Faculty development programmes in simulation-based teaching: An exploration of current practices

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ABSTRACT

Background and Aims: Simulation-based teaching (SBT) has become integral to healthcare education, offering a dynamic and immersive learning experience for bridging theoretical knowledge with real-world clinical practice. Faculty members play a crucial role in shaping the effectiveness of simulation-based education, necessitating the implementation of comprehensive faculty development programmes. This scoping review explores existing literature on training programmes for simulation-based teaching, focusing on strategies employed and the overall impact on educators and the quality of simulation-based education. Methods: The scoping review comprised five sequential steps: identifying the research question; identifying relevant studies; study selection; charting the data; and collating, summarising, and reporting the results. The research questions focused on existing practices and approaches in faculty development for simulation-based teaching, challenges or barriers reported, and the effectiveness of utilised methods and strategies. Results: A systematic search of databases yielded 13 studies meeting inclusion criteria out of 1570 initially screened papers. These studies provided insights into various aspects of faculty development programmes, including their nature, duration, and participant profiles. Despite the diversity in approaches, detailed, specialty-specific programmes were scarce, especially in anaesthesiology. Challenges, while implicit, lacked explicit exploration. Most studies reported positive outcomes, emphasising achievement of learning objectives, appreciable course content, and relevance to teaching practices. Conclusion: This scoping review describes the existing literature regarding the faculty training or development programmes related to SBT. The programmes target various health professionals and have a wide range of durations. The need for such a programme targeting anaesthesiologists is emphasised.

Key words: Faculty development, patient simulations, simulation-based teaching, staff development, teaching, training

INTRODUCTION

Simulation is theoretically defined as the imitation of any process. The use of simulation to aid in teaching is not new now, though the use of simulation for training purposes in other fields such as aviation precedes its use in healthcare by decades.^[1] Simulation-based teaching has emerged as a cornerstone in healthcare education, providing a dynamic and immersive learning environment that bridges the gap between theory and real-world clinical practice. As this pedagogical approach gains prominence across various disciplines, faculty members play a pivotal role in shaping the effectiveness and impact of simulation-based education. Recognising the pivotal role of educators in this context, faculty development programmes become a critical component to ensure that instructors possess the requisite skills, knowledge, and pedagogical strategies to harness the full potential of simulation-based teaching.

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As with any new teaching and training strategy, use of simulation in medical pedagogy was also not without initial hesitancy and unsureness. The field evolved with more and more advancements in refining the simulators and teaching strategies. Currently, the most widely practised technique combines pre-briefing, simulation experience, and debriefing, with modifications in type and timings in each part according to the learning objectives of the simulation-based training. Teaching simulation techniques requires the trainers' initial investment in time and understanding. All the trainers using simulation may not have undergone a training session using simulation for medical teaching.

This scoping review aimed to systematically explore and synthesise the existing literature on faculty development programmes in simulation-based teaching, shedding light on the diverse strategies employed, key competencies addressed, and the overall impact of these programmes on educators' proficiency and the quality of simulation-based education. This scoping review aimed to map and summarise the available evidence reporting training of trainers' activities and practices from literature related to simulation-based teaching and training. In addition to identifying reports about the existing practices in these trainings, this review tried to identify the lacunae that need to be addressed in terms of future training needs and the drawbacks and roadblocks in the current strategies to optimise the outcome of these activities.

METHODS

This is a scoping review according to the guidelines stated by Arksey and O'Malley,^[2] and the reporting of this study is guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-Scr) checklist.^[3]

The following review questions were used to describe and explore methods and strategies for training teachers, facilitators, and trainers in simulation-based teaching and learning practices-

- 1. What are the existing practices and approaches related to faculty development in simulation-based teaching (SBT)?
- 2. What challenges or barriers related to faculty development training programmes in SBT are reported?
- 3. What is known about the effectiveness of the methods and strategies utilised in these faculty development programmes?

In November 2023, a systematic search was performed in the databases MEDLINE (Ovid), SCOPUS (Elsevier), CINAHL (EBSCO host), and Educational Resource Information Centre (ERIC; Ovid). As a first step, a limited search using keywords was conducted in the PubMed database (MEDLINE). The search strategy was piloted to check the appropriateness of keywords according to the retrieved articles with each search. In all retrieved articles, an analysis of the words contained within the title abstracts and index terms was done to change the search strategy. A second search using all the identified keywords and index terms was done across all enlisted databases. Lastly, the reference lists of all studies were screened, and suitable manuscripts were selected for this scoping review.

