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Review Article

Standardized patients in antenatal history taking: bridging simulation and clinical practice: a narrative review

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ABSTRACT

Antenatal history taking is a main competency in obstetric education, requiring integration of communication skills, clinical reasoning, professionalism and patient centred care. Traditional bedside teaching alone may not provide required opportunities for repetitive practice because of limited patient availability, ethical considerations and variability in clinical exposure. Simulation based education using standardized patients (SPs) has emerged as effective strategy to address these challenges by providing realistic, standardized and safe learning environments. To examine the evidence for the role of SPs in teaching antenatal history taking and also review their educational use, benefits, challenges of implementation and future prospects in competency based obstetric education. A narrative review of recent open access literature (2023-2026) was performed. A critical review and synthesis of relevant articles on SPs, simulation based learning, competency based medical education, communication skills and obstetric education were performed to give an evidence based overview of the educational role of SPs in antenatal history taking training. Available evidence consistently indicates that using SPs improves communication skills, history taking ability, learner confidence, professionalism and clinical competence. SP based learning offers opportunities for deliberate practice, immediate feedback, reflective learning, and standardized competency assessment. Recent innovations such as teacher SPs and virtual patient technologies add to the further improvement of simulation based education and are complementary to conventional clinical teaching. SPs can be a valuable educational approach to teach antenatal history taking within Competency Based Medical Education. The inclusion of this teaching strategy within the curriculum of undergraduate and postgraduate education in obstetrics will facilitate the development of communication skills, competency-based evaluation and preparation for the practical situations.

Keywords: Standardized patients, Antenatal history taking, Competency based medical education, Simulation based learning, Obstetric education, Communication skills

INTRODUCTION

Over the past two decades, medical education has changed considerably in response to the evolving demands of healthcare. Greater emphasis is now placed on competency based learning, patient safety and patient centred care to ensure that graduates are prepared for clinical practice beyond the acquisition of theoretical knowledge. In obstetrics and gynaecology, these changes have shaped

curriculum that foster not only clinical competence but also communication skills, professionalism, ethical practice and effective teamwork. Such an approach aims to develop healthcare professionals who are capable of delivering safe, compassionate and high quality care.¹

Simulation based education is now widely recognized as an effective strategy for developing clinical competence in medical training. Unlike bedside teaching, simulation

enables students to practise clinical skills in a structured environment while maintaining patient safety. Repeated simulation sessions help students integrate theoretical knowledge with practical skills through structured feedback and reflection. Several studies have indicated that simulation based training improves communication skills, clinical skills, teamwork, decision making skills and learners confidence level and the reduces pre clinical anxiety.²

Among several forms of simulations, SPs have emerged as essential part of medical training programs. SPs are trained people who simulate particular clinical situations in which learners can practice their skills of history taking, communication, physical examination, counselling and clinical reasoning in standardized settings. The capacity of SPs to create realistic patient encounters coupled with their feedback makes them extremely useful for teaching clinical skills that involve extensive use of communication skills.^{3,4}

However, an emphasis on patient centeredness in healthcare has further reinforced the importance of patient participation in health education programs. Global bodies have started to recommend that patients be actively involved in the entire process of education, including teaching, curriculum development, assessment and program evaluation. Patient participation in education will enable the students to comprehend the experiences and viewpoints of patients.⁵

Recent studies proves the significance of using SPs in training. Comparing the effectiveness of teaching by SPs and peer role playing, it has been shown that teacher SPs create more realistic settings for training and offer a better quality of history taking skills than peer role playing.⁶ Also, there is evidence that simulation training in the context of competency based medical education helps improve procedural skills, communication, self confidence and readiness to perform clinical practice.⁷

Obstetric education faces a set of challenges since antenatal consultations need skills not only of technical nature but also interpersonal ones. The first antenatal consultation requires the establishment of rapport along with gathering medical, obstetric, surgical, social and family history from patients. In addition, counselling of pregnant women on the issues of their pregnancy, possible complications and prevention measures needs to be provided by practitioners who show empathy, professionalism and cultural competence. However, such skills demand multiple repetitions under supervision which might not be possible in regular clinical training due to lack of patients and ethical reasons.

Despite the extensive use of SPs in various domains of healthcare training programs, there are relatively few studies that specifically investigate the use of SPs in educating students about taking antenatal history. Most of the published literature on this topic focuses on

communication skills, simulation based education, virtual patient technologies and learners experiences with SPs rather than obstetric specific applications.^{8,10} However, in view of the increasing importance of competency based education and patient centered approach to maternity care, it highlights the need to conduct an evidence review.

The following narrative review hence attempts to explore the role of SPs in teaching antenatal history taking skills through a critical examination of the existing literature on the development, application, efficacy, strengths, weaknesses and future prospects of SPs in competency based obstetric training.

