

Evaluating the effect of an educational intervention on student midwife self-efficacy for their role as physiological childbirth advocates

Suzanne M. Thompson^{a,b,*}, Lisa Kane Low^c, Luc Budé^a, Raymond de Vries^{a,b,d}, Marianne Nieuwenhuijze^a

^a Midwifery Science, Zuyd University of Applied Sciences, Maastricht, the Netherlands

^b Care and Public Health Research Institute, Maastricht University, Maastricht, the Netherlands

^c School of Nursing, University of Michigan, Ann Arbor, United States

^d Center for Bioethics and Social Sciences in Medicine, University of Michigan, Ann Arbor, United States

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ABSTRACT

Introduction: Midwifery education that strengthens self-efficacy can support student midwives in their role as advocates for a physiological approach to childbirth.

Methods: To assess the effect of an educational intervention on self-efficacy, a pre- and post-intervention survey was administered to a control group and an intervention group of third year student midwives. The General Self-Efficacy Scale (GSES) was supplemented with midwifery-related self-efficacy questions related to behaviour in home and hospital settings, the communication of evidence, and ability to challenge practice.

Results: Student midwives exposed to midwifery education designed to strengthen self-efficacy demonstrated significantly higher levels of general self-efficacy ($p = .001$) when contrasted to a control cohort. These students also showed significantly higher levels of self-efficacy in advocating for physiological childbirth ($p = .029$). There was a non-significant increase in self-efficacy in the hospital setting in the intervention group, a finding that suggests that education may ameliorate the effect of hospital settings on midwifery practice.

Discussion: In spite of the small size of the study population, education that focuses on strengthening student midwife self-efficacy shows promise.

1. Introduction

The Lancet Series on Midwifery (Horton and Astudillo, 2014) emphasized the value and effectiveness of maternity care that begins with a focus on the needs of women and their families, rather than on identifying and responding to pathology. The philosophy that drives high quality care for childbearing women and their families is one in which biological, psychological, and social processes are optimized, a woman's capacity for childbirth and her subsequent role as a mother is strengthened, and obstetric interventions are used only when indicated. When asked, women indicate that positive childbirth experiences are those in which they can give birth without unnecessary medical intervention, in a location that they consider to be safe, supported by compassionate caregivers (Downe et al., 2018). The support and facilitation of physiological childbirth is a core value of midwifery practice (ACNM, 2012; Aitink et al., 2014; ICM, 2017). This is reflected in midwifery education, which places a strong emphasis on the

internalization of the midwifery philosophy of physiological childbirth, together with acquisition of competencies (knowledge, skills and attitudes) as part of professional socialization (Weis and Schank, 2002; Ulrich, 2004).

At the same time, however, midwives – and student midwives are faced with the reality of theory-practice gaps (Argyris and Schon, 1974) in which the professional ideals learned as a student do not always align with the realities of practice.

One such theory-practice gap is the promotion of physiological childbirth. Difficulties experienced by midwives include conflicts between authoritative knowledge and evidence-based practice (Keating and Fleming, 2009), an unwillingness to challenge routinized care practices, and a dominant medical hierarchy (Thompson et al., 2016, 2019b) which limits midwifery influence (Nilsson et al., 2019).

Incorporating evidence-based knowledge about pregnancy and birth against the backdrop of the cultural and organizational hegemony of medical practice can be challenging. To address this, educators should

* Corresponding author at: Academie Verloskunde Maastricht, Universiteitssingel 60, 6229ER Maastricht, the Netherlands.

E-mail address: s.thompson@av-m.nl (S.M. Thompson).

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pay attention to developing other characteristics in students (Pajares, 2003) that may supplement midwifery knowledge. One such characteristic is self-efficacy.

