

#9CC ePosters: Simulation in Interprofessional Teams and Supporting Career Choice Decisions

Location: Room 206

#9CC01 (771)

Perceptions of reality in interprofessional trauma-team simulation

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Background: There is a wealth of simulation studies on learning knowledge and technical skills in a single profession. This phenomenographical study focuses on workplace-based, high-fidelity simulations of interprofessional trauma-teams; and aims to explore the team members' perceptions of reality, as well as how different professions, and working-life experiences influence that perception.

Summary of Work: Our research data consist of semi-structured interviews of ten healthcare professionals at Töölö Hospital in Helsinki. Participants were selected using purposive sampling aiming at a variation between professions, and their working-life experiences. Data were transcribed and analysed using phenomenographic research methodology which explores differences between participants' perception of a phenomenon.

Summary of Results: Three categories of description were identified. (1) Pretended realism: acting a role hindered full participation; (2) Target-oriented realism: learning outcomes influenced the perceived reality; (3) Immersive realism: the feeling of simulation, and real working-life is indistinguishable. The number of simulations attended affected perceptions more than professional background or working-life experience.

Discussion: This study recognised divergent perceptions of realism in simulations. Pretended realism appears at earlier stages in simulation experience, whereas target-oriented realism is typical in experienced simulation participants. Immersive realism was relatively rare in the data. We contemplate the origin of realism in simulation, whether it derives from simulators or participants.

Conclusion: This phenomenographic study shows that the sense of reality in simulations expands beyond different healthcare professions. This adds to our knowledge on what role the perception of realism plays in participants' learning. The sense of realism might be as important for participation in simulation as the technological aspect.

Take-home Message: The sense of realism in simulation seems to develop with participation experience. The level of fidelity should be appropriate for the lesson being learnt. The technical aspect of simulation might evoke unwanted responses from the participants that might hinder learning, such as the focus being directed toward the wrong details.

#9CC02 (1236)

Interprofessional in-situ simulations during students' clinical practice in the intensive care unit - Worth a try!

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Background: There is a growing need in clinical practice to enrich health care students' clinical practice experience and increase students' competence in specific areas such as critical care. In addition, there is no formal post-graduate education program for intensive and critical care nursing in Finland.

Summary of Work: Simulations were included in nursing students' five-week clinical ICU practice. The participants were nursing and medical students, resident physicians and nurse mentors. The simulations were arranged in an ICU simulation room. The scenario topics were neurotrauma and sepsis. The scenarios and learning objectives were created in collaboration between the authors.

Summary of Results: Approximately 120 minutes was needed for each scenario. Feedback was gathered with the semi-structured questionnaires. Response rate was 94%. The overall grade of the simulations was 4.36 (1-5, 1= acceptable, 5 = excellent). The participants valued simulation practice in their own professional roles and real environment.

Discussion: All participants highlighted the value of interprofessional simulations and wanted to add the amount of simulations. The pre-learning materials were informative and sufficient. Participating in the care of the ICU patient in their own role and shared decision-making was appreciated. Both shared and profession-specific learning objectives were deemed as important.

Conclusion: The in-situ ICU simulation scenarios were challenging enough and very motivating. The students described that in the future they will work together and interprofessional practice during education is therefore crucial. Simulation teaching demands resources and in this pilot the simulations took two working days (excluding planning).

Take-home Message: The interprofessional simulations in clinical placement are highly valued and full of learning possibilities for all participants. The arrangements for the simulation session; developing the scenarios, selection of pre-learning materials, information of the all participants, and scheduling are worth of trying. All participants wanted more simulations of this kind.

#9CC03 (1541)

Airway tea-trolley teaching: multi-disciplinary training delivered to your anaesthetic room

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Background: Keeping up-to-date with airway skills is an essential aspect of continuing professional development and departmental governance. Maintaining familiarity and confidence with Difficult Airway Society algorithms and management of rare but catastrophic airway problems, requires frequent training. Consultants and nurses tend to have inferior access to simulation/skills training than do trainees.