EDUCATIONAL APPLICATIONS OF SPs IN TEACHING ANTENATAL HISTORY TAKING

SP teaching has revolutionized the process of teaching antenatal history taking by creating realistic and standardized clinical encounters which address the divide between theory and practice. While traditional classroom learning does not provide this opportunity to learners, the SP approach allows medical knowledge to be applied in real world situations as well as communication skills and clinical reasoning to be developed in a supportive environment. With the growth of competency based medical education, SPs have become an invaluable source of education in conducting thorough antenatal consultations.^{1,2}

Communication skills and therapeutic relationships

Communicating effectively is very important in quality antenatal care since it affects many things such as patient's trust, satisfaction, adherence and general pregnancy outcomes. While conducting antenatal consultations, the health professionals need to convey complex information to the patient, answer their queries, gather sensitive information from them and make decisions together with them in an empathic manner. The SPs offer learners many chances to practice all these communication skills under realistic conditions and receive feedback on them in terms of verbal and nonverbal communication, active listening and interpersonal behaviour.

Development of comprehensive history-taking skills

A proper antenatal history involves a thorough evaluation of the obstetrical, medical, surgical, menstrual, family, social and psychological history of the individual that may affect her pregnancy. Often times, students are concerned about asking all of the clinical questions without considering building rapport or adopting an approach that is centred on the patient. In SP experiences, learners have an opportunity to blend their clinical knowledge and interview skills through consistent practice. Since every learner goes through the same standardized experience, evaluators can objectively assess the learner's history taking skills.⁶

Counselling and patient-centred care

Antenatal care in contemporary times does not only involve the diagnosis but counselling on nutrition, lifestyle changes, prenatal testing, vaccinations, birth preparation, breastfeeding, and complications of pregnancy. Counselling in such cases necessitates the customization of information to fit a woman's level of education, beliefs, and emotions. The use of SPs presents chances for one to practice counselling in real life scenarios that encourage patient centered care and informed decision making. Immediate feedback from SPs allows learners to understand how effectively the information has been conveyed.⁵

Professionalism, empathy, and cultural competence

Professionalism is an essential competency of all healthcare professionals. Antenatal consultations include difficult emotional experiences like previous miscarriage, infertility, domestic abuse, congenital conditions, unplanned pregnancy and psychological disorders. Addressing such scenarios needs empathy, privacy, cultural awareness and proper communication. The technique of Simulation with SPs ensures that learners practice and acquire these skills in a psychologically safe setting where no real patient is put to emotional distress. This will gradually build the learner's confidence and professionalism.³⁻⁷

Clinical reasoning and decision-making

Apart from focusing on communication and patient history taking, SP encounters aid in the formation of clinical reasoning as well. The information obtained through the simulation of antenatal visits necessitates the identification of risk factors, prioritization of clinical problems, differential diagnoses and necessary investigations. It is possible for instructors to advance the difficulty level of cases according to the level of experience of learners so that learners may move from regular antenatal care cases to complex antenatal cases.

Feedback, reflection and competency based assessment

Another major advantage of SP approach is the availability of immediate and structured feedback. This allows learners to get feedback on their clinical and communication skills from the perspective of instructors, colleagues and SPs. Reflection after each experience allows students to see what skills are strong and where they need to improve and make plans for further development.

The SP approach is extensively used in the OSCEs and other types of competency based examinations due to consistent clinical cases and standardized examination conditions. Structured checklists and standardized rating scales provide more fair, reliable and objective way to evaluate competencies that cannot be assessed in written examinations. Among such competencies are communication skills, counselling skills, professionalism, empathy and clinical reasoning.^{4,8}

Learner confidence and preparedness for clinical practice

Transitioning from learning in classroom to dealing with patients is a process that usually brings fear to medical students. SP scenarios alleviate anxiety because learners can train themselves through repetition in safe atmosphere before their clinical training. Repetition allows for acquisition of improved communication skills, improved clinical performance and building of confidence prior to engaging in antenatal clinics. A recently published meta analysis suggests that use of SP based teaching helps to increase self confidence and build up clinical competence.⁹

In general, SPs present a complete package of learning that includes communication skills, professional behaviour, counselling, clinical reasoning, feedback and competency based assessment all in one antenatal encounter. Their capacity to generate a reliable, patient focused and ethical training environment makes them especially useful in preparing health care practitioners to provide safe maternity care.

Table 1: Summary of current evidence on the effectiveness of SPs in antenatal history taking education.

Authors	Year	Study design	Major findings	Relevance to antenatal history taking
Flanagan and Cummings ³	2023	Literature review	Improved communication, confidence and clinical competence	Supports communication training
Elendu et al ²	2024	Review	Simulation improves competency, teamwork and patient safety	Supports simulation-based antenatal education
Hamilton et al ⁸	2024	Review	Virtual and hybrid SP models complement conventional simulation	Supports future integration of digital simulation
Ghorbani et al ¹⁰	2024	Qualitative study	SPs valued educational participation and highlighted training needs	Supports structured SP programmes
Wei et al ⁶	2025	Comparative study	Teacher-SPs outperformed peer role-play in history taking	Supports antenatal interviewing skills
Devendra Prasad et al ⁷	2025	Educational study	Simulation improved competency within CBME	Supports competency-based obstetric education

CHALLENGES AND LIMITATIONS OF IMPLEMENTING SPs

While the benefits of SP programs in education are many, there is still a need for great institutional effort and resources for such programs to succeed. The success of SP programs will require well crafted clinical scenarios, experienced instructors, recruitment and training of SPs and quality assurance measures. The absence of any of the aforementioned will affect the consistency and effectiveness of such SP encounters.