The review included qualitative, quantitative, and mixed-method empirical studies and narrative reports in peer-reviewed journals. Studies and reports describing or inclusive of SBT-based faculty or facilitator training programmes in any geographical setting were included. Studies and reports describing or including SBT-based faculty or facilitator training programmes with target learners of teaching activities as any healthcare professional cohort (nurses, practising doctors, UG/PG students, physiotherapists, and paramedical professionals) were included. Studies and reports describing or inclusive of SBT-based faculty or facilitator training programmes with the learner population of these programmes being any group of healthcare professionals (nurses, practising doctors, UG/PG students, physiotherapists, or any paramedical professionals) were included.

The published literature excluded were letters, comments, conference abstracts, editorials, doctoral theses, and reviews. In addition, studies and reports describing or including educational activities that may have included SBT but lacked details, studies in languages other than English, and opinion pieces, viewpoints, and conceptual frameworks were excluded. Deliberations were done when inclusion into or exclusion from the study was unclear and if any specific content related to the research question was unclear.

Studies that were included in the final analysis were charted on a shared document by all three authors (RR, LS, and VR). The original chart with data is appended as supplementary material [Appendix 1]. The studies and reports shortlisted from the initial collective list from all databases were the initial databases from which all data were collected. The full text of all articles was read by at least one of the co-authors. In a dilemma, opinion was sought from at least one other co-author. Once the study was included in the review, the data were collated, results summarised, and answers to the research questions sought.

RESULTS

Thirteen studies were included out of 1570 initial screening from PubMed retrieved studies. In total, 1501 studies were excluded following the exclusion and inclusion criteria of being non-English studies, non-peer-reviewed articles, or text and article types mentioned in the exclusion criteria.

Through title and abstract reading, 53 studies were included. The full text was not available for four articles. Through full-text screening of the remaining studies, we ended up with 13 studies that met the eligibility criteria of the current scoping review. Details of the analysis of the included studies and reports are given in supplementary material [Appendix 1]. Figure 1 shows the diagrammatical representation of the approach to the final articles in the scoping review. Primary data regarding the studies are given in Tables 1-3.

DISCUSSION

1. What are the existing practices and approaches related to faculty development in simulation-based teaching (SBT)?

Very few articles clearly described and documented training programmes focused on the subject. The approaches to the programme vary with all types of programmes described, including in-person, purely digital, and hybrid types.^[4-16] Some programmes are comprehensive, that is, inclusive of training regarding all aspects of SBT,^[6-8,10,11,13,15] while some programmes and activities have only focussed on debriefing techniques.^[5,9,12] One study also described

Table 1: Participant professional background characteristics of studies included			
Participants	Number of studies		
Multi-disciplinary faculty/non-faculty	4		
Nurse educators	3		
Simulation instructors and fellows	2		
Residents	1		
internal medicine physician educators	1		
simulation educators and simulation technicians	1		
Surgical educators	1		
Total	13		

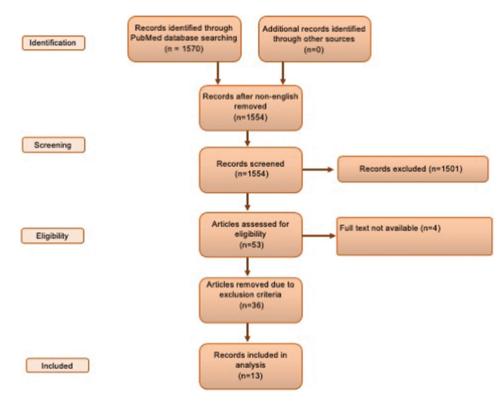


Figure 1: Flow chart for included studies

Table 2: Duration of programmes described			
Duration	Number of programmes/activities	References	
Training hours ≤1 day	4	4, 5, 6, 7	
1–7 days	4	8, 9, 10, 11	
<1 year	1	12	
Indeterminate	1	13	
≥1 year	3	14, 15, 16	