Summary of Work: An educational program was devised to address the gap in airway skills-and-drills training. Workshops incorporating low-fidelity simulation of three difficult airway scenarios (emergency front-of-neck access, awake fiberoptic intubation & use of airway exchange catheters) were delivered on a tea-trolley, which could be wheeled directly to candidates in each anaesthetic room.

Summary of Results: Over 60 individual workshops were delivered to 42 candidates (20 consultants, 17 trainees, 5 nurses) during a 3-month period. An electronic survey captured feedback. Most respondents reported under-confidence with airway techniques prior to teaching. 78-100% reported feeling more confident following attendance. 100% evaluated the sessions as very good or excellent.

Discussion: Tea-trolley airway teaching will continue to train and maintain skills across the multi-disciplinary team. Incorporation of received candidate feedback, introduction of additional airway topics and skills to the curriculum and inclusion of nurses to the teaching faculty will extend the impact and reach of this successful education project.

Conclusion: The tea-trolley airway sessions were delivered by three dedicated airway enthusiasts to almost half of the anaesthetic department over a short time period. It has proven to be a feasible and popular method of ensuring regular skills-and-drills practice reaches individuals who may not otherwise easily access airway training.

Take-home Message: An in-house rolling airway education program provides a pragmatic solution to training issues in the current resource-poor patient-safety conscious healthcare climate. 'Little-and-often' local training delivered in the anaesthetic room has multiple advantages including negligible costs, improved accessibility, convenience, minimal operating-list disruption and the ability to update, repeat and personalise sessions.

#9CC04 (2222)

Developing a behavioural marker system for registered nurses (RNs) and enrolled nurses (ENs) in crisis management teams – what's new?

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Background: 'Crisis Management for Nurses' simulation program is conducted for RNs and ENs to develop their non-technical skills (NTS) in a simulated environment. Currently, a structured taxonomy of NTS for nurses in crisis management is lacking in nursing literature. Hence, we aimed to develop a NTS behavioural marker system.

Summary of Work: Over five simulation sessions, we audio-recorded the debriefing sessions participated by 50 RNs and ENs. We analysed the data iteratively using qualitative content analysis, based on the Nurse Anaesthetists' Non-Technical Skills (N-ANTS) (Lyk-Jensen et al., 2014) that comprise four categories (i.e. 'situation awareness', 'task management', 'team working', 'decision making').

Summary of Results: Our newly developed behavioural marker system comprised six categories—three new categories emerged (i.e. 'situation management', 'leadership', 'self-management'), three similar to the N-ANTS. 'Task management', a category in N-ANTS was removed. Each category comprised two to four observable behaviours, also known as elements. We identified a total of 17 elements.

Discussion: Elements of 'task management', such as prioritising, were subsumed under 'situation management'. Compared to anaesthesiology, nurses in crisis management teams need to be more proactive and responsive, especially when patients collapse. Moreover, in extremely tense environments, nurses need to stay calm and focused; senior nurses are expected to demonstrate leadership.

Conclusion: We developed a behavioural marker system fostering the use of a common terminology for NTS in nursing crisis management teams. Six categories were identified—three new categories, three similar to the N-ANTS. Further validation work on the behavioural marker system will be conducted in the next phase of study.

Take-home Message: We developed a new NTS behavioural marker system which is useful for teaching and learning in nursing crisis management teams. Nurse educators may use it as a tool to develop simulation programs and scenarios for their teaching on NTS.

#9CC05 (2322)

Simulation and Training of Skills for Nurses and Physicians in Pediatric Oncology

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Background: 1.800 children are diagnosed with cancer every year in Germany. Treating these children requires different skills. Besides technical aspects soft skills like communication are required. Today, no training concept exists in Germany to improve these professional skills in pediatric oncology. We developed a novel, multidisciplinary and modular training-program called 'SICKO'.

Summary of Work: Following a needs analysis, we designed a modular workshop concept starting with basic knowledge and skills for oncology (= workshop 1), including lumbar puncture, bone marrow aspiration, central venous line management and chemotherapy. The subsequent workshops focus on complication management and communication skills (e.g. paravasation, tumor-lysis syndrome, convulsion, hemorrhagic cystitis).