The problem of recruiting and retaining appropriately trained SPs is yet another challenge. SPs should be regularly oriented, rehearsed, monitored, and retrained in order to guarantee consistency in performing clinical roles. Role playing differences and communication skills can affect performance of learners and validity of their assessments.

There are financial and logistical issues that will play an important part in the implementation of SP programs. There will be a need for simulation laboratories, audio and video equipment, administrative staff and financial means to recruit and remunerate SPs.

Another important requirement that must be taken into account for the success of SP programmes is faculty development. Professors need to be trained in developing simulations, facilitation, observation, debriefing and competence evaluation. Feedback is an important part of simulation based education and lack of proper training can affect the educational value of SP interactions.

While SPs can effectively simulate communication and counselling sessions, they are not capable of simulating all of physical examination findings during prenatal examination. Abdominal palpation, checking fetal presentation, fundal height and auscultation of fetal heart require use of task trainer, mannequin/clinical experience. Therefore, SPs should be considered as a complement to bedside learning and not an alternative to it.

Lastly, while digital technology has made simulation possible via virtual patients and blended learning techniques, it cannot entirely substitute for direct interaction. Real communication skills, empathy and non-verbal behaviours are vital elements of antenatal counselling, which can only be learned through direct interaction with SPs.

FUTURE DIRECTIONS AND RECOMMENDATIONS

The ongoing development of competency based medical education offers a chance to enhance the implementation of SPs within the scope of obstetric education. While existing literature proves that SPs based training contributes to the improvement of communication, clinical competencies, self confidence and professionalism. future

training programs need to pay attention to longitudinal application of SPs within both undergraduate and postgraduate programs instead of simulation sessions. Gradual increase of the complexity of antenatal scenarios will enable learners to build their communication and clinical skills and support the principles of competency based education.

It is important to make future SP training programs more diverse in terms of antenatal scenarios, which will mirror the modern-day reality of obstetrics. High risk pregnancies, recurrent pregnancy losses, hypertensive complications, gestational diabetes, domestic violence, mental health issues, adolescent pregnancy, substance abuse, prenatal testing and culturally sensitive counselling should be considered in simulation cases in order to promote clinical reasoning, empathy, ethics and patient centered communication.

It is important to acknowledge the necessity of faculty development for proper implementation of SP programs. Teachers must be trained on a regular basis for such areas as scenario development, simulation facilitation, debriefing, feedback and competency based assessment. The same can be said about institutional standardization of SP recruitment, training, evaluation and support.

Future developments in technology will most likely continue increasing the popularity of simulation based learning techniques. Hybrid teaching models, including live encounters with SPs and virtual patients, tele simulations and artificial intelligence can make education more accessible, while preserving human interaction. Nevertheless, the existing research demonstrates that digital simulations should serve as a supplement but not a substitute for live encounters of SPs, especially for communication and professional skills training.

The future of research in this field should focus on topics other than learner satisfaction and immediate educational outcomes. Multi centered studies with bigger numbers of participants must be conducted to assess such issues as retention of communication skills, transfer of learning, patient satisfaction, and cost effectiveness of SP programs. Comparative studies are necessary for evidence based curriculums in obstetric education.

Lastly, the cooperation between medical schools, teaching hospitals, simulation centres and health and educational professional associations is also necessary to facilitate the creation of standard programs and guidelines for SP training. The development of national and international standards for SP recruitment, training, testing and program evaluation would ensure consistency and enhance the delivery of simulation based OB education.

CONCLUSION

Antenatal history taking is an important skill in obstetrics that demands good communication, clinical reasoning,

professionalism, empathy and patient centered approach. While bedside teaching continues to be an important aspect of training in obstetrics, the emergence of new barriers, such as lack of patients, increase in the number of students, ethical concerns and differences in clinical exposure has shown the necessity of employing other training tools. Current evidence indicates that SPs offer an authentic and learner centred setting for acquiring good communication skills, history taking, counselling, professionalism and clinical reasoning. SP sessions offer the possibility of repeated practice and immediate feedback for the learners, while ensuring patient safety and respect at the same time. SP sessions also help in competency based assessment of learners, especially in Objective Structured Clinical Examinations.

Despite all these benefits, however, SP programmes can be successfully implemented only through an institution's willingness, well trained faculty members, SPs readiness, sufficient resources and quality assurance. The available literature suggests that results are positive; however, more studies should be conducted on obstetric education using SPs to assess the long-term educational effect and the cost effectiveness of this method. Innovations in the field of information technologies such as virtual patients or hybrid simulations, artificial intelligence can offer new perspectives for the improvement of medical education. Nevertheless, actual interaction with SPs is still essential for the development of empathy and communication. In summary, SPs can be considered an evidence based approach to teaching the process of antenatal history taking. Their use in competency based obstetric education curricula has the potential to increase learners competencies, communication skills and confidence.

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