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| **Table 1. Main results** | | | | | | | |
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| **Paper** | **Tool(s)** | **Purpose** | **Participants** | **Question** | **Method** | **Main Result** | **MERSQI** |
| 2012, Fransen et al | CTS (Clinical Teamwork Scale) | To investigate the effectiveness of team training in a medical simulation center | Gynaecologists, midwives, residents, and nurses. | Will obstetric team training improve the team clinical performance and increase the employment of essential clinical skills? | Multicenter randomized controlled trial | The intervention group had significantly higher median and overall "Clinical Teamwork Scale" scores. Specifically communication and decision making were significantly improved. | 17 |
| 2014, Weller et al | SNAPPI pre-defined scoring rubric | Investigate if a video-based intervention modelling a structured call-out would improve call-out in subsequent simulated cases, and if improved call-out affected information sharing and medical manegement during simulated crises | Nurses, anesthesiologists, and anesthetic technicians. | Does a video-based educational intervention modelling call-out improve the SNAPPI score? Is a higher SNAPPI-score associated with improved information sharing and medical management? | Randomized, blinded, pre/post-test study | The intervention significantly improved SNAPPI-scores. A trend toward increased information sharing and medical management scores in the intervention group was found, but the result was not statistically significant | 16 |
| 2013, Fernandez et al | Teamwork and Patient Care Measure | To determine the impact of a computer-based team process training intervention on teamwork behaviour and patient care performance | Medical students, emergency medicine residents, and confederate nurse actors. | Does recieving computer-based team process training result in more appropriate teamwork and patient care behaviour? | Randomized controlled trial | There were significantly higher levels of teamwork and patient care performance in the intervention group, supporting the relationship between team training and overall resuscitation performance | 15,5 |
| 2011, Janouskas et al | ANTS (Anesthetist's Non-Technical Skills) | To determine whether CRM training and BLS training improves team effectiveness and team process variables | Pediatric nurses, pediatric residents and anaesthesiology residents. | Does CRM + BLS training result in decreased respons time and fewer medical errors during a simulated petient crises? Does CRM + BLS training improve the team process? Are the results of these two interrelated? | Pre/post-test randomized controlled trial | CRM training did improve team process, but team effectiveness did not differ between intervention and controll group. | 15,5 |
| 2014, Paige et al | ORTAS (Operating Room Teamwork Assessment Scale) | To investigate the feasibility and effectiveness of high-fidelity simulation interprofessional student OR team training | Medical students, and nursing students. | Not clearly stated | quasi-experimental pre/post-test comparison study | The team training improved student's team-based attitudes and behaviours. The program was deemed feasible, though the cost was significant. | 14 |
| 2014, Rubio-Gurung et al | TEAM (Team Emergency Assessment Measure) | To determine the impact of in situ high-fidelity simulation-based group-training on neonatal resuscitation performance | Pediatricians, and midwives. | Does an in situ high-fidelity simulation-based group-training program improve the efficacy of the overall staff performance in neonatal resuscitation? | Multicenter randomized controlled trial | There was a significant improvement in both technical- and non-technical skills in the intervention group. Neonatal resuscitation was more effective in the intervention group port-test | 13,5 |
| 2015, Couto et al. | TEAM (Team Emergency Assessment Measure) | To compare teamwork behaviour between actual emergencies, in situ simulations and in-center simulations in a Pediatric Emergency Department | Physicians, nurses, respiratory therapists, para-medics, patient care assisstants, and pharmacists. | Is teamwork behaviour higher for actual emergencies and in situ simulations than for in-center simulations? | Retrospective, video-based comparison | There was no difference in teamwork bahaviour between the different settings | 13,5 |
| 2013, Sigalet et al | KidSIM Team Performance Scale | To examine the psychometric characteristics of the KidSIM Team Performance Scale | Undergraduate medical student, nursing students, and respiratory therapy students. | Not clearly stated | two-group, quasi-experimental study | The KidSIM Team Performance Scale was shown to evaluate two features of team performance: the roles and responsibilities of team members and communication. | 12,5 |
| 2008, Powers et al | NOTECHS (Nontechnical skills evaluation rating scale) | To develop and validate a high-fidelity simulation model of a laparoscopic crisis scenario | Expert and novice surgeons, and nurses. | Not clearly stated | Post-test descriptive study | Expert surgeons were significantly better than novices in all components of the non-technical skill. Expert surgeons also had significantly better tehcnical performance scores than novices. | 11,5 |
| 2011, Pascual et al | TLIS (Teamwork Leadership Interpersonal Skills) & ECCS (Emergency Clinical Care Skills) | To evaluate the effect of simulation training in established ICU advanced practitioners | Surgical critical care fellows, and advanced practitioners. | Does human patient simulator-based training improve surgical ICU "advanced practitioners" teamwork, leadership and clinical skills? | pre/post-test comparative study | Simulation-based training improved teamwork and leadership/interpersonal skills significantly. | 11,5 |
| 2013, Abdelshehid et al | NOTSS (Non-technical Skills for Surgeons) | To examine urologists' technical skill and non-technical skill | Urology residents, anesthesia nurses, and anesthesiologists. | Not clearly stated | Descriptive, post-test study | Senior level urologists had better technical and non-technical scores compared to junior level urologists | 11,5 |
