition, Juta, Lansdowne.

[26] Burns, N. and Grove, S.K. (2005) The Practice of Nursing Research: Conduct, Critique and Utilization. 5th Edition, Saunders Elsevier, St Louis.

[27] Keenan, P. (2003) The Nursing Workforce Shortages: Causes, Consequences, Pro-

posed Solutions. *The Commonwealth Fund/John F. Kennedy School of Government Bipartisan Congressional Health Policy Conference*, 16-18 January 2003.

[28] Weisman, J.S. (2007) Hospital Workload and Adverse Events. *Medical Care*, **45**, 448-454. https://doi.org/10.1097/01.mlr.0000257231.86368.09

[29] Scott, G. (2014) Don't Blame Nurses for Poor Patient Satisfaction, Blame Staff Shortages. *Nursing Standard*, **29**, 10-11. https://doi.org/10.7748/ns.29.6.10.s4

[30] Van den Haede, K. and Aiken, L.H. (2013) Nursing Workforce: A Global Priority for Health Policy and Health Services Research. *International Journal of Nursing Studies*, **50**, 141-142.

[31] Dunton, N., Gajewski, B., Taunton, R.L. and Moore, J. (2004) Nurse Staffing and Patient Falls on Acute Care Hospital Units. *Nursing Outlook*, **52**, 53-50.

[32] Hart, S., Bergquist, S., Gajewski, B. and Dunton, N. (2006) Reliability Testing of the National Database of Nursing Quality Indicators' Pressure Ulcer Indicator. *Journal of Nursing Care Quality*, **21**, 256-265. https://doi.org/10.1097/00001786-200607000-00011

[33] Duffield, C.M., Roche, M.A., Blay, N. and Stasa, H. (2011) Nursing Unit Managers, Staff Retention and the Work Environment. *Journal of Clinical Nursing*, **20**, 23-33. https://doi.org/10.1111/j.1365-2702.2010.03478.x

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Learning Outcomes Using Cooperative Learning in Communication Classes: Evaluation Using Text Analysis

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Abstract

Objectives: The study examined nursing students' acquisition of good communication skills via text analysis of learning outcomes using cooperative learning. **Methods:** The study involved 90 first-year students enrolled in the nursing department of a Japanese university. Participants were asked to learn three learning tasks considered to heighten communicative ability through firsthand experience using the discussion-based technique of cooperative learning: 1) to engage in self-reflection, 2) to imagine something beyond your own experience, and 3) to accept something that does not fit within the scope of your own experience or thought. A questionnaire survey consisted of five items, including learning challenges 1) to 3) as well as 4) "Satisfaction with the exercises" and 5) "Students' hopes." These items were evaluated using text analysis. **Results:** A total of 79 survey questionnaires were collected (87.8% recovery rate) for analysis. "Self-reflection and self-realizations prompted by the communication exercise" was observed as a characteristic of Task 1, "becoming aware of ideas and opinions different than one's own by listening to the opinions of others" as a characteristic of Task 2, "deepening relationships by learning about diverse ideas and values through interactions with others" as a characteristic of Task 3, and "the effects of communicating with student subjects" as a characteristic of Task 4. The responses to Task 5 were diverse; no common characteristics were found. The intervention was found to be useful for student engagement and the communication required of nurses. **Conclusions:** Using cooperative learning discussion in communication class was found to be effective. As nursing is an inherently interpersonal occupation, such effects include important elements.

Keywords

Active Learning, Think-Pair-Share, Round Robin, Communication, Student

Engagement, Text Analysis

1. Introduction

Active learning, a learning method based on a learner-centered paradigm, can be defined as a blanket term for learning behavior that accompanies the externalization of the cognitive processes of giving voice to one's own ideas and listening to those of others [1].

Reference [2], in advocating a shift from a teacher-centered paradigm to a learner-centered one, indicated the goals of university education to consist of the following points: "developing competence," "managing emotion," "developing autonomy," "establishing identity," "developing mature interpersonal relationships," "developing purpose," and "developing integrity."

More recently, the elements of learning experience have been summarized as consisting of "foundational knowledge" (understanding and recall of key concepts and terms), "application" (knowing ways to use and apply what they know), "the human dimension" (gaining personal and social insight by learning about a subject), "caring" (taking an interest in a subject), and "learning how to learn" (knowing ways to continue to learn after class) [3]. The significance of learning goes beyond the mere acquisition of knowledge; extending to the broad-based development of skills and attitudes (abilities) and the learner's growth as a human being [3].

One teaching strategy based on the concept of active learning that encompasses these is "cooperative learning." Cooperative learning has been described in various reports as a form of structured group learning in which students work together as a team on assignments, assuming responsibility for group learning [4]-[9]. In addition, in comparison with competitive learning or individualistic methods, cooperative learning has been shown to have a higher learning efficacy [10] as well as a higher order of group dynamics that fosters social interdependence. Cooperative learning techniques come in a variety of forms, including discussion and reciprocal peer teaching [11].

Given that communication is an important part of the nursing practice [12], effective communication is a core clinical skill that underpins every aspect of diagnosis, treatment, and care [13].

Nursing students need to acquire good communication skills to build good relations with patients and other professionals. The present work proposes that establishing these good relationships requires the ability "to engage in self-reflection," "to imagine things beyond one's own experience," and "to accept things beyond the scope of one's experience or thought." Thus, the study focused on cooperative learning as a way of heightening these abilities. One feature of cooperative learning is that it is a group-based method that facilitates mutual, continuous engagement with work. Group members develop social networks in the

course of their work, and then begin to be able to engage in self-identification [10].

In addition, one way to perceive a phenomenon as it exists is to focus on words related to the phenomenon in question and then perform an objective text analysis with a computer. Qualitative analysis is generally impeded by the concern that the determination of results will be biased by the subjectivity of the researchers. The advantage of the analysis used in the current research is that it represents a determinant indicator of objective results.

2. Methods

2.1. Study Design

The study is a research on intervention in teaching practice. This study uses text analysis to evaluate the efficacy of "cooperative learning."

2.2. Study Subjects

The study involved 90 first-year nursing students at a university in the Kinki district of Japan.

2.3. Study Procedure, Data Collection, and Ethical Considerations

Learning tasks: Three abilities that are considered the basis of communication skills for nursing students to learn are identified as follows:

1) To engage self-reflection.
2) To imagine something beyond one's own experience.
3) To accept things beyond the scope of one's experience or thought.

2.3.1. Intervention Method

Communication classes were held over three 90-minute sessions, consisting of a total of 270 minutes. In terms of content, these sessions involved knowledge-transfer lectures (traditional learning methods) on definitions and theory (equivalent to 20% of the total time), with cooperative learning making up the remaining 80%. Students were randomly assigned to groups, with each group being composed of five students. By specifying the learning tasks, the sessions encouraged cooperation between the instructors and students and among the students.

For communication-based cooperative learning, the intervention used the discussion techniques "Think-Pair-Share" [11], in which students start by thinking individually and then discussing their ideas with partners in their groups, and "Round Robin," in which students take turns generating ideas that are written on a list.

2.3.2. Data Collection

Students were asked to complete an anonymous self-administered questionnaire (April 2016). The completed questionnaires were collected the following day by means of a collection box that was installed in a secure location but without any

faculty supervision. The words used in the answers for each question were summarized (with a single word chosen to replace words with similar meanings).

2.3.3. Ethical Considerations

As for ethical considerations, it was explained to students that the data would not allow the identification of individual respondents, would not be used for any purpose other than the study, would be strictly managed, and would be destroyed upon completion of the study. Cooperation was voluntary, and it was guaranteed that evaluations for the class would not be affected either way. Consent was obtained with recovery. The study was approved by the Ethical Review Committee of the researchers' home institution at the time (No. 6).

2.4. Survey Content

The questionnaire survey items were the three learning tasks in 2.3, paraphrased in language that would be easier for students to understand as follows:

1) "Perceptions from re-examining your own ideas".

2) "What you have learned from listening to the experiences and ideas of other students".

3) "Interactions from peer learning among students".

In addition, to glean students' candid opinions, the questionnaire included questions 4) on "satisfaction with the exercises" and 5) "students' hopes." The survey was composed of a total of five items.

2.5. Data Analysis

To identify trends in the text used for each question, the study carried out a word-frequency analysis with co-occurrence network analysis as associated analyses. The analytics software used was IBM SPSS Text Analytics for Surveys 4.01, IBM SPSS Statics ver. 22, R ver. 3.1.3, and KH coder.

2.6. Interpreting the Data Analysis

Word frequency analysis: This analysis refers to the simple tabulation of data obtained by word extraction and is available for checking the frequency of appearance of words. This analysis is also ideal for assessing with a list by parts of speech and in the order corresponding to frequency.

Co-occurrence network analysis: This type of analysis creates a figure in which items with similar appearance pattern (*i.e.*, collocation) are linked with a line. It is an undirected graph in which the context of the phrase is not considered. The size of the circle indicates the frequency of appearance. Additionally, a thicker line indicates a higher co-occurrence. The color implies centricity, with the highest centricity expressed in the darkest pink, followed by light pink, white, and light blue. Regarding the relation between extracted words and their co-occurrence characteristics, the study turned to their context in the original text to deepen interpretation.

3. Results

3.1. Descriptive Data

An anonymous descriptive survey questionnaire was distributed to 90 students (79 women and 11 men). Students were between 18 and 24 years old. Of these, 79 were collected (recovery rate 87.8%) and analyzed.

3.2. Word Frequency Analysis and co-Occurrence Network Analysis

All responses to the questions were subjected to word frequency and co-occurrence network analyses.

The word frequency analysis lists five words extracted in order of highest frequency of appearance, with the number of occurrences shown in parentheses (). The results of the co-occurrence network analysis are shown in Figures 1-4, with the portions showing significant results enclosed in the figures.

3.3. Analytical Results

Q1 was "Perceptions from re-examining your own ideas."The words extracted in order of highest frequency of appearance by the word frequency analysis were "myself (57)," "think (55)," "communication (31)," "person (23)," and "idea (21)." The following results were found in the characteristics of the co-occurrence network analysis (Figure 1): ① Speaking after listening to the conversation (from the group composed of "conversation," "listening," and "speaking");

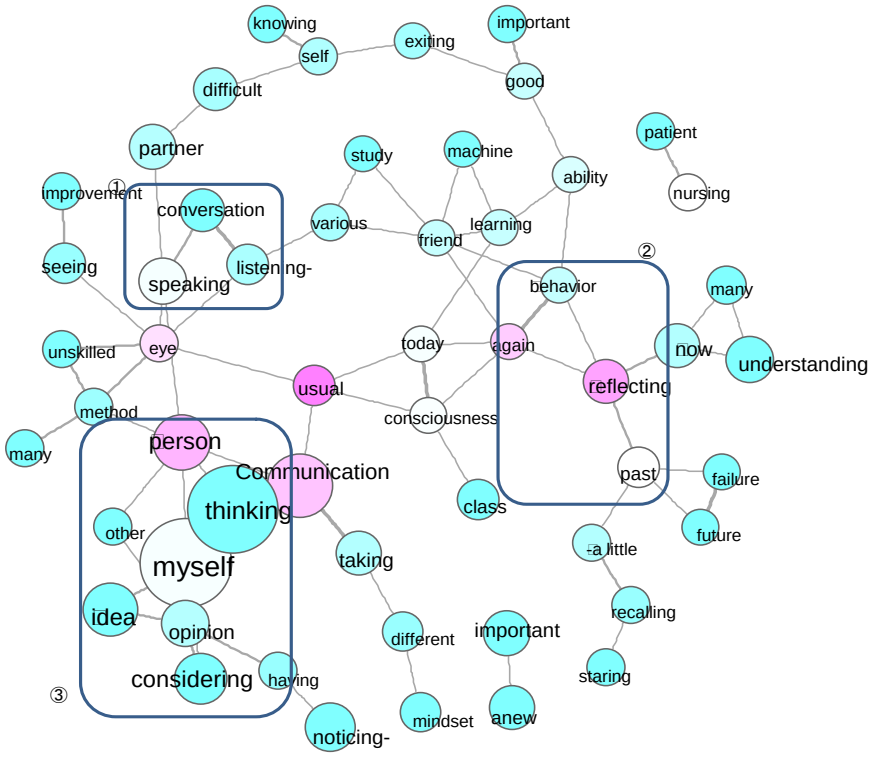

Figure 1. Re-examining my own ideas.