Social cognitive theory (Bandura, 2011) posits that self-efficacy – an individual's belief in their ability to carry out a course of action necessary to accomplish a desired goal – is an important factor for achieving professional goals. This characteristic is of particular importance in the education of health care professionals because students need to overcome the self-doubt associated with the intellectual, motivational, and social challenges of medical or health professions education (Klassen and Klassen, 2018). Midwifery education provides a sound fundament in the theoretical and practical skills needed to promote physiological childbirth (Renfrew et al., 2014; International Confederation of Midwives, 2019a, 2019b). Education that strengthens self-efficacy for applying knowledge and skills to practice may be an important area for midwifery educators to consider in designing education that educates midwives to be advocates for physiological childbirth. The value of developing self-efficacy is gaining traction in medical education (Dinther et al., 2011). The development of self-efficacious behaviour is seen as an important aspect of learning, in particular, motivation to learn (Artino, 2012), task selection, task persistence and cognitive strategies that support the task at hand (Dinther et al., 2011). Increasingly, educational researchers are exploring the importance of self-efficacy in healthcare students (Alavi, 2014; Klassen and Klassen, 2018) and among student nurses (Stump et al., 2012).

In a recent curriculum innovation in the Bachelor of Midwifery at a Dutch University of Applied Sciences, it was decided to supplement existing education about physiological childbirth with an initiative aimed at strengthening student midwife agency for physiological childbirth (Thompson et al., 2019a). Using Rapid Prototyping (RP) design methodology (Tripp and Bichelmeyer, 1990), we developed an educational programme with input from midwifery stakeholders (student midwives, midwifery preceptors and educators). This goal-oriented programme (Increasing Self-Efficacy in student midwives for Physiological childbirth – known as the 'ESSENTIAL' programme) consisted of three half-day sessions during the third year of midwifery education with intended learning outcomes (ILO's) and educational content that focused on effectively and convincingly communicating the evidence for physiological approaches to childbirth. The Dutch Optimality Index (Thompson et al., 2018) (OI-NL) was used as a reflective tool to support student engagement in assessing outcomes of care. Students were trained in persuasive communication strategies, including rhetorical discussion and debating skills. The design and development of the ESSENTIAL programme has been described in detail in a separate publication (Thompson et al., 2019a).

In this paper, we report the results of a study that explores the effect of the ESSENTIAL programme on student midwife self-efficacy for their role as promoters of physiological childbirth.

2. Methods

We used a quasi-experimental design to explore the effects of the ESSENTIAL programme, an educational intervention offered to third year student midwives intended to promote self-efficacy in the advocacy of physiological childbirth.

Both qualitative and quantitative data were collected from student midwives evaluating the educational initiative in order to explore the reception to and acceptability of the intervention.

2.1. Participants and data collection

We recruited from two cohorts of undergraduate student midwives who were in a four year, direct entry Bachelor of Midwifery programme in the Netherlands. Members of the first group, recruited in 2018, were controls; the experimental group, recruited in the subsequent year was exposed to an educational intervention (the ESSENTIAL programme).

Participants received an e-mail inviting them to participate in the study with two reminders being sent approximately one week and three weeks later. After giving informed consent, participants were then invited to fill in a questionnaire at two points in time during their third year of midwifery education.

Students in both cohorts were in their third year of study and had followed an identical programme comprised of theory and clinical placements up to the moment of recruitment. The 2018 cohort (from which a control group was recruited) consisted of a total of 65 potential participants; the 2019 cohort who were invited to participate in the educational intervention consisted of 47 potential participants.

Data were collected using an online questionnaire. We administered the questionnaire for both groups at two time points: February and June 2018 for the control group and February and June 2019 for the intervention group. The first measurement for each cohort (February 2018 or February 2019) we labelled T1; the second measurement for each cohort was correspondingly labelled T2. During this time frame, the control group followed the regular curriculum, which consists of theoretical study (tutorials, lectures and workshops) and an internship in either a primary care midwifery practice or hospital setting. The intervention group followed an identical curriculum and additionally, were invited to participate in the ESSENTIAL programme.

The study was reviewed and approved by the university ethics committee, Zuyderland Zuyd (METCZ20180038). Students' participation in both the study and intervention was voluntary, and confidentiality and anonymity were guaranteed.

2.2. Measures

We used a series of measures that included quantitative and qualitative assessment options to evaluate self-efficacy and self-efficacy related to midwifery care as our primary outcomes of interest.