Table 3: Type of study/report			
Type of study	Number of studies/reports	References	
Quantitative analysis	5	4, 6, 7, 10, 11	
Qualitative analysis	0		
Mixed methodology	4	8, 5, 9, 12	
Narrative review	4	14, 15, 13, 16	
Total	13		

a training activity using simulation for assessment.^[4] The duration of the programme is also wide-ranging, from 90-minute^[7] sessions to programmes that are more than a year long [Table 1].^[16] While the relatively short-duration activities are in workshop mode, the longer ones are fellowship programmes. One programme is a workshop followed by a long-term follow-up plan.^[14] The programme participants are simulation educators and fellows from all clinical and nursing backgrounds, but programmes focussing on a single specialty, for example, anaesthesiology, are lacking [Table 2]. Only one programme described activity for surgical educators^[12] and one for internal medicine educators.^[4] While the long-duration programmes and fellowships describe multiple activities within the programme, none of the reports, except one, describe a regularly conducted activity with long-term follow-up with the participants.^[14] Despite being a speciality with the highest end-users for SBT, none of the primary authors or programmes described in the current review are focussed on anaesthesiology education and practice. The maximum number of reports describe a multi-specialty/multi-disciplinary participant pool, which probably reflects that a larger participant pool ensures the success of such programmes.

2. What challenges or barriers related to faculty development training programmes in SBT are reported?

None of the studies mention the challenges and barriers in conducting and continuing these programmes. Some apparent challenges and barriers are the lack of dedicated faculty for conducting such programmes, financial constraints in investing in simulators, and time constraints for faculty to work and attend such workshops. The authors mention some challenges the activities and programmes have tried to overcome. We could not find any purely qualitative study in the selected articles. Some of the included reports employ a mixed methodology; the challenges of such training have not been elicited. Some reported challenges are listed as follows:

- Lack of consolidated and structured faculty development program (FDP) in India, multi-disciplinary team training opportunities using simulation, and mapping simulation into the existing curriculum^[14]
- Simulation fellows were completing the program with varied experience and expertise^[16]
 Lack of training in surgical faculty^[12]
- 3. What is known about the effectiveness of the methods and strategies utilised in these faculty development programmes?

Most of the included studies have found the programmes and activities to be very useful, as reported by the participants. Following are some consolidated findings and outcome measures from the included studies:

- Reportedly achieved all learning objectives
- Well-appreciated course content and delivery
- Relevant content for learning and disbursement

Qualitative feedback included the following

- "Excellent with ideal lead-in and subsequent group work."
- "Great format."
- "This course was beneficial. The conversation was facilitated very well."
- "It is excellent and helps in running the simulation scenario."
- "If this FDP were not there, I would have forgotten the simulation; this has supported me and provided constant monitoring."

Some drawbacks of the programmes and activities reported by the participants are as follows:

- "The only thing I did not like is that the focus of scenarios is all paediatric, I have to extrapolate it to adults."
- "The audio was not as clear as it could have been. I was a bit confused about which avatar was sometimes talking."
- "My discipline (social work) is not often represented in the scenarios."

In general, the reports and studies were not analysed for quality of reporting as most of them included narrative descriptions of the programmes and activities despite some intervention reports. However, this scoping review emphasises the need for more faculty development and training activities related to SBT and good qualitative and mixed-method studies to generate evidence about the challenges and barriers of such programmes. The review also examines the lacunae in specialty-specific training programmes related to SBT, especially anaesthesia and other critical fields. Simulation-based teaching and training activities are extremely important in anaesthesiology as they provide a safe learning environment for the learners to practice skills and master and learn the nuances of non-technical skills, which are important tools to ensure patient safety during crisis management.^[17] A report of such activities outlining exact details, challenges, and learner outcomes would be an extremely useful resource for trainers engaged in SBT in anaesthesiology and allied fields. The review also highlights that many programmes are not essentially designed according to the needs of the faculty. A robust needs assessment will bring about specific faculty requirements in areas where training is needed, which can be addressed in customised faculty training programmes. Such programmes will need to be modified and continuously re-evaluated according to the feedback received from the participants. It is also evident that the financial support for such programmes will further strengthen their robustness.

CONCLUSION

This scoping review underscores the need for more comprehensive, specialty-focused faculty development programmes in simulation-based teaching. While acknowledging the effectiveness of existing initiatives, there is a call for greater attention to qualitative and mixed-method studies addressing the challenges and barriers faced. The lacunae in specialty-specific training programmes, particularly in anaesthesiology, highlight the importance of refining current strategies to enhance the outcomes of training activities. This study serves as a foundational resource for educators, administrators, and researchers seeking to design future programmes that cater specifically to the needs of those engaged in simulation-based teaching within critical healthcare fields.

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Conflicts of interest

There are no conflicts of interest.