Summary of Results: 32 nurses and 46 physicians participated yet. 100 % of the participants recommend the workshop content and concept. Evaluation indicates significant improvement of knowledge and enhanced skills for managing complications. Participants feel significantly more confident about their communication skills in the challenging context of pediatric oncology.

Discussion: Young physicians and nurses report unpreparedness for working with cancer patients. We therefore introduced a training concept for healthcare personal (HSP) in pediatric oncology. Participants are trained in hands-on skills, are video-taped in simulated emergency situation and receive a feed-back and analysis afterwards. Multidisciplinarity is a cornerstone of the concept.

Conclusion: We designed a workshop for oncological HSP combining practical skills with theoretical background. Communication in various scenarios plays a major role. A unique model for the training of HSP was developed for the workshop. Participants value the quality of the workshops extremely positively indicating a demand for those programs.

Take-home Message: This novel workshop offers the opportunity for HSP to train and simulate their daily challenges. Communication is a core skill and trained in different scenarios. Participants feel more confident about daily work after their participation in the workshop. The results indicate simulation and training can be implemented for pediatric oncology.

#9CC06 (2542)

Educational Method using Team Resource Management and High-Fidelity Medical Simulation: Decrease rate of Accidental Tube Removal Incidents

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Background: Radiology department is an examination unit where accidental tube removal incidents, such as endotracheal tube, Foley catheter, nasogastric tube... etc, can occur at anytime while performing an examination, and on some occasions can result in life-threatening condition. Therefore, it is an important issue that must be avoided at all possible causes.

Summary of Work: Since 2016/03/01, the instructors and PGY(Post Graduate education) members of our department uses Team Resource Management (TRM) and High-Fidelity Medical Simulation resources to improve knowledge of the correct way to transfer patients between examination tables and to decrease rate of accidental tube removal incidents.

Summary of Results: After TRM education, the knowledge of the correct way to transfer patients between examination tables of the members was >90%. As of 2017/01/31, accidental tube removal incidents rate of our department was 0%, indicating good outcome of the team work.

Discussion: Accidental tube removal incidents is an important issue because it can result in life-threatening condition or even death, and should be avoided if possible. Acknowledgment of this problem and using effective teaching methods like TRM and High-Fidelity Medical Simulation can improve the communication between members and efficiently decrease Incidence.

Conclusion: TRM and High-Fidelity Medical Simulation are accessory methods for medical education. These educational methods can improve member's knowledge and decrease unnecessary errors occurring during the daily works, and thus decrease the medical liability and costs due to these errors.

Take-home Message: It is important for all members of the medical profession to become familiar with TRM and High-Fidelity Medical Simulation educational methods. Application of these teaching methods on daily clinical work can increase diversity in medical education and improve patient safety.

#9CC07 (3194)

Morning Rounds: A Simulation Experience for Second Year Medical Students to Promote Clinical Reasoning

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Background: Second year medical students, working in small groups, participate in two sequential simulation experiences involving diagnosis and treatment of patients. The primary objective is forming a differential diagnosis for acute presentations of two common symptoms: dyspnea or chest pain. Secondly, teamwork, communication, and resuscitation skills are assessed.

Summary of Work: Sequentially students encounter three simulated patients in the hospital presenting with the same symptom. On each patient, they take a focused history, perform a physical exam, and review diagnostic tests. Students huddle to obtain a shared mental model, then begin a treatment plan. Post simulation debriefing enhances reflection and metacognition.

Summary of Results: Faculty report improved clinical reasoning, teamwork, and communication, from the student's first to the second Morning Rounds simulation. Students find this activity highly satisfying and report their desire for this format more often. They also report that this simulation helps them to become aware of their knowledge and performance gaps.

Discussion: This simulation activity is designed for the deliberate practice of forming differential diagnosis by comparing and contrasting findings in patients that present with the same symptom. This format also promotes acquisition of clinical reasoning skills to gather and synthesize information in order to recognize patterns in the presenting patient.

