Review Research

Enhancing Self-Efficacy in Midwifery Education: A Narrative Review

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Abstract

Background: Self-efficacy, known as human's reliance on their own capabilities for conductiong specific tasks, is a critical determinant of motivation and behavior. In the context of midwifery education, self-efficacy plays a pivotal role in shaping students' learning experiences, professional development, and clinical performance. This narrative review synthesizes the existing literature on self-efficacy in midwifery education, exploring its theoretical foundations, influencing factors, and the effectiveness of various interventions designed to enhance it.

Methods: To provide a comprehensive overview of the current understanding of self-efficacy in midwifery education, including its theoretical underpinnings, the factors that influence it, and the interventions that have been shown to enhance it.

Methods: A narrative review was conducted, drawing on a range of empirical studies, theoretical frameworks, and qualitative data. Key databases were searched for relevant articles, and a thematic analysis was performed to identify common themes and insights.

Results: The studies demonstrate that various interventions, including planning and coping strategies, simulation-based training, educational workshops, and interprofessional simulations, effectively enhance self-efficacy among healthcare professionals, particularly midwives and student midwives. These interventions led to improvements in diet, physical activity, clinical skills, and patient outcomes, such as reduced BMI and better management of postpartum hemorrhage. Workshops with standardized patients and preceptor role modeling were particularly effective in boosting self-efficacy in sexual health counseling and midwifery hallmark behaviors, respectively. Overall, well-designed interventions play a crucial role in fostering self-efficacy and professional competence in healthcare settings.

Conclusion: Self-efficacy is a crucial component of midwifery education, influencing students' learning, professional development, and clinical performance. The review underscores the importance of a supportive learning environment, effective preceptorship, and well-designed educational interventions in enhancing self-efficacy. Future research should focus on developing and evaluating innovative interventions to further strengthen self-efficacy in midwifery students and practitioners.

Keywords: Self-efficacy, Midwifery Education, Preceptorship, Simulation-Based Training, Educational Interventions, Social Cognitive Theory, Self-Determination Theory.

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Introduction

Self-efficacy is a crucial concept in understanding human behavior and motivation, particularly in the context of health education (1). It refers to an individual's belief in their ability to perform a specific behavior, which is a key determinant of their actions and decisions (1,2). According to Bandura's social cognitive theory, self-efficacy is influenced by four primary sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological information (2). Additionally, self-efficacy is shaped by internal personal factors and external environmental factors, which can impact an individual's confidence in their ability to perform a task (1-3). It refers to an individual's confidence in their ability to perform specific tasks or behaviors, such as managing therapeutic groups of patients (3) or communicating effectively with patients and colleagues 2. Research has shown that self-efficacy can be developed and strengthened through training and experience (3,4). Additionally, a qualitative study identified six main sources contributing to the development of self-efficacy beliefs among healthcare providers in delivering health education, including quantity and quality of experience, encountering unexpected events, client trust, self-concept, professional knowledge and skill, and vicarious experiences (5). Furthermore, self-efficacy has been linked to other important outcomes, such as self-esteem, with research showing that self-efficacy, empathy, and emotional intelligence are predictors of self-esteem in healthcare professionals (6).

Prior to the eighteenth century, midwifery education was informal and unregulated, with traditional apprenticeships being the primary means of learning (7). However, with the introduction of formal midwifery programs in the eighteenth century, midwifery education became more structured and regulated (7,8). The use of archives, such as the High Coombe College archives, has helped to shed light on the history of midwifery education (7-9). Additionally, the history of midwifery education has been shaped by various factors, including the establishment of the Tuskegee School of Nurse-Midwifery, which educated Black nurse-midwives to improve Black maternal and neonatal outcomes in the South (9,10). The importance of midwifery education is further emphasized by the need for midwives to be equipped to deal with the challenges of providing care in a rapidly changing environment (11). This requires a commitment to the recruitment and education of midwives, as well as ongoing opportunities for professional development and skill updates (11). Furthermore, the International Confederation of Midwives Global Standards for Midwifery Education provide a framework for midwifery education programs, and their implementation is crucial for ensuring that midwives are adequately prepared to provide high-quality care (12).