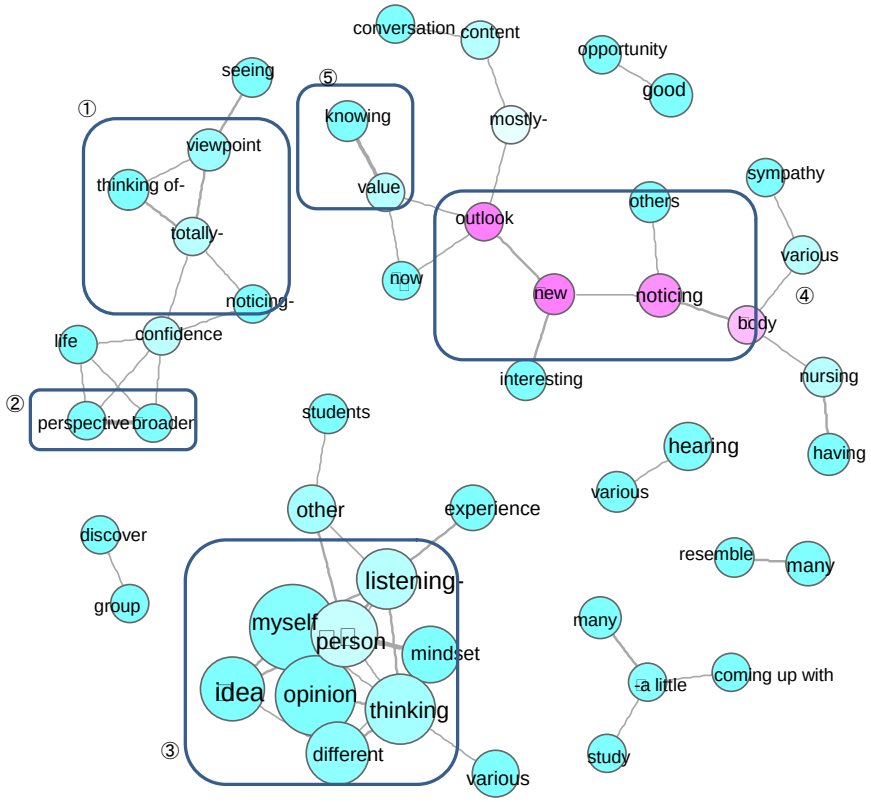

Figure 2. Learning from listening to the opinion of others.

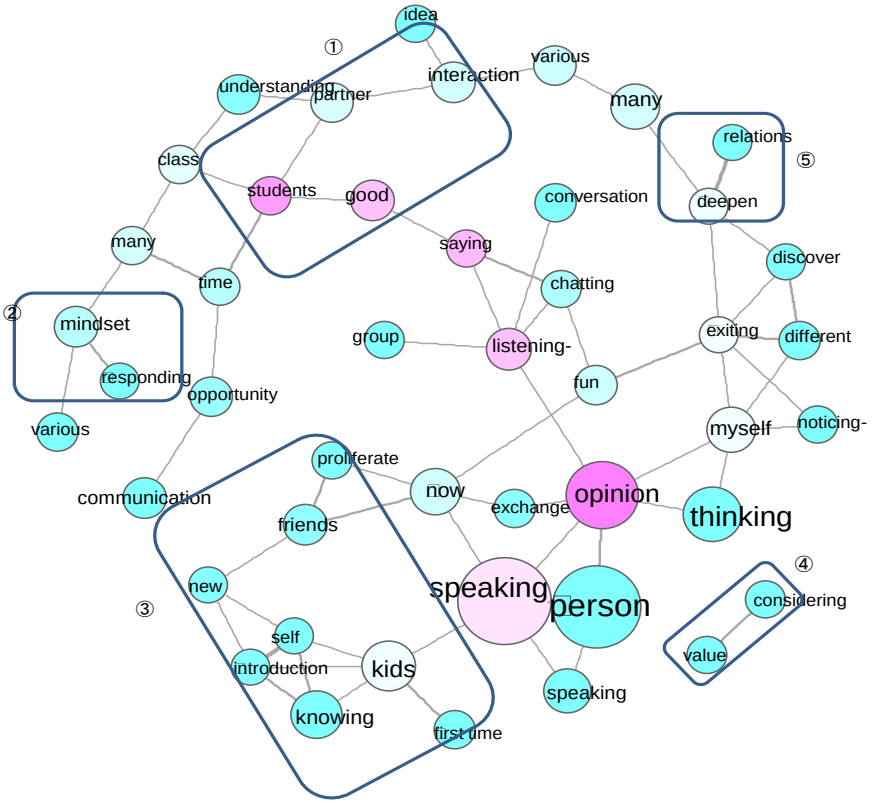

Figure 3. Peer learning among students.

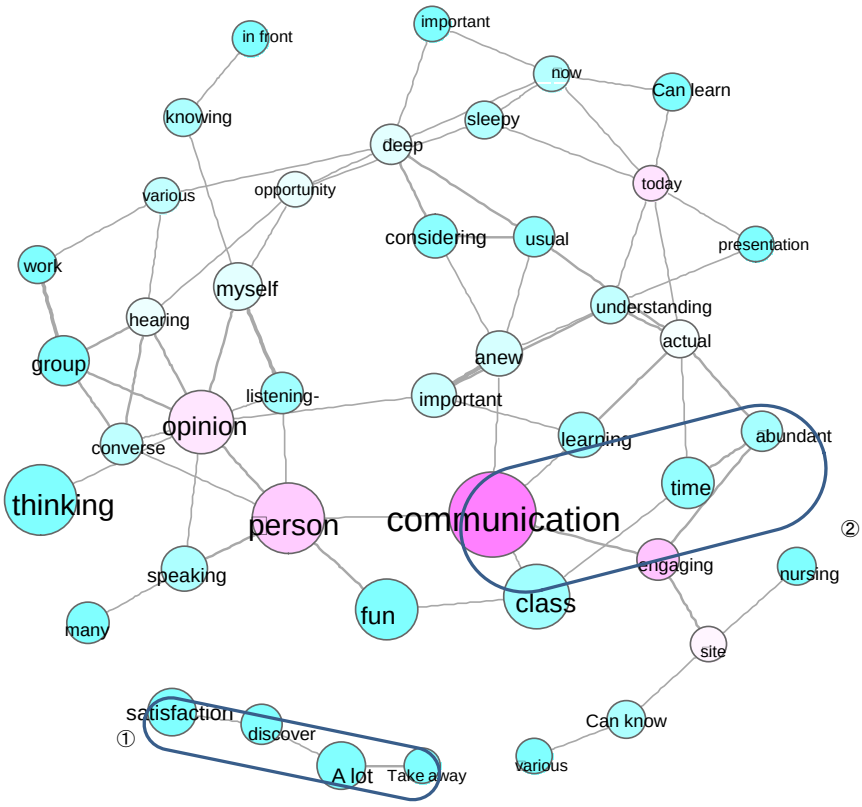

Figure 4. Excercise satisfaction.

② Reflecting on past behavior (from the group composed of "reflecting," "again," "past," and "behavior"); and ③ Considering other ideas that I might have myself based on the thoughts and ideas of others (from the group composed of "person [other than myself]," "myself," "thinking," "idea," "consider," "opinion," "other," and "having"). Synthesizing results ① to ③ yields the interpretation "self-reflections and self-realizations prompted by the communication exercise."

Q2 was "What you have learned from listening to the experiences and ideas of other students?"The words extracted in order of highest frequency of appearance by the word frequency analysis were "myself (54)," "opinion (48)," "thinking (37)," "person (33)," and "idea (30)." The following results were found in the characteristics of the co-occurrence network analysis (Figure 2): ① Noticing or coming up with totally different viewpoints (from the group composed of "perception," "coming up with," "totally," and "noticing"); ② Perspectives became broader (from the group composed of "perspectives" and "broadening"); ③ I heard the opinions and mindsets of people who were different from myself (from the group composed of "myself," "opinion," "mindset," "person," "different," "idea," and "listening"); ④ I noticed and incorporated new outlooks (from the group composed of "outlook," "new," "noticing," "body," and "other people"); and ⑤ I came to know their sense of values (from the group composed of "knowing" and "values").

A synthesis of results ① to ⑤ can be interpreted as "becoming aware of ideas and opinions different than one's own by listening to the opinions of others."

Q3 was "interactions from peer learning among students."The words extracted in order of highest frequency of appearance by the word frequency analysis were "speaking (45)," "person (41)," "opinion (29)," "thinking (18)," and "kids: students (14)."

The following results were found in the characteristics of the co-occurrence network analysis (**Figure 3**): ① My interactions with student partners were good (from the group composed of "students," "good," "partner," and "interaction"); ② Our mindsets were mutually compatible (from the group composed of "mindset" and "responding"); ③ I gained new friends after getting to know the first kid (from the group composed of "self," "introduction," "new," "friends," "proliferate," "know," "first," and "kid = students"); ④ Value differences made me think (from the group composed of "values" and "consider"); and ⑤ My relations grew deeper (from the group composed of "relations" and "deepening"). By synthesizing results ① to ⑤, these can be interpreted as "deepening relationships by learning about diverse ideas and values through interactions with others."

Q4 was "Satisfaction with the exercises."The words extracted in order of highest frequency of appearance by the word frequency analysis were "communication (29)," "group (10)," "myself (9)," "work (4)," and "opportunity (3)." The following results were found in the characteristics of the co-occurrence network analysis (**Figure 4**): ① I discovered a lot, which was satisfying (from the group composed of "a lot," "take away," "discover," and "satisfied"); and ② We spent an abundant amount of time engaging in communication (from the group composed of "communication," "engaging," "time," and "abundant"). Synthesizing ① and ② gives the interpretation "the effects of engaging in communication with student subjects."

Q5 was "Students' hopes." The words extracted in order of highest frequency of appearance by the word frequency analysis were "specific (17)," "test (3)," "national exam (2)," "listening (2)," and "wish (1)," with a variety of other words that also appeared only one time. In the co-occurrence network analysis, several of unique answers were extracted, such that no significant characteristics were found.

4. Discussion

4.1. Student Engagement

While advocating the importance of producing engaged learners through engaged learning, [14] also promotes the pursuit of the basis of such learning, which has been studied by numerous researchers. The present study chose a strategy that did not allow for student diffidence or indifference; students were given an opportunity to experience deep engagement through actual communication. The effect of this seems to be that they were motivated to engage with

others.

Moreover, this research used the discussion techniques known as "Think-Pair-Share" and "Round Robin." In this regard as well, having students interact with one another as members of a learning community seems to have fostered student engagement, yielding the synergistic effects of motivation and active learning [15].

Student reactions after the lesson on "perceptions from re-examining your own ideas" (Task 1) were characterized as results stemming from "self-reflections and self-realizations prompted by the communication exercise." Thus, in the context of a small group environment, clarifying one's own ideas enhances the ability to reflect on one's own past experiences and processes [16].

In addition, despite the abstract nature of the tasks, a learning effect was identified without departing from the task, which seems to stem from the fact that conceptual learning and problem-solving skills are heightened through group dynamics [17].

4.2. Communication as Nursing Students

Student reactions after the lesson on "what you have learned from listening to the experiences and ideas of other students" (Task 2) were characterized as results stemming from "becoming aware of ideas and opinions different than one's own by listening to the opinions of others." This outcome was suggested in the process by which students engaged in mutual problem solving after addressing themselves to the same task. However, although not apparent in the survey results, the experiences students spoke of in front of other students, unlike the fun communication with their friends, were also accompanied by a modicum of pain and anxiety, as well as other unpleasant feelings.

Therefore, regardless of whether such embodied experiences also occur for others at the same time, encountering and sympathizing with the thoughts of other group members also serves as a form of training. Indeed, human care, which is the essence of nursing, is something that is refined in the context of interpersonal relationships [18]; the ability to recognize sensations that humans possess is an important element of nursing. In other words, by seeing oneself reflected in the eyes of an interlocutor, people can derive an emotional understanding of what it is to be a human being. From these, collaborative learning experience can be thought to serve as training for an emotional engagement with patients' feelings when students engage with patients as nurses.

Student reactions after the lesson on "interactions from peer learning among students" (Task 3) were characterized as results stemming from "deepening relationships by learning about diverse ideas and values through interactions with others." This outcome suggests that even if they are something that one had not thought of previously, the opinions of others can be accepted based on logical thought. Regarding this effect, cooperative learning seems not only to heighten knowledge but also enhance logical thought [19] [20] [21] [22].

5. Limitations

This study only used cooperative learning discussion techniques for the communication unit. To heighten the effectiveness of cooperative learning, it will be necessary to introduce it systematically to other lessons as well.

6. Conclusion

Using cooperative learning discussion techniques in communications lessons, it was found to be effective in achieving the assigned tasks. As nursing is an inherently interpersonal occupation, such effects include important elements. For this reason, it will be necessary to continue systematic education. When instructors evaluate educational techniques, rather than simply analyzing only the data obtained, it is also necessary to consider insights on what students have chosen not to express in the data.

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References

[1] Chickering, A.W. and Gamson, Z.F. (1987) Seven Principles for Good Practice in Undergraduate Education. *AAHE Bulletin*, **39**, 3-7.

[2] Chickering, A.W. (1969) Education and Identity. Jossey-Bass, San Francisco.

[3] Fink, L.D. (2010) Designing Our Courses for Greater Student Engagement and Better Student Learning. *Perspectives on Issues in Higher Education*, **13**, 3-12. https://doi.org/10.1044/ihe13.1.3

[4] Goodfellow, L.M. (1995) Cooperative Learning Strategies: An Effective Method of Teaching Nursing Research. *Nurse Educator*, **20**, 26-29. https://doi.org/10.1097/00006223-199507000-00010

[5] Huff, C. (1997) Cooperative Learning: A Model for Teaching. *Journal of Nursing Education*, **36**, 434-436.