2.2.1. General self-efficacy

In order to assess general self-efficacy, we used the 10-item general self-efficacy scale (Jerusalem and Schwarzer, 1992) (GSES), which is validated for use in the Netherlands (Teeuw et al., 1994) in the field of health and health psychology. The GSES was designed to assess optimistic self-belief, in how far individuals believe they are competent to fulfil tasks and function in a broad range of challenging circumstances (Luszczynska and Gutierrez-Dona, 2005). The GSES differs from other measures of optimism in that it focuses on personal agency – defined here as power to effect successful outcomes (Veneklasen, 2002; Gaventa, 2005). The 10 item scale is scored on a four-point Likert scale ranging from 1 (not at all true) to four (exactly true). Responses are then summed to give a composite score ranging between 10 and 40, with higher scores representing higher self-efficacy. In their work, Jerusalem and Schwarzer (1992) recommend the addition of specific items to assess self-efficacy relating to more specific constructs. Following their recommendation, we constructed items to assess the agency of student midwives in promoting and facilitating physiological childbirth (*Midwifery related self-efficacy*).

2.2.2. Midwifery related self-efficacy

Using Bandura's guide for constructing self-efficacy scales (Bandura, 2006), we devised a scale in order to assess self-efficacy within the specific domain of physiological midwifery practice. In order to capture the construct of physiological midwifery practice, we generated seven aspects of physiological childbirth care processes from the recently validated Dutch Optimality Index (Thompson et al., 2018) (OI-NL). This ensured that the items were an appropriate 'fit' with contemporary physiological midwifery care processes in the Netherlands. We differentiated between feeling able to promote a physiological approach in primary care (home) and hospital settings, creating two subscales, consisting of seven questions per sub-scale. Participants were asked to score each item on a 10-point scale, ranging from 0 = "cannot do at all"

to 10 = “highly certain can do”. Responses are then summed to give a score ranging between 0 and 70 per sub-scale.

Also included were six aspects which focused on personal agency for challenging practice and persuading others of the value of physiological childbirth in the maternity care domain. An example of these questions included perceived self-efficacy in discussing differing approaches to childbirth with an obstetrician, a midwife preceptor, or with a woman. This sub-scale consisted of eight items. Participants were asked to score each item on a 10-point scale, ranging from 0 = “cannot do at all” to 10 = “highly certain can do”. Responses are then summed to give a score ranging between 0 and 80.

Examples of the questions we formulated can be found in [Tables 1 and 2](#).

2.2.3. Beliefs about birth and about evidence-based practice

Previous studies illustrate that both student midwives and practicing midwives view the promotion of physiological childbirth as a core aspect of their professional identity ([Thompson et al., 2016, 2019b](#)). Moreover, they value evidence-based practice as a means of shaping their interactions with other stakeholders in maternity care. To this end, beliefs about birth and evidence-based practice were considered important secondary outcome measures as they appear to contribute to midwifery agency.

2.2.4. Birth beliefs scale (BBS)

We used the Basic Beliefs about Birth scale ([Preis and Benyamini, 2017](#)) (BBS) to assess student midwives’ beliefs about birth. Validated in Israel, the measure consists of two sub-scales (natural birth and medical birth beliefs), consisting of eleven statements reflecting basic beliefs about birth. The items are scored using a 5-point Likert scale, with scores ranging from 1 = “completely disagree” to 5 = “completely agree”. Scores for each sub-scale are derived by calculating a mean of the responses, with resulting scores between 1 and 5.

2.2.5. Evidence-based practice beliefs scale

The EBP belief scale ([Melnyk et al., 2008](#)) was used to assess student midwives’ beliefs about evidence-based practice. The validated EBP beliefs scale consists of 16 items measured using a 5-point Likert scale with scores ranging from 1 = “completely disagree” to 5 = “completely agree”. Items are scored (including two reverse scores for negatively phrased items) and are summed to achieve a score ranging between 16 and 80, with higher scores reflecting strength of beliefs about the use of evidence-based practice.