Theoretical Framework of Self-Efficacy

The theoretical framework of self-efficacy, as posited by Albert Bandura, is a theoretical construct that plays an important role in regulating human motivation, behavior, and well-being (13,14). Self-efficacy is the subject’s faith in his or herself to exercise control over their actions and environment, which in turn affects their selection of way of acting, environment that their acts get happened, alongside the degree of diligence and tenacity devoted to a particular assignment (16,17). This concept is deeply rooted in social cognitive theory, which suggests that self-efficacy convictions function in tandem with objectives, anticipated outcomes, and perceived obstacles and enablers to shape human behavior (15-17).

Theoretical models, like Self-Efficacy Theory, the Self-System Model of Motivational Development, and Expectancy-Value Theory, offer various viewpoints on the connection between self-efficacy, classroom involvement, and academic success (15,16).

The control theory of self-efficacy, as proposed by Carver (18), suggests that an individual's confidence in their capacity to influence their surroundings and achieve their goals determines their motivation and behavior. According to this theory, self-efficacy is a key factor in determining an individual's level of motivation and goal-directed behavior (19).

Other theory is Self-Determination Theory (SDT), introduced by Deci and Ryan, that is a widely recognized motivational theory in

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psychology that has been utilized in diverse areas, including education and healthcare (20,21). According to SDT, human behavior is influenced by three intrinsic psychological requirements: independence, proficiency, and relationship (20). When these needs are satisfied, individuals are more likely to experience intrinsic motivation, self-regulation, and well-being. In the context of education, SDT has been used to understand the factors that versus impair intrinsic motivation, self-management, and wellness (20). Research has shown that autonomy support from teachers and parents can enhance students' intrinsic motivation and self-regulation (22). Additionally, SDT has been applied in health contexts, such as exercise and physical activity, to understand the function of autonomous drive in forecasting activity-linked actions, thoughts, and bodily self-assessments (23,24).

Self-Efficacy in Midwifery Education

Research has shown that the relationship with the preceptor is a significant factor in enhancing midwifery students' learning experiences and development of self-efficacy (25). A learning culture that fosters a positive and supportive environment can also contribute to the development of self-efficacy in midwifery students (25). Studies have also shown that educational interventions can strengthen self-efficacy in midwifery students (24,25). For example, a study found that learner midwives subjected to midwifery training crafted to bolster self-assurance exhibited markedly elevated degrees of overall self-assurance and self-assurance in promoting natural childbirth (25). Additionally, instructor demonstration is crucial in fostering learner assurance and competence in childbirth assistance (26). Furthermore, research has shown that the education model used for skill acquisition can impact midwifery students' self-efficacy (27). For instance, a study found that students who used the daily life activities model had higher levels of self-efficacy (27). Moreover, a study in China found that self-concept has a forecasting significance for professional confidence in obstetric learners (28). Similarly, a systematic review of experimental studies in nursing education found that various teaching and learning interventions can enhance self-efficacy, although the most effective approach remains unclear (30). This highlights the significance of self-efficacy in midwifery, not only for the students' professional development but also for the well-being of pregnant women and childbirth outcomes (31). Therefore, it is essential to investigate the factors that enhance midwifery students' self-efficacy and its impact on their learning and professional growth.

Interventions to Enhance Self-Efficacy

The studies summarized in the table 1 explore various interventions and their impacts on self-efficacy, particularly in the context of healthcare and midwifery education. Aleksandra Luszczynska and colleagues performed a randomized controlled study to assess the impact of a planning intervention on fruit and vegetable intake, physical activity, and body mass, with an emphasis on the moderating influence of self-assurance. Participants comprised student nurses and midwives (N = 182) who were given action and coping strategies, followed by two reinforcement sessions. The intervention was successful in enhancing fruit and vegetable intake and reducing BMI in overweight individuals, with self-efficacy playing a significant moderating role.

Aria Grabowski and her team assessed the effect of an in-class simulation of lactation on obstetric learners' (N = 9) self-efficacy in lactation skills through a pilot study with a prospective cohort design and convenience sampling. The study involved two simulation-based workshops aligned with breastfeeding competencies, resulting in a 14% increase in students' self-efficacy and the demonstration of various clinical lactation skills.