[6] Rowles, C.J. and Brigham, C. (1998) Strategies to Promote Critical Thinking and Active Learning. Teaching in Nursing: A Guide for Faculty. WB Saunders, Philadelphia, 247-274.

[7] Matthews, R.S., Cooper, J.L., Davidson, N. and Hawkes, P. (1995) Building Bridges between Cooperative and Collaborative Learning. *Change*, **27**, 35-40. https://doi.org/10.1080/00091383.1995.9936435

[8] Lazarowitz, R., Hertz-Lazarowitz, R. and Baird, J.H. (1994) Learning Science in a Cooperative Setting: Academic Achievement and Affective Outcomes. *Journal of Research in Science Teaching*, **31**, 1121-1131. https://doi.org/10.1002/tea.3660311006

[9] Watson, S.B. and Marshall, J.E. (1995) Effects of Cooperative Incentives and Heterogeneous Arrangement on Achievement and Interaction of Cooperative Learning Groups in a College Life Science Course. *Journal of Research in Science Teaching*,

32, 291-299. https://doi.org/10.1002/tea.3660320308

[10] Johnson, D.W. and Johnson, R.T. (2005) New Developments in Social Interdependence Theory. *Genetic, Social, and General Psychology Monographs*, **131**, 285-358. https://doi.org/10.3200/MONO.131.4.285-358

[11] Barkley, E.F., Cross, K.P. and Major, C.H. (2005) Collaborative Learning Techniques: A Handbook for College Faculty. John Wiley & Sons, Inc., New York.

[12] Okaya, K. (1995) Reliance between a Patient and Nurse. *Nursing Today*, **10**, 6-11.

[13] Walsh, T.D., Caraceni, A.T., Fainsinger, R., Foley, K.M., Glare, P., Goh, C., Lloyd-Williams, M., Olarte, J.N. and Radbruch, L. (2008) Palliative Medicine. Elsevier Health Sciences, Saint Louis.

[14] Bowen, S. (2005) Engaged Learning: Are We All on the Same Page? *Peer Review*, **7**, 4-7.

[15] Barkley, E.F. (2010) Student Engagement Techniques: A Handbook for College Professors. Jossey-Bass, San Francisco.

[16] Copp, S.L. (2002) Using Cooperative Learning Strategies to Teach Implications of the Nurse Practice Act. *Nurse Educator*, **27**, 236-241. https://doi.org/10.1097/00006223-200209000-00013

[17] Cohen, E.G. (1986) Designing Groupwork: Strategies for the Heterogeneous Classroom. Teachers College Press, Columbia University, New York.

[18] Watson, J. (1988) Nursing: Human Science and Human Care: A Theory of Nursing. Jones & Bartlett Learning, Sudbury.

[19] Kapitanoff, S.H. (2009) Collaborative Testing: Cognitive and Interpersonal Processes Related to Enhanced Test Performance. *Active Learning Higher Education*, **10**, 56-70. https://doi.org/10.1177/1469787408100195

[20] Lusk, M. and Conklin, L. (2003) Collaborative Design to Promote Learning. *Journal of Nursing Education*, **42**, 121-124.

[21] Roschelle, J. (1922) Learning by Collaborating: Convergent Conceptual Change. *The Journal of the Learning Science*, **2**, 235-276. https://doi.org/10.1207/s15327809jls0203_1

[22] Shindler, J.V. (2004) Greater than the Sum of Parts? Examining the Soundness of Collaborative Exams in Teacher Education Course. *Innovate Higher Education*, **28**, 273-283. https://doi.org/10.1023/B:IHIE.0000018910.08228.39

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Healthcare Staff Perceptions of Patient Safety Culture in Nursing Home Settings—A Cross-Sectional Study

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Abstract

In nursing homes, knowledge about patient safety culture is still limited. This study investigates staff perceptions of patient safety culture in Norwegian nursing homes, measured with the Nursing Home Survey on Patient Safety Culture (NHSOPSC). 466 (69%) staff from 12 different nursing homes participated. The total percentages of positive responses for each patient safety culture dimension and differences in perceptions according to staff's educational background and position were calculated. Multiple linear regression analysis was used to test if the NHSOPSC dimensions predicted participants' ratings of the question "Please give this nursing home an overall rating on patient safety". The proportion of positive responses was high, with six of ten dimensions having an average percentage above 70%. "Supervisor expectations and actions promoting patient safety" (88%), "feedback and communication about incidents" (87%), and a "non-punitive response to mistakes" (78%) had high average scores, while "staffing" (46%) and "training and skills" (56%) had the lowest average scores. Managers reported higher scores on all dimensions, except for "compliance with procedures" compared with other staff groups. Educational level had less influence on staff's perceptions of patient safety culture than management position. The ten NHSOPSC dimensions explained 47.2% of the variance for the overall rating question "Please give this nursing home an overall rating on patient safety" (F [10, 384] = 34.39, $p < 0.001$). "Management and organizational learning" had the strongest unique contribution (28.1%). This study suggests that staff working at the bedside have confidence in their nursing managers' attention to patient safety issues and that a non-punitive environment is prevalent in Norwegian nursing homes.

Keywords

Patient Safety, Safety Culture, Nursing Home, Perceptions, Cross-Sectional Survey

1. Introduction

Nursing homes provide complex care to a vulnerable group of patients in terms of age, medically complex conditions, and reduced cognitive function [1] [2]. Increased awareness of patient safety has shown that adverse events related to pressure ulcers, falls, medication, use of physical restraints, and infection outbreaks are common in long-term care (LTC) and nursing home settings [1] [3] [4] [5]. Although the risk of adverse events in nursing homes is prevalent, knowledge of patient safety and patient safety culture is still limited, particularly in Europe, including Scandinavia [6] [7] [8]. A recent Swedish study that described nurses' views on patient safety in nursing homes identified staff competence, sufficient information exchange related to care transitions, continuity of care, and physical work environment as the most influential factors for patient safety in nursing homes [8]. Among barriers were a lack of resources, including competence and staff shortage, and a lack of communication, including internal collaboration and documentation related to patients' transitions. Furthermore, there was a negative attitude to reporting incidents, including a culture of personal blame [8].

Safety culture may be considered as an aspect of organizational culture that refers to how safety is viewed and treated in organizations. Therefore, safety culture can influence behavior and decisions made by healthcare staff at the bedside [9] [10] [11]. Several factors are reported as important for safety culture, such as management support, teamwork, open communication founded on trust, a non-punitive approach to reporting adverse events, and ability to learn and improve [12] [13]. The Agency of Healthcare Research and Quality (AHRQ) refers to the following definition of patient safety culture. "The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures" ([14]: p. 23). A positive safety culture is known by encouraging honesty, promoting learning, and there is a balance between individual and organizational accountability [15].

Nurses are represented at all organizational levels in nursing homes as strategic policy makers, managers, and clinical staff working directly with patients and are important stakeholders in driving and establishing a culture to support

patient safety and to ensure the quality of care [2] [16]. The Nursing Home Survey on Patient Safety Culture (NHSOPSC), released in 2008, is specifically designed to measure patient safety culture in nursing homes from a staff perspective [17].

Patient safety culture in primary care, nursing homes and LCT settings have been explored in Sweden [18], Netherlands [7] and recently also in Norway [6]. However, these studies have used adapted or adjusted versions of the Hospital Survey of Patient Safety Culture (HSOPSC) and Safety Attitude Questionnaire (SAQ).

Previous studies among healthcare staff in LTC and nursing home settings from the United States showed that patient safety culture was poorly developed [1] [2] [3]. Fear of reporting adverse events or safety concerns among nursing home staff has been identified as a major barrier to quality improvement [10]. Furthermore, several studies have shown that managers have more positive perceptions of patient safety issues than frontline workers [3] [19] [20], as well as differences in perceptions among different types of nursing home staff [19]. This study aimed to investigate staff perceptions of patient safety culture in Norwegian nursing homes measured with the Norwegian version of NHSOPSC [21].

The specific aims of the study were as follows: 1) to examine staff perceptions of patient safety culture in a sample of Norwegian nursing homes as measured by the NHSOPSC; 2) to evaluate differences in staff perceptions of patient safety culture according to educational background and position; and 3) to examine whether some patient safety culture dimensions contribute more to variance than others in the overall rating question: "Please give this nursing home an overall rating on patient safety".

2. Methods

2.1. Design

We used a cross-sectional design based on the Norwegian version of the AHRQ's NHSOPSC to assess staff perceptions of patient safety culture in a sample of nursing homes [17] [21]. Twelve Norwegian nursing homes from six different municipalities in southern and western Norway representing both urban and rural districts were purposively selected using variation as the main selection criteria. Variation was related to the size of the nursing homes, ranging from one to five wards. Staff participants, according to inclusion criteria, ranged from 15 - 172 per nursing home. Additionally, the nursing homes differed in how they were organized depending on size, but also related to their level of integration with daycare and home based services. The sample included nursing homes offering specialized care such as long- and short-term care, subacute care, rehabilitation, care for patients with cognitive impairments (such as dementia) and palliative care. Based on the variation criteria the sample of nursing homes included would to a certain extent represent the variety of nursing home settings in Norway. Information regarding the study and the survey instrument were presented

to nursing home managers as part of the recruitment process. The sample consisted of healthcare staff who were employed in a minimum of 30% of positions and spoke the Norwegian language. A total of 671 paper-based questionnaires were distributed to study participants between June and September 2013. An information letter followed the questionnaire and participation was based on written informed consent. Each nursing home had a contact person who was responsible for local administration of questionnaires.

2.2. Study Setting

Healthcare in Norway is a public responsibility that is mainly financed through taxation and public sources. While the state is responsible for specialized healthcare, such as hospitals, the municipalities are responsible for primary care, including nursing homes. Nursing homes play an important role in the health services system by offering advanced care, including long- and short-term care, sub-acute and acute care, rehabilitation, care for patients with dementia and cognitive impairments, and palliative care [22].

The Norwegian Coordination Reform, which was implemented in 2012, aimed to reduce the need for costly specialized healthcare by transferring medical treatment and nursing tasks from hospitals to nursing homes [23]. Consequently, nursing homes have received an increased number of patients with poor functioning and who are at risk for adverse events. Through the national patient safety program, leadership and safety culture are regarded as crucial aspects for improving patients' safety [24].

2.3. Questionnaire

Safety culture was measured with the Norwegian version of the NHSOPSC inventory, which consists of 43 items covering the perceptions of healthcare staff regarding patient safety culture. The original instrument, which comprises 12 factors, has been tested and validated on a large scale in the United States, and is used to examine patient safety culture ratings [17] [19]. When the NHSOPSC inventory was translated and tested in a Norwegian context, results from confirmatory factor analysis showed that a 10-factor model had an acceptable fit in the Norwegian setting as follows: root mean square error of approximation = 0.060, comparative fit index = 0.934, Tucker-Lewis index = 0.926, $\chi^2 = 2058.33$, degrees of freedom = 765, $p < 0.001$, and acceptable factor loadings from 0.40 - 0.89 [21].

All NHSOPSC items are rated on Likert scales from 1 - 5, and include a response alternative "does not apply (DA) or "don't know" (DK). In addition to the 10 dimensions (**Table 1**), we included one overall rating question considered as outcome as follows: "Please give this nursing home an overall rating on patient safety" (scale from 1 - 5). The survey also collected background demographic variables, such as staff position or background, number of years in a nursing home, work hours per week, work shift, and working directly with patients most of the time [17] [21].

Table 1. Description of the 10 dimensions of the Norwegian version of the Nursing Home Survey on Patient Safety Culture instrument.

Patients' Safety Culture Dimensions	Description
1. Teamwork	Staff treat each other with respect, support each other, help out, and feel they are part of a team
2. Staffing	Sufficient staff to cope with the workload, meeting patients' needs during shift changes, and limited turnover
3. Compliance with procedures	Staff follow procedures and do not ignore procedures to make work easier
4. Training and skills	Staff obtain the training they need, understand the training, and are trained to deal with complex patients
5. Nonpunitive response to mistakes	Staff are not afraid of reporting mistakes, are not blamed, and are treated fairly
6. Handoffs	Staff have sufficient knowledge before taking care of a patient and when a care plan is changed, and they receive sufficient information when patients are transferred from hospital
7. Feedback and communication about incidents	When staff report harm to patients, the focus is on preventing incidents and ways to keep patients safe
8. Communication openness	Staff speak about problems and their ideas are valued
9. Supervisor expectations and actions promoting patient safety	Frontline managers listen to staff ideas, provide positive feedback, and pay attention to safety problems of patients
10. Management and organizational learning	Management provides a supportive work environment, gives safety top priority, and promotes a learning culture

2.4. Ethics Approval and Consent to Participate

The study was approved by the Norwegian Social Science Data Services (Ref. No. 2012/32450) and the Norwegian Regional Committees for Medical and Health Research Ethics (Ref. No. 2011/1978). Participation was based on written informed consent.