The questionnaire included the scales mentioned above and demographic information on the participants’ age, their highest educational attainment prior to starting midwifery education and the number of weeks spent in community and hospital clinical practice. We pilot-tested the questionnaire with a group of fourth year student midwives ($n = 5$) asking them to provide feedback in terms of clarity of questions and the length of time needed to complete the questionnaire. Some small linguistic adjustments were made on the basis of student feedback.

In addition to these measures, we collected quantitative and qualitative data pertaining to how participants evaluated and experienced the ESSENTIAL programme. We used a short questionnaire consisting of 2

Table 1
Midwifery related self-efficacy.

At home/in hospital, I trust in my ability to
Leave the membranes until they rupture spontaneously.
Provide support with various coping strategies in order to support women with labour pain.
Provide supportive, one-to-one continuous support during labour and birth.
Motivate women to be physically active during labour.
Auscultate foetal heart tones intermittently.
Provide space for a woman to push without verbal direction from me.
Support a woman to birth her baby using different, non-supine birthing positions.

Table 2
Self-efficacy in advocating for physiological childbirth.

I trust in my ability to...
Challenge areas of practice or (midwifery) management in areas where there is good quality evidence for a different approach.
Discuss areas of practice where there is contradictory evidence with
<ul style="list-style-type: none"> • obstetric • nursing or • midwifery colleagues
Challenge my preceptor if I see aspects of midwifery practice or management that are not evidence-based.
Discuss areas of practice that promote and support physiology with a woman.
Engage in a dialogue with a woman when she requests interventions that are not evidence-based.
Use the evidence that supports physiological childbirth to support my discussions with other midwives.

open and 9 closed questions evaluating the content of each component of the ESSENTIAL programme. We also asked participants to rate the quality of each of the sessions on a 10 point scale. Higher scores (5.5 and above) were considered representative of satisfaction with the session and scores lower than 5 representative of dissatisfaction.

Additional, qualitative data were collected during an informal feedback session, in which we had a structured conversation with students. This conversation was based around 5 open-ended questions relating to student experiences and motivation to participate in the ESSENTIAL programme. A written record was made of this session.

2.3. Data analysis

Our primary outcome was general and midwifery-related self-efficacy. We used an independent samples *t*-test to compare mean scores between the control group and intervention group. A *p*-value < .05 was considered statistically significant.

Missing items were imputed using maximum likelihoods methods ([Field, 2009](#)) in cases where not more than 10% of the total data from each measurement scale were missing. Questionnaires with more than 10% of data missing were excluded.

Data entry and analysis was performed using SPSS version 25.0.

3. Results

3.1. Participation in the questionnaire

A flow diagram ([Fig. 1](#)) demonstrates the recruitment and participation of student midwives in filling out the questionnaire, both in the control group and the intervention group.

The control and intervention groups were similar in terms of mean age and educational attainment prior to entering midwifery education. All were female and their age ranged between 19 and 38 years with a mean age of 22. For an overwhelming majority, the on-going Bachelor of Science was the highest academic achievement. One student had completed a Bachelor and Master in another subject area before starting the present Bachelor of Science. Participants also had similar exposure to theoretical education and internships during the midwifery programme.

In total, 102 questionnaires were returned. Of these, one questionnaire in the control group (February 2018) contained more than 10% of missing data. This questionnaire was removed, leaving 101 questionnaires across both cohorts for analysis (see [Fig. 1](#)). In line with a priori decision-making, missing data (less than 10%) in 27 questionnaires were imputed using maximum likelihoods methods.