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Appendix 1: Overview of studies and reports included in the final analysis. **Study- Any manuscript where a question has been asked and data (either quantitative or qualitative) has been generated and analyzed			
Author, year, Program name	Study/ report*	Method- Qualitative/ Quantitative/ Mixed/ Narrative	Main findings Report 1. Brief description of the approach 2. Challenges/barriers reported before the approach that the report addresses 3. Benefits of the approach Study 1. Intervention 2. Outcome measured
			3. Conclusion
K T Waxman (2011) BASC program	Report	Narrative	Brief description: The Bay Area Simulation Collaborative (BASC), established in 2007, is a group of more than 100 schools of nursing and hospitals, totalling more than 600 faculty and hospital educators from both service and academia in the ten counties that comprise the San Francisco Bay Area. This project was designed to train and educate nursing faculty and hospital educators in simulation concepts. It was also designed to develop clinical simulation scenarios within the BASC. To standardise and promote simulation-based teaching, a faculty development plan was created.
			The plan was based on the Benner novice-to-expert Model
			The 50 high-fidelity simulation scenarios were also co-written by academic/clinical teams and validated by subject matter, clinical, and simulation experts. These scenarios were pilot-tested annually.
			Challenges: Lack of training of nursing educators in SBT
	Chudu	Quertitetius	Benefits: This collaboration/program directly aided in increasing educational capacity concerning faculty development, simulation scenario development and dissemination, and research. The BASC met the primary goal of fostering regional competency in simulation pedagogy to enable educators to deliver innovative education to students and staff.
Hyun Soo Chung, et al. (2012)	Study	Quantitative	Intervention: An international, collaborative, multi-professional program from a pre-existing Western model was adapted. The process focused on prioritising curricular elements based on local needs, translating course materials, and delivering the program in small group facilitation exercises.
			Outcomes measured: Three types of evaluation data were collected: participants' simulation experience, participants' ratings of the course, and participants' self-assessment of the impact of the course on their knowledge, skills, and attitudes (KSA) toward simulation-based teaching.
			Conclusion: Despite various challenges, a systematic approach in adapting a Western simulation faculty development course model was successfully implemented in Korea, and the program improves participants' self-confidence and learning.
Eli M Miloslavsky, <i>et al</i> . (2015) RaT program	Study	Quantitative	Intervention: Residency training is charged with improving resident teaching skills. Utilising simulation in teacher training has unique advantages, such as providing a controlled learning environment and opportunities for deliberate practice. A RaT program was embedded in an 8-case simulation curriculum for 52 internal medicine (IM) interns. Residents participated in a workshop, then served as facilitators in the curriculum and received feedback from faculty.
			Outcomes: The intern learners measured residents' teaching and feedback skills using pre-/post-program self-assessments and post-session and post-curriculum evaluations. Conclusion: This simulation-based RaT program offered a unique opportunity for the deliberate practice of teaching skills in a simulated environment and led to improvements in resident facilitators' teaching and feedback skills. The simulation curriculum, facilitated by residents, was well received by the intern learners.
John T Paige, et al. (2015) "Best Practices for Debriefing in Surgical Simulation: the What, Where, When, and Why."	Study	Quantitative	Intervention: A workshop on best practices for debriefing in surgical simulation-based training was developed for the 2012 Annual Association for Surgical Education Meeting. Content emphasised key theoretical concepts related to and evidence-based components of an effective debriefing. Additionally, the workshop incorporated experiential learning via active debriefing following a simulated scenario. Little literature in healthcare focuses on the key constituents of optimal debriefing, especially in surgery. Outcomes measured: The workshop's effectiveness was assessed using a pre-/ post-workshop questionnaire design completed by the participants. Questions measured self-efficacy about the objectives-driven aspects of debriefing
			Conclusions: Effective debriefing is essential for educators involved in surgical simulation-based training. Without it, learning opportunities are missed. Training the trainer in effective debriefing is critical to ensure standardisation of practice. Creating a meeting-based educational workshop to teach debriefing to surgical educators is feasible. In addition, it can be designed to span several sessions to provide different opportunities for learning and degrees of participation.