2.5. Statistical Analyses

We used SPSS Version 23.0 (IBM Corporation, Armonk NY, USA) for Windows for the analyses. Average percent positive responses for each of the 10 safety culture dimensions were calculated by averaging the item-level percentage positive responses, when the response alternative DA or DKwas excluded [17]. When the responders answered "strongly agree/agree" and "most of the time/ always" or "strongly disagree/disagree" or "never/rarely" for reverse worded items, the answers were categorized as a positive response. Items with the corresponding mean, standard deviation (SD), number of positive responses per item, percentage of positive responses per item and, average percentage per dimension were reported.

Differences in perception of patient safety culture (10 dimensions) according to educational background and position (managers included leaders at the first-line level, healthcare workers with a minimum of a Bachelor's degree and healthcare workers with upper secondary school education and assistants) were

tested using one-way, between groups analyses of variance (ANOVA). Assistants included those who responded "assistants" and those who responded "others" related to staff position or background. Separate post-hoc tests (LSD) were conducted for parameters that were significant in the overall analyses.

Multiple linear regression analyses were performed to examine the predictive value of the 10 safety culture dimensions on the outcome question "Please give this nursing home an overall rating on patient safety". All of the independent variables were entered simultaneously. Pearson's Product—Moment Correlation and preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity before we performed the regression analyses. No violation was found and the correlation coefficients varied between 0.236 and 0.635. The unstandardized coefficient (B), standard error of the mean (SE), standardized beta coefficient (β), and the unique predictive contribution for each of the dimensions (sr^2_{unique}) are presented. A p value of <0.005 was regarded as significant.

3. Results

3.1. Descriptive Statistics

A total of 466 healthcare staff responded to the questionnaire, with a response rate of 69%. The participants were representative for Norwegian nursing home staff and 6.3% included managers, comprising leaders at first line level (n = 29), 39.6% were healthcare workers with a minimum of a Bachelor's degree (n = 181), and 54% were healthcare workers with upper secondary school education and assistants, (n = 247). Furthermore, 45.7% of the staff reported working >10 years in the nursing home (n = 209), 71.8% reported work hours >25 per week (n = 326), 67.7% worked in the daytime most often (n = 303), and 95.2% of the respondents working directly with patients most of the time (n = 436).

3.2. Perceptions of Patient Safety Culture in Norwegian Nursing Homes

The proportion of positive responses was high. Six of the 10 dimensions had an average percentage of positive responses above 70% (Table 2). The dimensions with the highest percentages were "supervisor expectations and actions promoting patient safety" (88%) and "feedback and communication about incidents" (87%). "Non-punitive response to mistakes" also showed a high score (78%). The dimensions with the lowest percentages were "staffing" (46%) and "training and skills" (56%). Moreover, 80.9% of respondents rated the overall patient safety grade in their nursing home as excellent or very good, 17.4% as acceptable, and 1.8% as fair (n = 449).

3.3. Perception of Patient Safety Culture According to Educational Background and Position

Managers, including leaders at the first-line level, reported higher scores in all of the dimensions, except for "compliance with procedures" compared with the

Table 2. Items with the corresponding mean (SD), number of positive responses, percentage of positive responses per item and per dimension.

Patient Safety Culture Dimensions	Items	Mean (SD)	Positive responses per item (percentages)
1. Teamwork	A1. Staff in this nursing home treat each other with respect	4.31 (0.79)	392 (85%)
	A2. Staff support one another in this nursing home	4.18 (0.79)	369 (80%)
	A5. Staff feel like they are part of a team	4.10 (0.82)	372 (80%)
	A9. When someone gets really busy in this nursing home, other staff help out	3.71 (0.85)	276 (60%)
			76%[1]
2. Staffing	A3. We have enough staff to handle the workload	2.97 (0.89)	110 (24%)
	A8 (R). Staff have to hurry because they have too much work to do	2.55 (0.92)	51 (11%)
	A16. Patients needs are met during shift changes	3.80 (0.81)	295 (66%)
	A17 (R). It is hard to keep patients safe here because so many staff quit their jobs	4.11 (0.85)	355 (83%)
			46%[1]
3. Compliance with procedures	A4. Staff follow standard procedures to care for patients	4.00 (0.79)	353 (78%)
	A6 (R). Staff use shortcuts to get their work done faster	3.38 (0.92)	206 (46%)
	A14 (R). To make work easier, staff often ignore procedures	3.82 (0.81)	312 (70%)
			65%[1]
4. Training and skills	A7. Staff get the training they need in this nursing home	3.63 (0.86)	264 (57%)
	A11. Staff have enough training on how to handle difficult patients	3.21 (0.86)	153 (34%)
	A13. Staff understand the training they get in this nursing home	3.89 (0.73)	332 (76%)
			56%[1]
5. Nonpunitive response to mistakes	A10 (R). Staff are blamed when a patient is harmed	4.13 (0.77)	372 (87%)
	A12 (R). Staff are afraid to report their mistakes	3.76 (0.83)	291 (67%)
	A15. Staff are treated fairly when they make mistakes	3.95 (0.79)	333 (80%)
	A18. Staff feel safe reporting their mistakes	3.97 (0.74)	347 (78%)
			78%[1]
6. Handoffs	B1. Staff are told what they need to know before taking care of a patient for the first time	4.01 (0.72)	367 (80%)
	B2.Staff are told right away when there is a change in a patient's care plan	3.79 (0.78)	308 (69%)
	B10. Staff are given all the information they need to care for patients	4.24 (0.63)	417 (91%)
			80%[1]

Continued

7. Feedback and communication about incidents	B4. When staff report something that could harm a patient, someone takes care of it	4.25 (0.69)	381 (88%)
	B5. In this nursing home, we talk about ways to keep incidents from happening again	3.98 (0.78)	358 (79%)
	B6. Staff tell someone if they see something that might harm a patient	4.42 (0.58)	436 (96%)
	B8. In this nursing home, we discuss ways to keep patients safe from harm	4.07 (0.69)	381 (85%)
			87%[1]
8. Communication openness	B7. Staff ideas and suggestions are valued in this nursing home	3.85 (0.74)	329 (72%)
	B9 (R). Staff opinions are ignored in this nursing home	3.82 (0.83)	317 (71%)
	B11. It is easy for staff to speak up about problems in this nursing home	3.90 (0.85)	316 (71%)
			71%[1]
9. Supervisor expectations and actions promoting patient safety	C1. My supervisor listens to staff ideas and suggestions about patient safety	4.22 (0.76)	381 (84%)
	C2. My supervisor says a good word to staff who follow the right procedures	4.19 (0.78)	388 (86%)
	C3. My supervisor pays attention to patient safety problems in this nursing home	4.38 (0.66)	419 (93%)
			88%[1]
10. Management and organizational learning	D1. Patients are well cared for in this nursing home	4.33 (0.73)	411 (89%)
	D2. Management asks staff how the nursing home can improve patient safety	3.58 (0.96)	236 (56%)
	D3 (R). This nursing home lets the same mistakes happen again and again	3.70 (0.85)	282 (65%)
	D4. It is easy to make changes to improve patient safety in this nursing home	3.59 (0.79)	235 (54%)
	D5. This nursing home is always doing things to improve the patient safety	3.79 (0.74)	304 (69%)
	D6. This nursing home does a good job keeping patients safe	3.97 (0.64)	362 (81%)
	D7. Management listens to staff ideas and suggestions to improve patient safety	3.80 (0.83)	300 (68%)
	D8. This nursing home is a safe place for patients	4.30 (0.64)	418 (91%)
	D9. Management often walks around the nursing home to check on patient care	2.96 (1.14)	134 (33%)
	D10. When this nursing home makes changes to improve patient safety, it checks to see if the changes worked	3.61 (0.84)	221 (61%
			67%[1]

Notes: R = reverse coded items. Positive responses were defined as answering "strongly agree/agree" and "most of the time/always" or "strongly disagree/disagree or "never/rarely" for reversed coded items. [1]Average percentage of positive responses per dimension. A, B, C and D representing sections in the questionnaire.

two other staff groups (Table 3). With regard to educational level, healthcare workers with upper secondary school and assistants reported higher scores on two dimensions, "handoffs" and "management and organizational learning", compared with healthcare workers with a minimum of a Bachelor's degree.

3.4. Perception of Patient Safety Culture and the Overall Rating of Patient Safety

Standard multiple linear regression analysis showed that the 10 NHSOPSC dimensions explained 47.2% of the variance for the outcome question "Please give this nursing home an overall rating on patient safety" (F [10, 384] = 34.39, $p < 0.001$) (Table 4). Only three dimensions ("staffing", "handoffs," and "management and organizational learning") made unique significant contributions to the model when the overlapping effects of all other variables were removed. "Management and organizational learning" made the strongest unique contribution to the model and explained 28.1% of the variance for the outcome question "Please give this nursing home an overall rating on patient safety".

Table 3. Comparison of patient safety culture scores across managers, including leaders at the first-line level, healthcare workers with a minimum of a Bachelor's degree, and healthcare workers with upper secondary school education and assistants.

Patient Safety Culture Dimensions	Staff groups			
	Managers	Bachelor's degree	Upper secondary school education/ assistants	$F(df)$, p value
	Mean (SD)	Mean (SD)	Mean (SD)	
1. Teamwork	4.33 (0.34)	4.04 (0.61)	4.04 (0.67)	2.94 (2, 450) = 0.06[a,b*]
2. Staffing	3.56 (0.62)	3.25 (0.70)	3.24 (0.59)	3.24 (2, 444) = 0.04[a,b*]
3. Compliance with procedures	3.78 (0.60)	3.64 (0.69)	3.62 0.71)	0.70 (2, 447) = 0.50
4. Training and skills	3.77 (0.61)	3.36 (0.71)	3.53 (0.70)	5.52 (2, 448) < 0.01[a**,b*]
5. Nonpunitive response to mistakes	4.07 (0.84)	3.77 (0.72)	3.75 (0.72)	2.49 (2, 437) = 0.08[a,b*]
6. Handoffs	4.33 (0.53)	3.85 (0.66)	4.00 (0.61)	8.37 (2, 446) < 0.01[a,b**, c*]
7. Feedback and communication about incidents	4.40 (0.42)	4.04 (0.64)	4.13 (0.60)	4.94 (2, 439) < 0.01[a**,b*]
8. Communication openness	4.30 (0.48)	3.78 (0.72)	3.76 (0.69)	7.97 (2, 445) < 0.01[a,b**]
9. Supervisor expectations and actions promoting patient safety	4.23 (0.54)	4.21 (0.73)	4.23 (0.68)	0.03 (2, 444) = 0.97[a,b**]
10. Management and organizational learning	3.98 (0.52)	3.53 (0.64)	3.67 (0.62)	7.10 (2, 427) < 0.01 [a,b**,c*]

Differences between groups were tested with ANOVA and post-hoc analyses were performed with LSD. *$p < 0.05$; **$p < 0.01$. [a]Comparison between managers and healthcare workers with a minimum of a Bachelor's degree. [b]Comparison between managers and healthcare workers with upper secondary school education and assistants. [c]Comparison between healthcare workers with a minimum of a Bachelor's degree and healthcare workers with upper secondary school education and assistants.

Table 4. The predictive values of the 10 patient safety culture dimensions on the overall rating question, "Please give this nursing home an overall rating on patient safety".

Patients' Safety Culture Dimensions	Overall rating on patient safety			
	B	**SE**	***β***	***sr²* (*unique*)**
1. Teamwork	0.012	0.013	0.045	0.036
2. Staffing	0.027	0.013	0.094*	0.079
3. Compliance with procedures	0.024	0.016	0.067	0.055
4. Training and skills	−0.007	0.017	−0.019	−0.015
5. Nonpunitive response to mistakes	0.011	0.011	0.042	0.035
6. Handoffs	0.045	0.019	0.114*	0.088
7. Feedback and communication about incidents	0.021	0.016	0.065	0.050
8. Communication openness	0.022	0.018	0.062	0.044
9. Supervisor expectations and actions promoting patient safety	0.009	0.017	0.025	0.020
10. Management and organizational learning	0.047	0.006	0.408**	0.281
R^2	0.472			
Adjusted R^2	0.459			

*$p < 0.05$; **$p < 0.01$. B = The unstandardized coefficient, SE = standard error of the mean β = Standardized beta coefficient, sr^2_{unique} = the unique predictive contribution for each of the dimensions.

4. Discussion

4.1. Perceptions of Patient Safety Culture

This study is the first using the NHSOPSC in a cross-sectional design to report how a sample of healthcare staff in 12 Norwegian nursing homes perceive patient safety culture. Our study showed a positive awareness of patient safety culture among nursing home staff. Frequently cited dimensions related to safety culture, such as "leadership commitment to safety", "non-punitive response to mistakes", "teamwork", and "communication openness", had a high percentage of positive responses [13]. To some extent, these findings contradict previous studies indicating that patient safety culture is poorly developed in nursing homes and LTC settings, including a recent Norwegian study [1] [2] [3] [6].