| 2011, Frengley et al | TBR (Team Behavioral Rater) | To examine the impact of a simulation-based intervention on teamwork behaviours in established critical care unit teams | Junior and senior medical doctors, and junior and senior nursing staff. | Does simulation-based team training improve the teamwork behaviours of critical care teams? Is simulation-based learning superior to case-based learning in this regard? | Self-controlled randomized crossover study | There was a significant improvement in teamwork scores, especially "leadership" and "team coordination". Teams receiving simulation-based learning showed a greater improvement than teams receiving case-based learning | 11 |
| 2010, Capella et al | TPOT (Trauma Team Performance Observation Tool) | To describe a quality improvement effort focused on trauma team training and team behaviour, teamwork efficiency and clinical outcomes | Residents, nurses, and faculty surgeons. | Does formal team training improve team behaviours in the trauma resuscitation bay? if yes, then does improved teamwork lead to more efficiency and/or improved clinical outcomes? | Pre/post-test intervention study | Team performance did improve after team training, which results in greater efficiency. The results support that improved communication and leadership leads to more efficient teamwork | 10,5 |
| 2015, Morgan et al | SAGAT (Situation Awareness Global Assessment Technique) | To address the use of SAGAT for training and assessment of interprofessional teams' situation awareness | Obstetricians, anesthesiologists, and nurses. | Not clearely stated | Post-test descriptive study | The results suggest a high degree of feasibility of use of SAGAT with interprofessional obstetrical teams and high fidelity simulation | 10,5 |
| 2013, Kennedy et al | CEPTE (Clinical Emergency Predaredness Team Evaluation) | To determine if team training and preparation for office emergencies improves overall patient care and team performance. | Physicians, respiratory therapists, nurses, and office administration. | Are case-based high-fidelity simulations effective in teaching and retention of emergency management team skills? | Prospective pre/post-test study | The high-fidelity simulation course improved team-focused skills and patient care significantly. Furthermore, the participating teams retained their knowledge and skills 10-12 months after the initial training | 10,5 |
| 2008, Daniels et al | "Checklist of Expected Actions", and "Health Failure Modes Effects Analysis" (HFMEA) | To evaluate whether simulation is an effective method for teaching obstetric teams about catastrophic events | Nurses, anesthesia residents, and obstetric residents. | Can simulation of obstetric crises be created for team training? Can simulation identify clinical performance deficiencies of obstetric residents that can serve as a basis for focused teaching? | Post-test descriptive study | The simulated crises allowed reviewers to identify performance deficiencies, especially poor interprofessional communication, poor leadership and poor distribution of workload | 10 |
| 2012, Minehart et al | Videorecordings analysed qualitatively for language patterns | To analyse the communication strategies used by teams of obstetricians and anesthesiologists in a simulated maternal-fetal crisis | Anesthesiologists, and obstetricians. | Not clearly stated | Post-test descriptive study | Anesthesiologists used "advocacy" more often than urologists, while urologists used "inquiry" and "advocacy" in more balanced proportions. Explicit "joint plans" were found in less than 50% of the teams | 9,5 |
| 2014, Muller-Juge et al | "Template Analysis Approach", Qualitative analysis with a priori coding and template analysis | To describe resident physicians' and nurses' actual behaviour contributing to teamwork quality in a simulated internal medicine ward | Internal medicine residents, and nurses. | Not clearly stated | post-test descriptive study | Established and effective leadership, structured communication, positive team spirit and sufficient autonomy was essential for teamwork quality | 9,5 |
| 2014, Calhoun et al | TPDSCI (Team Performance During Simulated Crisis Instrument) & CRM checklist (Crisis Resource Management), validation not reported | To explore the outcomes and implementation of a simulation replicating a hierarchy-related medical error | Pediatricians, medicine/pediatric residents, Pediatric Intensive Care Unit (PICU) nurses, and Pediatric Emergency Department (PED) nurses. | How can a health care team prevent the detrimental effects of hierarchy? | post-test descriptive study | 80% were unsuccessful at adressing the hierarchy error. Trends towards lower NTS scores was present in cases were hierarchy was unsuccessfully challenged. Not statistically significant due to small sample size | 9,5 |
| 2008, Messmer et al | KSNPS (Kramer and Schmalenberg Nurse-Physician Scale), Collaboration & Satisfaction with Patient Care Decisions (CSPCD) and Clinical Practice Group Cohesion (GC). | To determine the level of nurse-physician collaboration on multiple dimensions during simulation training | Pediatric residents and fellows, and nurses. | Not clearly stated | Post-test descriptive study | The level of nurse-physician collaboration improved after each of the simulations, as did the appreciation of one another's contributions. This resulted in an immediate increase in shared knowledge. | 9,5 |
| 2010, Calhoun et al | Kalamazoo Essential Elements Communication Skills | To demonstrate multi-rater feedback with gap analysis for assessing commnication skills and self-insight, and enhancing self-reflection | Resident or fellow physician, and nurses. | Not clearly stated | Post-test descriptive study | Multi-rater assessment enables the integration of multiple points of view. Gap-analysis enables qualitativ and quantitative assessment of participants' under-valued strengths and perceptual blind spots. Together they support reflective learning | 9 |
| 2012, Lee et al | ANTS (Anesthetist's Non-Technical Skills) & NOTSS (Non-technical Skills for Surgeons) | To evaluate the implementation of a simulation-based team training scenario and assess the technical and non-technical skills of urology and anesthesiology residents | Urology residents, and anesthesiology residents. | Not clearly stated | Post-test descriptive study | Level of training correlated to tehcnical performance score in both urology and anesthesiology residents. Level of training correlated to non-technical performance only in anesthesiology residents. This was speculated to be a result of differences in residency programs | 8,5 |