Conclusion: The two Morning Rounds experiences improve students' clinical reasoning skills, teamwork, and communication skills in a simulated clinical setting in which they can safely practice skills and receive feedback and guidance related to their performance.

Take-home Message: The sequential presentation of patients with the same symptom is an effective strategy to enhance acquisition of critical thinking skills in second year medical students.

#9CC08 (1173)

Analysis of teaching methods in medical humanities and social sciences curriculum of a medical college

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Background: Proper teaching method is a critical factor and an effective tool to induce students' interests and participation in humanities classes, since medical students are science oriented and focused on inductive thinking. This study introduces various teaching methods we use in order for students to develop critical and creative thinking.

Summary of Work: OMNIBUS, medical humanities and social science curriculum in the Catholic University of Korea, is a longitudinal program with 12 segments during 4 years of medical education. Each segment lasts for one week, and is intercalated in the medical curriculum. Teaching methods with different characteristics are used in OMNIBUS curriculum.

Summary of Results: OMNIBUS curriculum was categorized by 6 groups: lecture (61%), activities including PBL, role play(Hospital Ethics Committee), mock IRB, sorry work and RCA, and issue forum(17%), social service (11%), debates, (7%) and patient encounter (4%). Patient encounter is arranged by clinical professor who facilitates question and answer between students and patients.

Discussion: Lecture is a good and common teaching method for humanity and social science courses, but has limitation in attracting students' attention. OMNIBUS collocated lecture subjects in accordance with the basic and the clinical medicine curriculum and gave students the opportunity to enlarge medical subjects in cultural, social, and historical contexts.

Conclusion: OMNIBUS curriculum used various teaching methods in order to attract science-oriented students' attention. Lecture subjects were chose in order to present humanistic side of medicine, and various activities were arranged to induce students' participation and impose their responsibilities. Patients encounter was an opportunity to bring up empathy toward patients' suffering.

Take-home Message: 1. Arrange humanities program in accordance with basic and clinical medicine curriculum, and chose relevant subjects to what students are learning at that time.

2. Provide various tasks and agenda to induce students' participation.

3. Patients encounter and social services are valuable experiences to breed students' empathy and compassion.

#9CC09 (1590)

**The Process of Korean Junior Doctors' Specialty Choice.
Qualitative Study Guided by the Grounded Theory**

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Background: Specialty choice compliant with aptitude and ability is a critical decision for a doctor's self-realization. Previous studies used quantitative methods or survey but specialty choice is a complex phenomenon reflecting psychological aspects. A qualitative study is needed for the understanding of subjective experience and exploring its internal meanings.

Summary of Work: Fifteen participants were recruited by purposeful sampling from internship trainees at Chungnam National University Hospital, Korea in 2016. All participants determined their specialties. Data were collected through audio-recorded, semi-structured, in-depth exploratory interviews by a nonfaculty facilitator. The qualitative analysis was guided by the principles of Strauss and Corbin's grounded theory.

Summary of Results: A total of 115 concepts, 43 sub-categories, and 22 categories were identified through the open coding process. Junior doctors chose their specialties based on personality, future prospects, departmental atmosphere, residents' life-quality or role model. A part of them changed the specialty choice based on the experience of their internship training.

Discussion: Through the axial coding, the phenomenon was 'confronting doctor as a job in reality'. The conditions were 'choosing without regret' (causal), 'seeing my inconceivable personality (context)' and 'seeing the situation objectively (intervening)'. The strategy and consequence were 'going closer to the patients' and 'finding the difference of thoughts and reality'.

Conclusion: The factors for specialty choice were personality, aptitude, curiosity, future prospects, mentor/role model and especially senior residents' quality of life. Additionally departmental atmosphere during training was identified as an important factor. And the various experiences during internship training were cited as important for specialty choice as well.

Take-home Message: Participation in internship training is an important period in which junior doctors solidify their specialty choice. Various supports and programs that provide the understanding for the specialties will also help their decision-makings.