Our study supports Castle *et al.*'s study that compared safety culture in nursing homes and hospitals in the US using respectively the NHSOPSC and the HSOPSC [25]. They found that nursing home scores were generally better when comparing similar items in the HSOPSC questionnaire. Out of 26 highly similar items in the questionnaires, 16 of the NHSOPSC scores were higher than the HSOPSC scores. These results from US were not confirmed in a study from Netherland where patient safety culture in nursing homes, measured with SAQ, were comparable to those found in Dutch and US Intensive Care Units and ambulatory services [7]. Due to the scarcity of studies from European nursing home context using the NHSOPSC, cautions should be made when comparing studies

having used different assessment tools.

In our study, the dimensions "supervisor expectations and actions promoting patient safety" (88%) and "feedback and communication about incidents" (87%) showed the highest percentages of positive responses. These results indicate that staff working at the bedside in Norwegian nursing homes have confidence in their frontline nursing managers. Engaged nursing managers listening to frontline staff's concerns and promoting improvement of patient safety can serve as important role models in nursing homes. A recent Danish study investigated staff's perceptions of patient safety culture before and after a leadership intervention [26]. This Danish study showed that strengthening leadership could act as a catalyst for improvement in the proportion of staff with positive attitudes and a more positive safety culture.

Fear of reporting has been recognized as a barrier to improvement in safety nursing homes [10]. Data from the AHRQ Comparative Database Report 2016 still found "non-punitive response to mistakes" among the dimensions that had the lowest average percentage of positive responses (54%) [27] [28]. In contrast, our study showed that "non-punitive response to mistakes" had a high average percentage of positive responses (78%). This finding indicates that staff feel confident in reporting safety concerns. Furthermore, teamwork, identified in the literature as the second most critical sub-dimension of patient safety culture, after leadership, showed a high average percentage of positive responses in our study (76%) [12]. Norwegian work life is characterized by a democratic leadership style and staff involvement in decision-making [29]. Additionally, national patient safety initiatives and legislation have shifted from focusing on the person to focusing on the system [24]. Notably, we found that "communication openness" had a slightly lower average percentage of positive responses (71%) than "non-punitive response to mistakes" (78%) and "teamwork" (76%). This is in line with a Swedish study that described nurses' views on safety in nursing homes, and identified lack of communication and negative attitudes to reporting incidents among profound patient safety barriers [8].

Our results for the dimensions "staffing" and "training and skills" are of concern because they had the lowest percentages of positive responses. Simultaneously, there has been steady growth of older patients with multiple diagnoses who are discharged from hospitals to primary care services, including nursing homes [30]. A recent study among municipality healthcare nurses in Norway concluded that the majority of nurses experienced complex and challenging work, but they lacked time, competencies, equipment, and information to sufficiently care for their patients [30]. Staffing appears to be a common challenge in nursing homes, exacerbated by financial issues and a lack of skilled staff and training [2] [30] [31]. A study that compared nursing home staffing standards in six countries showed wide variations within and across countries [16]. The increasing levels of severity of illness among patients in nursing homes highlights the need for further attention to staffing standards, to assure the quality of care.

Norway has no official standards for staffing in nursing homes [31]. Staff training is an important aspect of safety improvement, but may be challenged by work shift arrangements and insufficient staffing levels.

4.2. Educational Background and Position

The respondents in the current study were considered representative for nursing home staff and nearly all of them (95.2%) worked directly with patients most of the time. In our study sample, we found that managers, including leaders at the first-line level, reported higher scores on all the dimensions, except for "compliance with procedures", compared with the two other staff groups (healthcare workers with a minimum of a Bachelor's degree and healthcare workers with upper secondary school education and assistants). This finding is in line with previous studies, which reported that managers have significantly more positive safety culture perceptions than do frontline staff [3] [19] [20]. Comparison with other European studies is not possible as they lack management position in background characteristics" [6] [7].

Educational level appeared to have less influence on staff's perceptions of patient safety culture than management position. Still, we found that healthcare workers with upper secondary school education and assistants reported higher scores in the two dimensions "handoffs" and "management and organizational learning" than did healthcare workers with a minimum of a Bachelor's degree. These results are in line with a Dutch study using SAQ reporting a negative correlation between education and safety climate [7]. The SAQ factor safety climate seems to some extend have similarity to the management and organizational learning dimension in the Norwegian NHSOPSC. Lower scores among staff with a minimum of a Bachelor's degree might be a result of higher clinical competence and clinical assessment ability. However, the results to some extend contradictory to the findings of a recent Norwegian study where neither profession nor work experience were significantly associated with mean scores for any patient safety factor [6]. This inconsistency in results might be explained by study samples and should be further investigated.

4.3. Overall Rating on Patient Safety

The present study showed that the "management and organizational learning" dimension was the strongest unique contributor to the outcome question related to overall staff ratings on patient safety. This dimension consists of 10 items, including management support, safety priority, learning systems, and improvement changes. Considering that organizational characteristics are a stronger predictor of safety culture than individual behavior, changes toward an improved patient safety culture in nursing homes should be performed at an organizational level [10]. Management support means putting patient safety issues on the strategic agenda. Staff in nursing homes should know that they are not held accountable for system failures. Learning systems should be able to capture

information and concerns from the frontline staff, besides having the capacity to drive improvement. The patient safety factor "perceptions of management" including managements support of daily efforts seems not to be included in the Norwegian version of SAQ for nursing homes [6]. Comparison is therefore not possible. Hence, previous studies have suggested a need for leadership involvement at all organizational levels and highlight managers' responsibility in establishing and sustaining safety culture as a key driver in patient safety work [24] [26] [32].

4.4. Strengths and Limitations

A strength of the present study is the response rate of 69%, which can be partly explained by the substantial leadership involvement in recruitment and feedback of results. The high number of respondents working directly with patients (including day, afternoon, and night shifts) provided important information from frontline staff on patient safety culture in nursing homes. Respondents included staff with relatively high levels of education and low rates of turnover, which are considered important to patient safety.

Twelve nursing homes located in the southwest region of Norway were included in the study based on their interest in patient safety issues and by actively enrolling in the study. Although our study results are not necessarily generalizable to all nursing homes in Norway, they provide a valuable overview of the patient safety culture across a number of nursing homes. Some of the nursing homes in our sample also participated in the Norwegian Patient Safety Campaign, adding explanatory value to the high percentages of positive responses.

One limitation of this study is the low number of managers participating in the study (n = 29). Another important limitation is the lack of an objective outcome that measures patient safety (e.g., falls and medication errors). Therefore, we had to relate to the subjective overall rating question "Please give this nursing home an overall rating on patient safety".

4.5. Conclusions

Assessing patient safety culture can be the first step in identifying areas of improvement and barriers to provide safe care. We found a positive awareness of patient safety culture among frontline staff in participating Norwegian nursing homes. The highest proportion of positive responses was for the dimension "supervisor expectations and actions promoting patient safety," indicating that staff have confidence in their frontline nursing managers. Furthermore, "feedback and communications about incidents" and "non-punitive response to mistakes" had high scores. Fear of reporting mistakes is considered a major barrier to improvement in safety. Areas of particular concern were staff perceptions of the "staffing" and "training and skills" dimensions, especially considering the increasing transfer of medical treatment and complex nursing tasks from hospitals to nursing homes.

As expected, managers reported higher scores on all dimensions, except for "compliance with procedures", compared with other staff groups, while educational level had less effect on staff's perceptions of patient safety culture. "Management and organizational learning" made the strongest unique contribution to overall staff ratings of patients' safety, indicating the importance of actions taken at an organizational level to support a robust safety culture. Further research should include objective outcomes that measure patient safety, such as falls and medication errors, to identify if improvement in safety culture affects clinical outcomes. Culture assessments may increase the awareness of safety issues and support quality improvement initiatives.

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Competing Interests

The authors declare that they have no competing interests.

Authors' Contributions

KC was responsible for designing the study, developing the Norwegian version of the NHSOPSC, data collection, statistical analysis, interpretation of data, and writing the first draft of the manuscript. AH contributed to interpretation of the data and revision of the manuscript. MS participated in data collection and revision of the manuscript. KA supervised the design of the study, contributed to interpretation of data, and critically revised the manuscript. All authors read and approved the final manuscript.

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References

[1] Thomas, K.S., Hyer, K., Castle, N.G., Branch, L.G., Andel, R. and Weech-Maldonado, R. (2012) Patient Safety Culture and the Association with Safe Resident Care in Nursing Homes. *Gerontologist*, **52**, 802-811. https://doi.org/10.1093/geront/gns007

[2] Bonner, A.F., Castle, N.G., Perera, S. and Handler, S.M. (2008) Patient Safety Culture: A Review of the Nursing Home Literature and Recommendations for Practice. *Annals of Long-Term Care*, **16**, 18-22.

[3] Wagner, L.M., Capezuti, E. and Rice, J.C. (2009) Nurses' Perceptions of Safety Cul-

ture in Long-Term Care Settings. *Journal of Nursing Scholarship,* **41**, 184-192. https://doi.org/10.1111/j.1547-5069.2009.01270.x

[4] Zúñiga, F., Schwappach, D., De Geest, S. and Schwendimann, R. (2013) Psychometricproperties of the Swiss Version of the Nursing Home Survey on Patient Safety Culture. *Saf Sci*.

[5] Wagner, L.M. (2016) Improving the Patient Safety Culture in Nursing Homes through Walk Rounds. *The Joint Commission Journal on Quality and Patient Safety*, **42**, 543-544. https://doi.org/10.1016/S1553-7250(16)30105-2

[6] Bondevik, G.T., Hofoss, D., Husebø, B.S. and Deilkås, E.C.T. (2017) Patient Safety Culture in Norwegian Nursing Homes. *BMC Health Services Research*, **17**, 424. https://doi.org/10.1186/s12913-017-2387-9

[7] Buljac-Samardzic, M., van Wijngaarden, J.D. and Dekker-van Doorn, C.M. (2015) Safety Culture in Long-Term Care: A Cross-Sectional Analysis of the Safety Attitudes Questionnaire in Nursing and Residential Homes in the Netherlands. *BMJ Quality & Safety*, **25**, 424-431. https://doi.org/10.1136/bmjqs-2014-003397

[8] Andersson, F. and Hjelm, K. (2017) Patient Safety in Nursing Homes in Sweden: Nurses' Views on Safety and their Role. *Journal of Health Services Research & Policy*, 1355819617691070. https://doi.org/10.1177/1355819617691070

[9] Nordin, A., Theander, K., Wilde-Larson, B. and Nordström, G. (2013) Health Care Staffs' Perception of Patient Safety Culture in Hospital Settings and Factors of Importance for This. *Open Journal of Nursing*, **3**, 28-40. https://doi.org/10.4236/ojn.2013.38A005

[10] Arnetz, J.E., Zhdanova, L.S., Elsouhag, D., Lichtenberg, P., Luborsky, M.R. and Arnetz, B.B. (2011) Organizational Climate Determinants of Resident Safety Culture in Nursing Homes. *The Gerontologist*, **51**, 739-749. https://doi.org/10.1093/geront/gnr053

[11] Ross, J. (2011) Patient Safety Outcomes: the Importance of Understanding the Organizational Culture and Safety Climate. *Journal of PeriAnesthesia Nursing*, **26**, 347-348. https://doi.org/10.1016/j.jopan.2011.08.001

[12] Sammer, C.E., Lykens, K., Singh, K.P., Mains, D.A. and Lackan, N.A. (2010) What Is Patient Safety Culture? A Review of the Literature. *Journal of Nursing Scholarship*, **42**, 156-165. https://doi.org/10.1111/j.1547-5069.2009.01330.x

[13] Halligan, M. and Zecevic, A. (2011) Safety Culture in Healthcare: a Review of Concepts, Dimensions, Measures and Progress. *BMJ Quality & Safety,* **20**, 338-343. https://doi.org/10.1136/bmjqs.2010.040964

[14] Advisory Committee for the Safety of Nuclear Installations. Organising for Safety. In. Sheffield: HSE Books: Human Factors Study Group Third Report. 1993

[15] European Union Network for Quality in Health Care (2006) Use of Patient Safety Culture Instrument and Recommendations. *European Network for Quality in Health Care*, Office for Quality Indicators. http://www.pasq.eu/DesktopModules/BlinkQuestionnaires/QFiles/448_WP4_REPORT%20%20Use%20of%20%20PSCI%20and%20recommandations%20-%20March%20%202010.pdf

[16] Harrington, C., Choiniere, J., Goldmann, M., Fadnes Jacobsen, F., Lloyd, L., McGregor, M., Stamatopoulos, V. and Szebehely, M. (2012) Nursing Home Staffing Standards and Staffing Levels in Six Countries. *Journal of Nursing Scholarship*, **44**, 88-98. https://doi.org/10.1111/j.1547-5069.2011.01430.x

[17] Sorra, J., Gray, L., Famolaro, T., Sorra, J., Yount, N. and Behm, J. (2016) Nursing Home Survey on Patient Safety Culture. Prepared by Westat, under Contract No.