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Author, year,	Study/	Method-	Appendix 1: Contd Main findings
Program name	report*	Qualitative/ Quantitative/ Mixed/ Narrative	Report Brief description of the approach Challenges/barriers reported before the approach that the report addresses Benefits of the approach Study Intervention Outcome measured Conclusion
Christine M Thomas, <i>et al.</i> (2015) NLN Leadership Development Program for Simulation Educators	Report	Narrative	 Brief description: Important to the success of simulation programs in nursing education is that faculty are formally trained in theory-based simulation methods. The National League for Nursing (NLN) Leadership Development Program for Simulation Educators is an annual yearlong faculty development program focusing on advancing simulation as a science, leadership development, and networking with diverse educators. Small working groups are formed based on personal interest in projects that advance simulation science. The authors were members of the 2014 NLN simulation educator faculty development group (FDG) and elected to design a faculty development resource. The entire FDG met monthly in synchronous video online and in-person video meetings at four NLN-sponsored conferences—the completed project. The Simulator Educator Toolkit was sent to NLN simulation experts Nursing Education Perspectives for review, feedback, and eventual posting on the NLN Simulation Innovation Resource Centre (SIRC) website. Challenges: None Benefits: Simulation coordinators can use this product to develop individual learning trajectories for simulation educators and technologists. The toolkit outlines levels of ability
Young Sook Roh <i>et al.</i> (2016)	Study	Quantitative	 for efficiency and provides quality resources to meet the diverse needs of simulation educators and team members. Intervention: Participants were asked to rate their competence on a 10-point scale (0=strongly incompetent, 10=strongly competent) for both the pre-course and post-course stages. Outcomes measured: The participants' learning and attitudes from the course were evaluated. Participants' demographics (gender, age, simulation instructor experience, and self-assessment of simulation expertise) were also surveyed.
			Conclusion: Trained educators are critical in integrating simulation into nursing curricula. Consequently, a faculty development program on simulation pedagogy aimed to maximise simulation instruction competency was developed, implemented, and evaluated in a Thai nursing faculty.
Debra Nestel, <i>et al.</i> (2016) AusSETT Program.	Study	Mixed method	 Interventions: Three days of workshops with four to eight hours of e-learning. The program was offered to all professions in all states and territories. Three hundred and three participants attended workshops, with 230 also completing e-learning modules. Topics included foundational learning theory, orientation to diverse simulation modalities, briefing, and debriefing. Outcomes Measured: A layered objectives-oriented evaluation strategy was adopted with multiple stakeholders (participants, external experts), methods of data collection (end-of-module evaluations, workshop observer reports, and individual interviews), and at
			various data points (immediate and two months later). Conclusions: The program is a significant and enduring learning resource. Developing a national training program to support a competent simulation workforce is feasible. The Program objectives were largely met.
Michelle Chiu, Stu et al. (2017)	Study	Mixed method	Intervention: Kern's approach to curriculum development was used to develop, implement, and evaluate the Foundational Elements of Applied Simulation Theory (FEAST) curriculum.
			Educational strategies were developed, the curriculum implemented, and the curriculum evaluated. Outcome measured: Data in the form of anonymous feedback surveys, focus groups, and retrospective pre- and post-self-assessment questionnaires was collected from 32 fellows over five years of implementation of formal curriculum in educational theory. Conclusion: Program evaluation shows that FEAST has increased participant knowledge in key areas relevant to simulation-based education and that the curriculum has successfully met the needs of novice simulation educators.