Ingrid Blixt and colleagues examined healthcare professionals' (HCPs) perceived self-efficacy in providing lactation assistance prior to and following a training session, utilizing a before-after intervention research structure. The participants, including midwives and child healthcare nurses (N = 73), underwent a lactation training program consistent with the Ten Steps to Successful Lactation and WHO guidelines. The research discovered a notable rise in self-confidence

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scores for 8 out of 11 Breastfeeding Self-Efficacy Clinical Scale (BSCS) elements, with the total BSCS index score enhancing from 36.87 to 39.56 points (p = 0.001).

Another study by Aria Grabowski and colleagues evaluated the impact of a simulation-based exercise (LactSim OSCE) on midwifery students' self-efficacy in clinical lactation through a mixed-methods approach, including audio-video recordings, self-reflection, and focus groups. The intervention, which involved the LactSim OSCE simulation with opportunities for reflection, led to students' self-efficacy becoming more realistic, and the time spent on clinical skills was documented.

Talaat Khadivzadeh and colleagues compared the impact of interactive educational sessions with or without standardized patients (SPs) on obstetric learners' (N = 62) self-confidence in sexual health advising. The quasi-experimental study with pre- and post-intervention assessments found that workshops with SPs significantly increased self-efficacy more than workshops without SPs.

Signe Egenberg and colleagues examined the impact of interprofessional simulation training on self-efficacy, collective efficacy, and patient outcomes in postpartum haemorrhage management. The quasi-experimental, pre-post intervention design with multimethod data collection. The training, which included realistic scenarios and debriefing, led to increased self-efficacy and collective efficacy, as well as a significant reduction in severe postpartum haemorrhage.

William Lauder and colleagues explored differences in self-efficacy, student support, and self-reported competence among student nurses and midwives in Scotland through a cross-sectional survey of a stratified random sample (N = 777). The national evaluation of fitness for practice curricula revealed high self-reported competence, with significant differences in support levels between institutions, and the support from higher education institutions (HEIs) being rated the lowest.

Nitikorn Phoosuwan and colleagues developed and evaluated a self-confidence enhancement program for public health professionals (PHPs) in detecting and managing perinatal depressive symptoms. The mixed-methods study with randomization and focus group discussions (FGDs) involved PHPs from sub-district health promotion hospitals (N = 66). The intervention, which included one day of theory and four weeks of practice, resulted in higher self-efficacy scores in the intervention group (p = 0.004). FGDs revealed increased confidence, knowledge, and role perception among participants.

Suzanne M. Thompson and colleagues assessed the impact of an educational program on student midwives' self-confidence in their role as advocates for physiological childbirth. The pre- and post-intervention survey with control and intervention groups involved third-year student midwives. The midwifery education designed to strengthen self-efficacy led to a significant increase in overall self-confidence (p = 0.001) and self-confidence in advocating for natural childbirth (p = 0.029).

Finally, Robin Jordan and Cindy L. Farley examined the impact of mentor behaviors on student midwives' self-confidence in performing midwifery hallmark behaviors through a cross-sectional survey using researcher-developed tools. The study, which involved recent graduates of midwifery education programs, found that preceptor behaviors, particularly role modeling of therapeutic presence and non-intervention significantly affected student confidence in performing key behaviors. The students' belief in the importance of the hallmark was the most significant predictor of self-confidence.

Action and Coping Plans:

Luszczynska et al. and Grabowski et al. demonstrate that structured interventions, such as action and coping plans, can significantly enhance self-efficacy. These plans not only improve personal health outcomes (e.g., reduced BMI in overweight individuals) but also boost professional skills, such as lactation support and clinical lactation skills. Furthermore, studies have demonstrated that action planning and coping planning can mediate the relationship between intention and behavior, with action planning predicting behavior only when intentions are high (42). Additionally, coping planning has been found to be a critical self-regulation strategy for

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maintaining physical activity levels, particularly among formerly active individuals (42).

Simulation and Practical Training:

Studies by Grabowski et al., Blixt et al., and Egenberg et al. underscore the effectiveness of simulation-based training in improving self-efficacy. These simulations, whether in the form of workshops, OSCEs (Objective Structured Clinical Examinations), or interprofessional scenarios, provide realistic and practical experiences that translate into increased confidence and competence. Studies have shown that simulation training can significantly improve self-efficacy and performance among healthcare workers, including nurses (43-45). A systematic review of imitation-driven education for ongoing vocational enhancement within a fundamental healthcare setting found that simulation-based training can be an effective method for improving healthcare professionals' self-efficacy and performance (44). Another study found that simulation training can enhance physicians' and nurses' level of self-confidence and preparedness to use electronic medical records (43).