HHSA290201300003C, AHRQ Publication No. 15(16)-0052-EF, AHRQ Publication No. 15(16)-0052-EF (replaces 08(09)-0060).
https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/nursing-home/nhguide/nhguide.pdf

[18] Hedskold, M., Pukk-Harenstam, K., Berg, E., Lindh, M., Soop, M., Ovretveit, J. and Sachs, M.A. (2013) Psychometric Properties of the Hospital Survey on Patient Safety culture, HSOPSC, Applied on a Large Swedish Health Care Sample. *BMC Health Services Research,* **13**, 332. https://doi.org/10.1186/1472-6963-13-332

[19] Castle, N.G., Wagner, L.M., Perera, S., Ferguson, J.C. and Handler, S.M. (2010) Assessing Resident Safety Culture in Nursing Homes: Using the Nursing Home Survey on Resident Safety. *Journal of Patient Safety*, **6**, 59-67.
https://doi.org/10.1097/PTS.0b013e3181bc05fc

[20] Castle, N.G., Wagner, L.M., Ferguson, J.C. and Handler, S.M. (2011) Safety Culture of Nursing Homes: Opinions of Top Managers. *Health Care Management Review*, **36**, 175-187. https://doi.org/10.1097/HMR.0b013e3182080d5f

[21] Cappelen, K., Aase, K., Storm, M., Hetland, J. and Harris, A. (2016). Psychometric Properties of the Nursing Home Survey on Patient Safety Culture in Norwegian Nursing Homes. *BMC Health Services Research*, **16**, 446.
https://doi.org/10.1186/s12913-016-1706-x

[22] Ministry of Health and Care Services, Helse-og omsorgstjenesteloven
https://lovdata.no/dokument/NL/lov/2011-06-24-30#KAPITTEL_3

[23] The Coordination Reform (2008-2009) Proper Treatment—At the Right Place and Right Time. Report No. 47 (2008-2009) to the Storting.
https://www.regjeringen.no/contentassets/d4f0e16ad32e4bbd8d8ab5c21445a5dc/en-gb/pdfs/stm200820090047000en_pdfs.pdf

[24] National Norwegian Patient Safety Program.
http://www.pasientsikkerhetsprogrammet.no

[25] Castle, N.G, Wagner, L.M., Perera, S., Ferguson, J.C. and Handler, S.M. (2011) Comparing the Safety Culture of Nursing Homes and Hospitals. *Journal of Applied Gerontology,* **30**, 22-43. https://doi.org/10.1177/0733464809353603

[26] Kristensen, S., Christensen, K.B., Jaquet, A., Møller Beck, C., Sabroe, S., Bartels, P. and Mainz, J. (2016) Strengthening Leadership as a Catalyst for Enhanced Patient Safety Culture: A Repeated Cross-Sectional Experimental Study. *BMJ Open*, **6**, 1-10.
https://doi.org/10.1136/bmjopen-2015-010180

[27] Sorra, J., Famolaro, T., Yount, N., Burns, W., Liu, H. and Shyy, M. (2014) Nursing Home Survey on Patient Safety Culture 2014 User Comparative Database Report (Prepared by Westat, Rockville, M.D., under Contract No. HHSA290201300003C). Agency for Healthcare Research and Quality; November 2014, AHRQ Publication No. 15-0004.
https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/nursing-home/2014/nhsurv14-ptI.pdf

[28] Famolaro, T., Yount, N., Greene, K., Hare, R., Thornton, S. and Sorra, J. (2016) Nursing Home Survey on Patient Safety Culture 2016 User Comparative Database Report (Prepared by Westat, R., Rockville, M.D., under Contract No. HHSA 290201300003C). Agency for Healthcare Research and Quality; October 2016, AHRQ Publication No. 17-0004-EF.
https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/quality-patient-safety/patientsafetyculture/nursing-home/2016/nhsurv16-pt1.pdf

[29] The Working Environment Act (2007).

http://www.arbeidstilsynet.no/binfil/download2.php?tid=92156

[30] Gautun, H. and Syse, A. (2013-2014) The Coordination Reform. How do Community Health Services Receive the Increased Amount of Patients Submitted from Hospitals? NOVA—Norwegian Social Research 2013. In: Report Oslo, NOVA—Norwegian Social Research 2013-2014. [In Norwegian] http://www.hioa.no/Om-HiOA/Senter-for-velferds-og-arbeidslivsforskning/NOVA/Publikasjonar/Rapporter/2013/Samhandlingsreformen

[31] Bratt, C. and Gautun, H. (2015) National Norms for Staffing in Nursing Homes. *Tidsskrift for omsorgsforskning*, **1**, 99-107.

[32] Gandhi, T.K., Berwick, D.M. and Shojania, K.G. (2016) Patient Safety at the Crossroads. *JAMA*, **315**, 1829-1830. https://doi.org/10.1001/jama.2016.1759

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Intraoperative Care of the Conscious Patient from the Perspective of the Operating Theatre Nurse: A Grounded Theory

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Abstract

Introduction: Intraoperative care includes a unique knowledge of how to perform a safe and effective surgery procedure. Surgery performed under regional or local anaesthesia allows the patient to remain conscious during the procedure and is rather common in Swedish healthcare today. **Aim:** The aim was to obtain a deeper understanding of the main concerns of operating theatre nurses (OTN) when caring for conscious patients during the intraoperative phase. **Methods:** Interviews were conducted with 23 OTNs from five different hospitals in Sweden and analysed according to grounded theory. **Findings:** The main concern among the OTNs was to take the patient in consideration. The core category "achieve and maintain ethical treatment of patients" in the operating theatre (OT) was a strategy used throughout the intraoperative process. Ethical treatment was described as moral behaviour at different levels and included the team's behaviour, respectful and individualised patientcare, and the working-morale of the professionals. Being vigilant and being flexible were the categories related to the core category. The OTNs constantly assessed where to pay most attention as they balanced between the needs of the patient, the team, and the surgery procedure. **Conclusion:** It is important that every patient is taken into consideration and that ethical principles are held to the highest standards in the OT. A familiar team can facilitate that. The complex skills that operating theatre nurses develop can be added to explain important competencies within the profession.

Keywords

Conscious Patient, Grounded Theory, Intraoperative Care, Nursing, Operating Theatre Nurse

1. Introduction

In Sweden today, OTNs are registered nurses, providing perioperative nursing-care to surgical patients, which requires unique knowledge and a highly developed set of skills [1]. Perioperative nursing care is provided at the time close to the surgery [2]. The intraoperative phase, which is a part of the perioperative care, starts when the patient arrives in the operating theatre (OT) and ends when he/she is transferred to the postoperative ward. The environment in the OT is highly technological, and time pressure to meet productivity requirements interact with respect for the patient [3].

The nature of medical- and nursing-care often leaves an individual's body exposed to the eyes, hands, assessments, and comments of others [4]. Different levels of anxiety have been reported in patients undergoing surgery, the causes of which may be the fear of pain and discomfort, but also the loss of control, altered body image, and concerns about diagnosis [5]. While any type of surgical procedure, regardless of the method of anaesthesia, can be anxiety provoking for patients, the choice of anaesthesia will primarily depend on the extent of the surgery being performed [6].

General anaesthesia is a reversible state of complete unconsciousness [7]. Using local or regional anaesthesia allows the patient remain conscious during the surgery [6]. This should not to be confused with awareness during general anaesthesia, which is a consequence of some sort of inadequate anaesthesia technique [8]. As a result of anaesthetic and surgical development, more complex procedures are performed under local or regional anaesthesia, which allows for a patient to be conscious throughout the intraoperative phase, fully aware of both their care environment and treatment. Although it is anticipated that the patient will remain awake during the procedure, the patient may require conscious sedation, which means that the patient is sedated, but is still able to respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation [7]. According to Hankela and Kiikkala [9] the perioperative care expectations and perceptions of conscious patients are different than those of general anaesthesia patients. Being awake during a surgery process has been described as a threat against both the body and the ego [10] and this stress that occurs in the awake patient could alter intraoperative care conditions.

OTNs generally describe their role as being there for the patient and that the patient's wellbeing and safety is their responsibility [11] [12]. The fact that OTNs operate behind closed doors means that the value of their work might has been based on their performance in relation to the surgeon [13] [14].

The Swedish Society of Nursing [15] has identified a research gap concerning the intraoperative experience of patients during local or regional anaesthesia. Previous research has primarily described the experiences and perspectives of anaesthesia nurses and patients [16] [17] [18]. Therefore, the current study seeks to address this research gap by describing the intraoperative care experiences of OTNs when surgery is performed on conscious patients.

2. Aim

The aim of this study was to obtain a deeper understanding of OTNs main concerns when caring for conscious patients during the intraoperative phase.

3. Methods

3.1. Design

Grounded theory (GT) was well suited to examine the issues of the current study since the aim was to obtain a deeper knowledge regarding specific areas. In GT, both quantitative and qualitative data can be used, since "all is data" [19]. Specifically, GT is a general inductive method based on a concept-indicator model aimed to generate a new theory that is grounded in data and to present the process occurring in the field of study [20]. The main task of GT is to provide explanatory conceptual names to patterns of human behaviour [19] and to explain how participants address their main concerns [21].

3.2. Ethical Approval

The study was approved by the appropriate ethics committee (Dnr 2016-159-31M) and then accepted by the chief physicians at the clinics. Written information about the study (*i.e.* study purpose, procedure, voluntary nature of participation, right to withdraw, and confidentiality of data) was sent out to the operating departments, and nurses in charge forward the information to the OTNs and invited them to participate. Prior to data collection, all participants provided written informed consent.

3.3. Context and Participants

The study was carried out in five different hospitals in Sweden, selected for convenience because of its location. One surgery department was in a university hospital, located in metropolitan area. The other, in regional hospitals, was located in middle-sized cities. One hospital's surgery department were specialized at upper limb orthopaedics and another only performed eye surgery. The other hospitals' surgery departments daily performed a mix of different kind of surgery, for example; urological, orthopaedic, gynaecological (**Table 1**). Inclusion criteria for the participants, was that they worked in operating departments as registered OTNs, all with a minimum of one year experience of profession and experience of any characteristic of surgery when the patient is conscious. A total of 23 OTNs participated (22 female; **Table 1**). Participants described the context for their work as being a part of an OT-team, which included the anaesthesia nurse, the circulating nurse (who assisted the OTN with material and documentation), an anaesthetist, the surgeon, and the OTN (**Table 1**). Variation existed between hospitals which professionals were generally included in the team (**Table 1**). In hospitals 1 - 3, the anaesthesia nurse, described as responsible for bringing the patient from the preoperative ward to the OT, often remained in sight of the patient throughout the intraoperative process. In hospitals 4 - 5, it

Table 1. Overview of: Hospitals' surgery departments' clinical characteristics (M—Mixed surgery, O—Orthopaedic upper limb surgery, E—Eye surgery) and team-members that generally were included in the OT during surgery utilizing local or regional anaesthesia in the different hospitals (X—Always-irrespective of anaesthesia method, XO—Sometimes-depending on anaesthesia method). Total number of participants according to hospitals.

Professions/clinical characteristic/total number of participants	Hospital 1	Hospital 2	Hospital 3	Hospital 4	Hospital 5
Clinical Characteristic	M	M	O	E	M
Operating Theatre Nurse [OTN]	X	X	X	X	X
Anaesthesia Nurse	X	X	X	XO	XO
Circulating Nurse	X	X	X	X	X
Anaesthetist	X	X	X	XO	XO
Surgeon	X	X	X	X	X
Total number of participants	n.4	n.8	n.8	n.2	n.1

was more common that the OTN accompanied the patient to the OT, as surgery with local anaesthesia was performed more frequently and presences of an anaesthesia nurse was not deemed necessary. The anaesthetist was present in the OT, depending on resources, anaesthetic method, and patient's medical condition. OTN, circulating nurse, and surgeons were represented in all five hospitals.

3.4. Data Collection and Analysis

Data was collected from focus group and individual interviews (**Table 2**) between September 2016 and March 2017.The interviews were conducted in places chosen by the participants and major part chosed the hospital, near the working places. Five interviews were held at the university area as preferred by some of the participants.

The interviews began with the question "Can you tell me about how it is to work in the operating theatre as an operating theatre nurse when the patient is awake during surgery?" That initial question aimed to collect spontaneous descriptions of what the participants considered as most important aspects of the research area [22]. Followed-up questions, such as "Can you describe that more?" and "Can you expand on that?" were asked during interviews.

Notes were written after each interview to capture ideas and continued as a simultaneous activity through the analysis [23]. The basic goal of notation was to develop ideas with complete freedom [24]. In accordance with GT, data collection and analysis were jointly performed [21] and began with focus-group interviews. The focus-group dynamic was used to generate a rich description and to record a variety of perspectives about research area [24]. Further, constant comparison began after the first interview [23]. When the recorded interviews were transcribed, they were coded in the right-hand margin. The process started with

Table 2. Overview of data collection and informants.