Author year	Study/	Mathod	Appendix 1: Contd
Author, year, Program name	Study/ report*	Method- Qualitative/ Quantitative/ Mixed/ Narrative	Main findings Report 1. Brief description of the approach 2. Challenges/barriers reported before the approach that the report addresses 3. Benefits of the approach Study
			 Intervention Outcome measured Conclusion
Nelson L Wong et al. (2020) (SimLEARN) developed DebriefLive	Study	Mixed method	Intervention: The Simulation Learning, Education, and Research Network (SimLEARN) developed DebriefLive, a virtual teaching environment that brings together faculty and participant debriefers. Recorded simulation sessions were viewed, followed by the opportunity for participant debriefers to debrief virtual learners. Participant debriefers were then provided with structured and objective debriefings of debriefings with the added opportunity for immediate practice. Program evaluation data for the pilot sessions were collected via an electronic survey, including a mix of Likert scale questions and short-answer responses.
		level. Avatar-based debriefing scenarios for accuracy and appropriateness follow the technology of video-based scenarios. Whether to recommend this training program to colleagues	
			Conclusion: Simulation instructors and fellows found the innovative computer-based faculty development program DebriefLive acceptable and effective in increasing self-efficacy in debriefing.
Traci Robinson, Study Mixed (2020) Sim for Life Foundations program	Study	Mixed	Intervention: Healthcare professionals were recruited to attend a 2-day simulation educator faculty development course (Sim for Life: Foundations), covering principles of scenario design, scenario execution, pre-briefing, and debriefing. Debriefing strategies were contextualised to local culture and focused on debriefing structure, conversational strategies, and learner-centeredness. A debriefing worksheet was used to support debriefing practice. Trained simulation educators taught simulation sessions for 12 months.
		Outcomes measured: Debriefings were videotaped before and after initial training and before and after 1-day refresher training at 12 months. The debriefing quality was measured at each time point using the Objective Structured Assessment of Debriefing (OSAD) tool by trained, calibrated, and blinded raters.	
			Conclusions: The Sim for Life Foundations program significantly improves debriefing skills with retention of debriefing skills at 12 months.
Michael J Meguerdichian, <i>et al.</i> (2021)	Report	Narrative	Brief description: The yearlong fellowship followed an apprenticeship-type model, where fellows were paired with existing simulation educators and received "on-the-job" training. Fellows would shadow a simulation faculty member's course facilitation and gradually begin to facilitate more parts of the course until they were able to teach it independently. By observing courses, fellows gradually learned scenario development, debriefing, and manikin operations. In successive years, it became apparent that fellows were completing the program with varied experience and expertise. Recognising the challenge of training proficient simulation educators with all the requisite knowledge and skills required, the Simulation Centre purposefully employed a revised instructional design (4CID) approach that draws upon the principles of CLT to provide a robust framework to re-design its fellowship program. The revised program included- 1. Markedly increased hours of curriculum development time to ensure the fellowship curriculum embodies the 4CID model. 2. Regular follow-up for each fellow by the faculty team to ensure they are recording in their logbook and working on capstone projects. 3. Each fellow receives individual feedback on their milestone progress twice throughout the fellowship to ensure they are meeting requirements and to provide opportunities to focus on learning opportunities for their growth.
			The four components include (1) structuring learning tasks, (2) offering supportive information, (3) providing procedural information, and (4) focusing on part-task practice. Challenges: Simulation fellows were completing the program with varied experience and expertise.
			Benefits: The framework is supported by evidence-based approaches, best practices, and expert opinion. Development of a reproducible and high-quality simulation fellowship curriculum, by which simulation fellows can create impactful simulation experiences and maybe move the dial on improved clinical outcomes.

			Appendix 1: Contd
Author, year, Program name	Study/ report*	Method- Qualitative/ Quantitative/ Mixed/ Narrative	Main findings Report 1. Brief description of the approach 2. Challenges/barriers reported before the approach that the report addresses 3. Benefits of the approach Study 1. Intervention 2. Outcome measured 3. Conclusion
Megan A Koster, <i>et al.</i> (2021)	Study	Quantitative	 Intervention: A 90-minute workshop was delivered in person and in virtual formats (the latter was chosen due to the COVID-19 pandemic). Large-group facilitated discussions and small-group activities were used for practical skill development. The tools that were used in small group discussions were checklist tool, global rating scale tool, and objective tool. When delivered virtually, a shared online meeting platform enabled breakout rooms, screen-sharing, and participant chat functions. Materials and breakout room assignments were distributed in advance of the session via email. Outcomes measured: Twenty-six participants (30%) completed the postworkshop survey, which was designed, conducted, and analysed by the IMSH 2020 conference. Seven participants (100%) in the virtual version completed the survey. Conclusion: The workshop provides a practical, evidence-based framework to guide educators in the development of a simulation-based assessment program, including optimisation of the environment, design of the simulated case, and utilisation of meaningful, valid assessment tools
Rajasri R Seethamraju <i>et al.</i> (2022) PediSTARS Faculty Development Program	Report	Narrative	 Brief description: The PediSTARS Faculty Development Program is a novel approach to simulation faculty training to increase the pool of trained simulation faculty in India and neighbouring countries. Established in 2013, it is a 3-level faculty development program (FDP) using four main principles- use of simulation as a clinical problem-solving tool, emphasis on training teams of doctor-nurse dyads to reflect real-life settings, encouraging in situ simulation demonstrating the use of low-technology resources to create high-fidelity scenarios. Challenges: Lack of consolidated and structured FDP in India, multi-disciplinary team training opportunities using simulation, and mapping simulation into the existing curriculum. Benefits: Provided a structure to the simulation activities, set out goals to achieve, and laid down a pathway to progress. The process helped recall and reinforce skills learned at the TOT workshop and made the participants feel valued.