Conclusion:

The studies collectively highlight the effectiveness of various interventions in enhancing self-efficacy among healthcare professionals, particularly midwives and student midwives. These interventions, ranging from planning and simulation-based training to educational workshops and interprofessional simulation, have shown significant improvements in self-efficacy, clinical skills, and patient outcomes. For instance, action and coping plans, along with booster sessions, were effective in improving diet and reducing BMI, especially in overweight individuals. Classroom-based and simulation-based breastfeeding training increased self-efficacy and clinical lactation skills, while interprofessional simulations improved both self-efficacy and collective efficacy in managing postpartum hemorrhage. Workshops with standardized patients were more effective than those without in boosting self-efficacy in sexual health counseling. Additionally, preceptor behaviors and role modeling significantly influenced student confidence in performing midwifery hallmark behaviors. Overall, these findings underscore the importance of well-designed interventions in fostering self-efficacy and enhancing professional competence in healthcare settings.

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Table

Table 1: studies providing intervention to promote self-efficacy of midwives

Authors	Objective	Design/Method	Participants	Intervention	Key Findings
Luszczynska et al. (32)	Test planning intervention effects on diet, physical activity, and BMI, moderated by self-efficacy.	RCT with 2 booster sessions.	182 student nurses/midwives	Action and coping plans, 2 boosters	reduced BMI in overweight; self-efficacy moderated effects.
Grabowski et al. (33)	Evaluate classroom-based breastfeeding simulation impact on self-efficacy in lactation skills.	Pilot study, prospective cohort, convenience sampling.	9 nurse-midwifery students	2 simulation workshops	14% self-efficacy increase, improved clinical lactation skills.
Blixt et al. (34)	Describe HCPs' self-efficacy in breastfeeding support before/after training.	Pre-post intervention study.	73 HCPs (midwives, child healthcare nurses)	Breastfeeding training aligned with WHO recommendations	Significant self-efficacy increases in 8/11 items; overall BSCS index improved (36.87 to 39.56, p=0.001).
Grabowski et al. (35)	Evaluate LactSim OSCE impact on self-efficacy in clinical lactation.	Mixed-methods study with audio-video, self-reflection, focus groups.	Midwifery students (N unspecified)	LactSim OSCE simulation, reflection	More realistic self-efficacy post-reflection; documented clinical skills time.
Khadivzadeh et al. (36)	Compare interactive workshops with/without SPs on self-efficacy in sexual health counseling.	Quasi-experimental with pre/post assessments.	62 midwifery students	Workshops with/without SPs	Workshops with SPs increased self-efficacy more.
Egenberg et al. (37)	Examine interprofessional simulation impact on self-efficacy, collective efficacy, and patient outcomes in PPH management.	Quasi-experimental pre-post design, multimethod data.	Midwives, obstetricians, auxiliary nurses	Interprofessional simulation, debriefing	Increased self/collective efficacy; reduced severe PPH.
Lauder et al. (38)	Examine self-confidence, student support, and proficiency in Scottish student nurses/midwives	Cross-sectional	777 midwives	National curricula evaluation	High self-reported competence; support differences between institutions; lowest HEI support.
Phoosuwan et al. (39)	Develop and evaluate SIP for PHPs in detecting/managing perinatal depression.	Mixed-methods with randomization, FGDs.	66 PHPs from sub-district hospitals	1 day theory, 4 weeks practice	Higher self-efficacy (p=0.004); FGDs showed increased confidence, knowledge, role perception.
Thompson et al. (40)	Assess educational intervention impact on self-efficacy in advocating for physiological childbirth.	Pre-post survey with control/intervention groups.	Third-year student midwives (N unspecified)	Midwifery education for self-efficacy	Significant increase in general (p=0.001) and advocacy self-efficacy (p=0.029).

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Authors	Objective	Design/Method	Participants	Intervention	Key Findings
Jordan, Farley (41)	Examine preceptor behaviors' influence on self-efficacy in midwifery hallmark behaviors.	Cross-sectional survey with researcher-developed tools.	Recent midwifery graduates (N unspecified)	Preceptor role modeling, non-intervention	Preceptor behaviors influence confidence; belief in hallmark value predicts self-efficacy.

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