No.	Interviewer	Interview	Informants recruited from	Number/years of experience as OTN	Interview length in minutes
1	K.B /M.H	Focus group	Hospital 1	4 OTN/8-40 years	81
2	K.B/M.H	Focus group	Hospital 2	4 OTN/2-21 years	65
3	K.B	Focus group	Hospital 3	4 OTN/3-30 years	53
4	K.B	Focus group	Hospital 3	3 OTN /1-11 years	55
5	K.B/M.H	Individual	Hospital 2	1 OTN/6 years	65
6	K.B	Individual	Hospital 2	1 OTN/34 years	70
7	K.B	Individual	Hospital 2	1 OTN/44 years	42
8	K.B	Individual	Hospital 2	1 OTN/32	74
9	K.B	Individual	Hospital 3	1 OTN/40	70
10	K.B	Individual	Hospital 4	1 OTN/23	63
11	K.B	Individual	Hospital 4	1 OTN/32	60
12	K.B	Individual	Hospital 5	1 OTN /35	62

open coding, meaning everything was coded, keeping in mind the question "What is really occurring in the data?" [23]. The codes, derived from the text, were then sorted, compared, and renamed several times during the process. These preliminary concepts, main concerns, and core categories, acted as a guide and indicated that individual interviews could add more depth to data. Individual interviews were then conducted (**Table 2**), still aimed at bringing inductive perspective to the data. While interviewing and analysing the data, ideas of what to ask next arose, and more specific questions for the subsequent interviews were generated (**Table 2**).

The core category, central for all of the other categories, represents patterns of participant behaviour performed to address the main concern [24]. The main concern can be defined as a chief mover of action in an area of study [21]. As the core category developed, the selective coding began, which was limited to those variables related to the core category [25]. The final step in the analysis process, theoretical coding, can be described as a set of conceptual model of relationships that were found to relate the codes to each other [26]. The analysis process was partly cross-validated by the second and third authors to ensure the first author's experiences of the phenomenon were not biased. Theoretical saturation was assumed when new data did not provide new information to the category or theory [27].

3.5. Findings

The main concern among OTNs when a patient is conscious during surgery was to take the patient in consideration (**Table 3**). The OTNs emphasised the importance of providing each patient with individual treatment, so that they may feel that they have been respectfully cared for, and are the central focus of

Table 3. Overview of findings.

Main concern: Taking the conscious patient into consideration	
Core category: Achieve and maintain high ethical standards in the OT	
Being vigilant	**Being flexible**
• React to ethical lapses • Assess where to focus	• Adaptive team communication • Being on or off stage • Comprehension of needs
Theoretical code: ***Balancing among needs—patient, team, and safety***	

attention. To address the main concern, participants strove to achieve and maintain ethical treatment of patients in the OT throughout the intraoperative process (Table 3). Ethical treatment was described by the participants as a whole, with the goal of providing the patient an overall positive experience. To achieve and maintain these high ethical standards in the OT, three parts were described as being taken in regard; the patient, the team, and the professional role of the OTN. That all team-members acted professionally and concentrated on their duties, adjusted to the patient's specific needs and focusing on the patient's safety, was explained as important to achieve high ethical standards. Further, this was also explained as working to achieve a safe and smooth surgery, which was believed to be part of the OTN's professional role. This was understood as any ethical lapse treatment, behaviour, or professional-duty could cause disgrace for the participants.

The nursing-care activities, aimed at achieving and maintaining high ethical standards in the OT, are explained in the categories, being vigilant and being flexible (Table 3). The theoretical codes, balancing between needs—patient, team, and safety, relates to these categories. These codes demonstrate the balance sought by OTNs among all of the interpreted needs in the OT, and how they would adapt to address these needs, depending on what they assessed as most pertinent, based on the prevailing circumstances. The overall findings are presented in Table 3.

3.6. Core Category: Achieve and Maintain High Ethical Standards in the OT

Achieving and maintaining high ethical standards in the OT was an important skill OTNs demonstrated for taking the needs of the patient in consideration. To achieve and maintain ethical standards, as fundamental to the reduction of risk concerning the core category, was described by the participants like "having eyes in the neck", with the aim of feeling in control over the OT environment. Participants emphasized the importance of being aware of everything happening in the OT, in an effort to interpret various needs as they arose. It was described that they constantly tried to notice any possible difficulties, in an effort to promote an intraoperative phase where the patient was always taken into consideration. This also included being aware of critical phases during the surgery procedure as

a part of their professional role. Being aware, within the context of facilitating high ethical standards, was to prevent anything or anyone from causing patient discomfort. According to the participants, discomfort could be conceptualized as signs of pain [e.g. feet moving under the surgical covering]. However, this could also be conceptualized as team members using cell phones or computers for personal reasons that shifted focus from the patient and the surgery process. Despite this, risks that shifted focus from the patient were sometimes let to pass. This was done for the reason of not starting an argument in the OT. Instead, the OTNs described feeling like inappropriate behaviour of colleagues required to be even more aware of the whole, to compensate for the ethical lapses of other team members. Participants with more experiences expressed that they had developed skills to predict critical elements that could endanger ethical standards. This was described as a strength, and that successful attention to the whole process, utilizing correct nursing interventions, was expressed as feeling highly ethical and satisfying.

3.7. Being Vigilant

Being vigilant was a way to achieve and maintain ethical standards and is further explained in the subcategories react to ethical lapses and assess where to focus. However, vigilance, according the participants, was to keep a watchful eye, interpret, and react to elements that could have negative effects on the patients' experience, such as difficulties in the surgical process, disrespectful behaviours, and/or inappropriate conversation.

The participants described that they reacted to ethical lapses in sense that they would reprimand non-acceptable behaviours and/or conversation. Avoiding inappropriate elements that the conscious patient could notice was described as especially significant for maintaining ethical standards. The intention was to correct these inappropriate behaviours by either reminding team members about the awake patient, becoming very quiet (*i.e.* not answering), or by changing the direction of the conversation.

"*…. if I see something is going to go wrong or someone says something inappropriate, then I have to react to that, of course…*" (OTN, interview 1)

The same reaction was described if a discussion about a patient who was not present occurred (*i.e.* a telephone call from other wards or between surgeons during a surgery), which was perceived as unethical lapse in maintaining confidentiality. With more work experience in the unit, the OTNs expressed a growing courage to correct errors to achieve and maintain high ethical standards in the OT.

3.8. Being Flexible

To achieve and maintain high ethical standards, participants highlighted the importance of being flexible during surgery, taking into account the patient, the team-members, and the surgery process. This concept concerned how they talked, what they said, what they did, and when they did it. They assessed every situation trying to fit in as long as it maintained high ethical standards and en-

hanced the patient experience. Adapted team communication was explained as communicating clearly, but with the aim of not worrying the patient. This adapted communication was performed both verbally and non-verbally. Non-verbal communication was easier to manage when the team members knew each other. They used the eyes and a kind of sign language to gain each other's attention. It was described by many of the participants as ethical if they could avoid frightening terms like "knife" or "needle" as much as possible, but at least so it did not cause anxiety within the patient. In situations when the participants needed to speak, they tried to express what they needed to say through whispering or by talking it in positive terms, so that the patient should not misunderstand.

"*…the conscious patient is so incredibly nervous and responsive to everything and all the little nuances…you can hardly communicate at all without making the patient nervous…*" (OTN, interview 10)

Flexibility included being on or off stage was described as adjusting the interaction with the patient. The participants explained that, by getting a picture of the state of the patient they were able to adapt this interaction. The first patient meetings were mostly described as occurring when the patient entered the OT, accompanied by the anaesthesia nurse. This time was described as a short moment to perceive what kind of patient this was, and attempt to gain the patient's trust. When the patient made eye contact, and seemed rather calm, the OTNs sought more interaction than if the patient hardly answered or showed signs of fear.

"*In the way that the patient answered, you would get an idea of how nervous the patient was. So, already in the first meeting, you get a picture of how the patient will act on the operating table, and from that, I adapt myself…*" (OTN, interview 5)

The OTNs indicated that they sometimes would back off and let the anaesthesia nurse continue undisturbed, so as not to cause the patient more discomfort or anxiety. In situations where the participants perceived it was difficult to get near the patient and make a contact before preoperative disinfection, an assessment about the value of this interaction was performed. It was described that OTNs typically waited for the most appropriate time to "get on stage", depending on how they perceived the patients' needs, the value of contact, time-pressure, and the team's attitude in the OT. The importance of creating a professional relationship with the patient was described, but for ethical reasons, they never seemed to force contact that was not wanted or needed. Being "off stage", taking the patient in consideration was not seen as a problem for OTNs. Participants expressed that a part of achieving high ethical standards in the OT was that all of the team members felt comfortable with the role taken on by the OTNs. From the perspective of the participants, did not matter if their role was passive or active, as long as they perceived their behaviour was best for the patient.

Comprehension of needs was described as a combination of various skills.

During a surgery-process, there were many different needs that would emerge. The description provided by OTNs of their professional role was advocating for the patient and being responsible for the successful outcome of the surgery process. When a patient undergoes surgery with local or regional anaesthesia, the information provided to the patient was very important. OTNs underlined that things the patient could perceive [e.g. preoperative disinfection, changing the patient's body-position, needle sticks], could never be done without informing the patient first. The participants explained that they provided this information to the patient in a way they deemed necessary for each patient. Participants further described their professional roles as not only insuring that the patient did not maintain a body position that could cause harm, but also preparing the patient for lying in said position so that it did not start to feel uncomfortable soon after. It was also described as understanding the importance of creating appropriate access to the surgery area, promoting a safe surgery process. The participants did not compromise the aseptic or surgical quality, but they expressed the value of patient's needs for comfort. As a part of the comprehension of patient needs, the OTNs determined if the patient liked to talk during surgery, then they tried to find anything that could include the patient in the conversation. They sought to uncover common interests if it brought comfort, reduced anxiety, and helped the patient overall in the foreign environment of the OT. Although the participants described that they were involved in this kind of talking, they only did so when necessary and would not distract the surgeon and/or the safe surgery process.

3.9. Balancing among Needs—Patient, Team, and Safety

The theoretical code, balancing among needs—patient, team, and safety, illustrates the importance of knowing where attention should be directed and when, to fulfil the goal of achieving and maintaining high ethical standards in the OT. Even though knowledge of aseptic conditions and of the surgery procedure itself were elements attributed almost exclusively to OTNs, they also saw their mission as being responsible for establishing a respectful and safe situation for their conscious patients. To accomplish this, they tried to interpret the individual needs of the patient and assess how well the other team members responded to these needs. The participants described that they took on the role that was needed from moment to moment, and adapted their behaviour and performance accordingly. Further, they strove for a smooth surgery, which required focus on the surgery process and the surgeon, but also a focus on helping the patients remain calm during the procedure. The balance among all the needs in the OT by the OTNs was about constantly assessing and reassessing to determine where, and how, they would be the most useful.

4. Discussion

The aim of this study was to obtain a deeper understanding of the main concern of OTNs when caring for conscious patients during the intraoperative phase.

The overall analysis showed that this concern was to take the needs of the patient into consideration. Participants in this GT explained that they always endeavoured for an intraoperative phase with high ethical standards, but that this was perceived as even more important when the patient was awake during the surgery. They described that conscious patients needed to be provided consideration throughout the duration of the surgery. The patient was seen as vulnerable and highly sensitive to everything that happened in the OT, a sentiment that has also been suggested by Eriksson [28]. Additionally, OTNs felt empathy with the patient and tried to make the whole surgical experience as positive as possible. The challenging nature of this has been suggested by Marran [5] and, according to the participants in this study, it largely depended on the ethical standards within the OT team. To address this main concern, participants endeavoured to achieve and maintain high ethical standards within the OT. Ethical standards within the OT, as Lindwall and von Post [29] suggested, can be understood as the combination ethics and habitual behaviours, because of the moral virtue that arises through habits. The morality described in this study involves adjusting nursing care to meet the needs of the patient, maintaining respectful behaviours, and promoting a safe surgical environment. The participants described how they strove to achieve high ethical standards within the OT, based on assessed needs, and facilitated by work experiences. A comparable sentiment was suggested by Lindwall and Von Post [29] who described that the method OTNs perform their work is primarily based on knowledge, values, ethics, and morality.

To maintain high ethical standards, OTNs tried to be aware of the whole OT environment. This was also suggested by Kelvered *et al.* [11], who stated that the intraoperative nursing care style characteristic of OTNs was to be constantly present in every situation. For the OTNs in this study, to be aware of the whole included having control, and reacting to inappropriate/unethical actions that could put the patient or surgical procedure at risk, or could cause discomfort/suffering. Similar findings have also been discussed in other intraoperative studies, utilizing the term "situation awareness" [30] [31] which is defined as "knowing what is going on".

Knowing fellow members of the surgical team well seemed to be of great value, according to the sentiments of the participants of this, and other studies [32] [33] [34]. Being familiar with the team was expressed in this study as a facilitator to achieve and maintain high ethical standards in the OT, which is in line with the results presented by Lindwall and Von post [29]. This type of familiarity can facilitate non-verbal communication and optimize important elements of collaboration within the team, a sentiment that was also suggested in a study by Sandelin and Gustafson [35]. In the present, as well as other studies [35] [36] [37], familiarity with the team can be understood as contributing to the level of situational awareness perceived by OTNs, and assists in achieving and maintaining high ethical standards as a whole. It can further be suggested as being "prepared for expected and assumed incidents and/or disruptive behaviours" when striving to create a respectful and professional care environment. Lindwall

et al. [38] describes that habits as acts that are sometimes unethical, but performed regularly by some individuals. The situations described by OTNs in this study can explain the importance of being familiar with the team. In other words, knowing the team can also include knowing their habits, especially their bad habits, thus allowing for OTNs to be prepared to address these issues that can negatively affect high ethical standards in the OT.

The theory, presented as a balance among the needs of all individuals within the OT, can be suggested as a balance between technical and non-technical skills. The non-technical skills, as described in other studies [30] [31] [39], can be seen as the ability to think ahead, trying to imagine everything that can go wrong, and utilizing an understanding the team to primitively address these concerns. The balance between needs related to safety and patients, as explained in this study, are similar to concepts suggested by Buber [40]. Buber [40] differentiated relationships, in which an "I and thou" relationship could be understood as when the OTN saw the conscious patient as a person. In this concept, the relationship between the OTN and the patient is considered one based on equality, with a focus on interaction and reciprocity. However the participants in this GT described that they never took more contact than they assessed that the patient desired, which can be seen as ethically correct according to Buber [40]. The balance also included that OTNs responded to the more technical needs that occurred, as they endeavoured to promote a safe surgery. This made the OTNs to assume another approach. Here the OTNs changed the relationship from a "thou" in to an "it". The "I and it" relationship, according to Buber [40] can be understood as a relationship based on more science, where facts and discussions of "cause and effect" dominates. This was described as necessary in some surgical situations when distance and objectivity was required to perform appropriate medical, surgical, and/or nursing interventions. Buber [40] suggested that these two relationships occur in a continuum, where both are present, but to various degrees.

5. Methodological Discussion

GT was well suited to describe the main concern in intraoperative nursing care when the patient is awake. The researchers have very different experiences of intraoperative nursing-care in conscious patients, and these experiences were used to validate the results. In GT, that data should speak for itself, with each category being grounded in data, rather than rising from researcher's preconceptions [28]. The first researcher's experiences within the OT have been taken in consideration, and data was cross-validated by the other two authors.

A GT must demonstrate four criteria; fit, workability, relevance, and modifiability [19]. The theory fits when categories represents the pattern of the data [26]. Relevance is shown when the generated theory explains how the participants resolve the main concern they described as an important issue. Workability has been considered, and participants confirmed that the results correctly explain the reality as they experienced it. This theory could be modified if new data

alters the circumstances.

Participants were employed at five different hospitals in the central region of Sweden. Even though there were differences in their specific experiences, they seemed mostly to talk about the same sentiments and concerns. Some of the participants were former colleagues of the researcher. This was not seen as a problem however, as many years had passed. Instead, some of the participants found it easier to describe their experiences about the research area when they were familiar with the interviewer. While the current study describe the specific experiences of the participants, the results can be relevant in any context where medical or surgical treatments are performed in team.

6. Conclusion

The findings illustrate the importance of a common vision of high ethical standards within a surgical team to ensure that the patient is taken in consideration. This study also reveals how vulnerable ethics can be in an unfamiliar team, both from a technical and non-technical standpoint, and suggests that ethics should be strongly considered, especially when it comes to surgery utilizing local or regional anaesthesia. The OTNs concern about considering the conscious patient, and the skills they develop and apply to address this concern, can be added to further describe the professional competencies of OTNs.

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Declaration

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References

[1] Lindwall, L. and Von Post, I. (2009) Continuity Created by Nurses in the Perioperative Dialogue—A Literature Review. *Scandinavian Journal of Caring Sciences*, **23**, 395-401. https://doi.org/10.1111/j.1471-6712.2008.00609.x

[2] Lindwall, L., Von Post, I. and Bergbom, I. (2003) Patients' and Nurses' Experiences of Perioperative Dialogues. *Journal of Advanced Nursing*, **43**, 246-253. https://doi.org/10.1046/j.1365-2648.2003.02707.x

[3] Martinsen, K. (2012) Operationssjuksköterskan och den sårbara patienten—Kropp, sinnesförnimelse och integritetszon. [Operating Theatre Nurse and the Vulnerable Patient—Body, Sense of Mind and Integrity Zone]. In: I DåvØy Myklestul, G.H.I. and Eide Hege, P., Eds., *Surgery Healthcare—The Operating Theatre Nurse's Perioperative Nursing Care*, Studentlittertur, Lund, 29-45.

[4] Lindwall, L. (2004) Kroppen som bärare av hälsa och lidande. [The Body as a Vessle for Health and Suffering]. Ph.D. Disseration, Åbo Akademi.

[5] Marran, J. (2005) Psychological Needs of Patients in the Peri-Operative Environment. *Journal of Operating Department Practice*, **2**, 10-14.

[6] Cobbold, A. and Money, T. (2010) Regional Anaesthesia: Back to Basics. *The Journal of Perioperative Practice*, **20**, 288.

[7] Rothrock, J.C. and Alexander, E.L. (2007) Alexander's Care of the Patient in Surgery. 13th Edition, Mosby/Elsevier, St. Louis, 105.

[8] Nunes, R.R., Porto, V.C., Miranda, V.T., de Andrade, N.Q. and Carneiro, L.M.M. (2012) Risk Factor for Intraoperative Awareness. *Brazilian Journal of Anesthesiology*, **62**, 365-374. https://doi.org/10.1016/S0034-7094(12)70137-X

[9] Hankela, S. and Kiikkala, I. (1996) Intraoperative Nursing Care as Experienced by Surgical Patients. *AORN Journal*, **63**, 435-442. https://doi.org/10.1016/S0001-2092(06)63231-6

[10] Larsson-Mauleon, A., Palo-Bengtsson, L., Ekman, S.-L. and Mauleon, A.L. (2007) Patients Experiencing Local Anaesthesia and Hip Surgery. *Journal of Clinical Nursing*, **16**, 151-158.

[11] Kelvered, M., Öhlén, J. and Gustafsson, B.Å. (2012) Operating Theatre Nurses' Experience of Patient-Related, Intraoperative Nursing Care. *Scandinavian Journal of Caring Sciences*, **26**, 449-457. https://doi.org/10.1111/j.1471-6712.2011.00947.x

[12] Blomberg, A.C., Bisholt, B., Nilsson, J. and Lindwall, L. (2015) Making the Invisible Visible-Operating Theatre Nurses' Perceptions of Caring in Perioperative Practice. *Scandinavian Journal of Caring Sciences*, **29**, 361-368. https://doi.org/10.1111/scs.12172

[13] Bull, R. and FitzGerald, M. (2006) Nursing in a Technological Environment: Nursing Care in the Operating Room. *International Journal of Nursing Practice*, **12**, 3-7. https://doi.org/10.1111/j.1440-172X.2006.00542.x

[14] Blegeberg, B., Blomberg, A.-C. and Hedelin, B. (2008) Nurses Conceptions of the Professional Role of Operation Theatre and Psychiatric Nurses. *Nordic Journal of Nursing Research*, **28**, 9-13. https://doi.org/10.1177/010740830802800303

[15] Swedish Society of Nursing (2013) Kunskapsluckor inom omvårdnad en första inventering (Internet) Knowledge Gap in Nursing Sciense—An Initial Inventory. https://www.swenurse.se/globalassets/01-svensk-sjukskoterskeforening/publikationer-svensk-sjukskoterskeforening/forskning-och-utveckling-publikationer/kunskapsluckor.inom.ovardnad_2013.pdf

[16] Caddick, J., Jawad, S., Southern, S. and Majumder, S. (2012) The Power of Words: Sources of Anxiety in Patients Undergoing Local Anaesthetic Plastic Surgery. *The Annals of the Royal College of Surgeons of England*, **94**, 94-98. https://doi.org/10.1308/003588412X13171221501267

[17] Karlsson, A.-C., Ekebergh, M., Larsson Mauléon, A. and Almerud Österberg, S. (2013) Patient-Nurse Anesthetist Interaction during Regional Anesthesia and Surgery Based on Video Recordings. *Journal of PeriAnesthesia Nursing*, **28**, 260-270.

[18] Karlsson, A.-C., Ekebergh, M., Mauléon, A.L. and Österberg, S.A. (2012) Is That My Leg? Patients' Experiences of Being Awake during Regional Anesthesia and Surgery. *Journal of PeriAnesthesia Nursing*, **27**, 155-164.

[19] Glaser, B.G. (2008) Doing Quantitative Grounded Theory. Sociology Press, Mill Valley.

[20] Glaser, B.G. (1999) The Future of Grounded Theory. *Qualitative Health Research*, **19**, 836-845. https://doi.org/10.1177/104973299129122199

[21] Glaser, B.G. (2001) The Grounded Theory Perspective: Conceptualization Contrasted with Description. Sociology Press, Mill Valley.

[22] Kvale, S. (2009) Den kvalitativa forskningsintervjun (The Qualitative Research In-

terview). 2th Edition, Studentlitteratur, Lund.

[23] Glaser, B.G. (1967) The Discovery of Grounded Theory: Strategies for Qualitative Research. Aldine de Gruyter, New York.

[24] Krueger, R.A. (2000) Focus Groups: A Practical Guide for Applied Research. 3th Edition, Sage Publications, Thousand Oaks.

[25] Glaser, B.G. (1978) Theoretical Sensitivity: Advances in the Methodology of Grounded Theory. Sociology Press, Mill Valley.

[26] Glaser, B.G. (1992) Basics of Grounded Theory Analysis: Emergence vs. Forcing. Sociology Press, Mill Valley.

[27] Hallberg, L.R.M. (2006) The Core Category of Grounded Theory: Making Constant Comparisons. *International Journal of Qualitative Studies on Health and Well-Being*, **1**, 141-148.

[28] Eriksson, K. (2002) Caring Science in a New Key. *Nursing Science Quarterly*, **15**, 61. https://doi.org/10.1177/089431840201500110

[29] Lindwall, L. and von Post, I. (2008) Habits in Perioperative Nursing Culture. *Nursing Ethics*, **15**, 678-681. https://doi.org/10.1177/0969733008092875

[30] Mitchell, L., Flin, R., Yule, S., Mitchell, J., Coutts, K. and Youngson, G. (2011) Thinking Ahead of the Surgeon. An Interview Study to Identify Scrub Nurses' Non-Technical Skills. *International Journal of Nursing Studies*, **48**, 818-828.

[31] Mitchell, L. and Flin, R. (2008) Non-Technical Skills of the Operating Theatre Scrub Nurse: Literature Review. *Journal of Advanced Nursing*, 15-24. https://doi.org/10.1111/j.1365-2648.2008.04695.x

[32] Gillespie, B.M., Chaboyer, W., Longbottom, P. and Wallis, M. (2010) The Impact of Organisational and Individual Factors on Team Communication in Surgery: A Qualitative Study. *International Journal of Nursing Studies*, **47**, 732-741.

[33] Alfredsdottir, H. and Bjornsdottir, K. (2008) Nursing and Patient Safety in the Operating Room. *Journal of Advanced Nursing*, **61**, 29-37. https://doi.org/10.1111/j.1365-2648.2007.04462.x

[34] Bleakley, A., Allard, J. and Hobbs, A. (2013) "Achieving Ensemble": Communication in Orthopaedic Surgical Teams and the Development of Situation Awareness—An Observational Study Using Live Videotaped Examples. *Advances in Health Sciences Education*, **18**, 33-56. https://doi.org/10.1007/s10459-012-9351-6

[35] Sandelin, A. and Gustafsson, B.Å. (2015) Operating Theatre Nurses' Experiences of Teamwork for Safe Surgery. *Nordic Journal of Nursing Research*, **35**, 179-185. https://doi.org/10.1177/0107408315591337

[36] Cochran, A. and Elder, W.B. (2014) A Model of Disruptive Surgeon Behavior in the Perioperative Environment. *Journal of the American College of Surgeons*, **219**, 390-398.

[37] Higgins, B.L. and Macintosh, J. (2010) Operating Room Nurses' Perceptions of the Effects of Physician-Perpetrated Abuse. *International Nursing Review*, **57**, 321-327. https://doi.org/10.1111/j.1466-7657.2009.00767.x

[38] Lindwall, L., von Post, I. and Eriksson, K. (2007) Caring Perioperative Culture: Its Ethos and Ethic. *Journal of Advanced Perioperative Care*, **3**, 27-34.

[39] Kang, E., Massey, D. and Gillespie, B.M. (2015) Factors That Influence the Non-Technical Skills Performance of Scrub Nurses: A Prospective Study. *Journal of Advanced Nursing*, **71**, 2846-2857. https://doi.org/10.1111/jan.12743

[40] Buber, M. (1994) Jag och du [I and Thou]. 6th Edition, Dualis Förlag AB, Ludvika, (Original Work Published in German in 1923).

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