3.2. Participation in the ESSENTIAL programme

All of the students in the intervention group ($n = 47$) were invited to

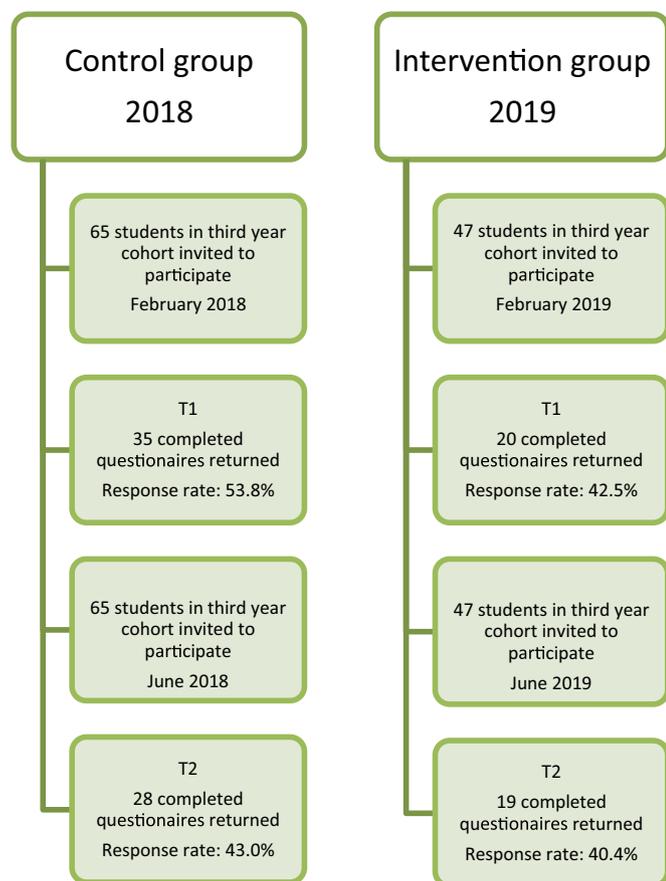


Fig. 1. Flow chart: recruitment, participation and response rates for participation in the questionnaire.

participate in the ESSENTIAL programme. Of these, 40 students participated in session 1 (85.1%), 35 students participated in session 2 (74.4%) and 24 students participation session 3 (51%).

3.3. Effect of the ESSENTIAL programme

3.3.1. General self-efficacy

The effect of the ESSENTIAL programme on general self-efficacy is reported in Table 3. Student midwives in both groups reported similar levels of general self-efficacy at T1. At T2, students in the intervention group reported significantly higher levels of general self-efficacy ($p = .001$), in contrast to the control group.

3.3.2. Midwifery self-efficacy

The results of midwifery self-efficacy are presented in Table 4.

In home settings: At T1, the control group had a higher level of midwifery self-efficacy compared to the intervention group. This difference was not significant. At T2, both groups demonstrated similar mean sum scores. Both groups showed an increase in self-efficacy between T1 and T2; however, when compared to the increase in the mean

Table 3
General Self-efficacy [range = 10–40].

	T1			T2		
	N	Mean	Std. deviation	N	Mean	Std. deviation
Control group	34	30.41	3.34	28	30.60	3.24
Intervention group	20	30.50	2.85	19	32.89	0.45

Table 4
Midwifery care self-efficacy in home and hospital settings [range = 0–70].

	N	Home		N	Hospital	
		T1	T2		T1	T2
Control group	34	56.64	58.39	28	51.02	47.32
Intervention group	20	53.50	58.36	19	47.90	49.84

sum score in the control group, the increase in the intervention group was statistically significant ($p = .017$).

In hospital settings: At T2, the control group mean score was decreased by several points. This decrease was not statistically significant. In the intervention group, there was a slight increase in levels of self-efficacy in hospital settings at T2. While not a statistically significant change, the increase may be relevant as a clinical/educational finding.

Student midwife self-efficacy for challenging practice and debating aspects of midwifery practice with women, midwifery preceptors and other professionals in the maternity care domain is illustrated in Table 5. The intervention group demonstrated significantly higher self-efficacy at T2 when compared to the control group ($p = .029$).

3.3.3. Birth beliefs

Student midwives showed high scores of belief in birth as a natural event and lower scores for belief in birth as a medical event (Table 6). In the intervention group, we observed a decrease in belief in birth as a medical event at T2, compared with the mean sum scores for this group at T1. This decrease was significant ($p = .015$). This is in contrast to the control group where the mean sum scores for birth as a medical event increased over time, although this increase was not statistically significant.

3.3.4. Evidence-based practice beliefs

There were no significant differences in EBP beliefs between the control group and the intervention group (data not presented).

3.4. Evaluation of the ESSENTIAL programme by student participants

Nineteen students participated in the evaluation and were positive in their assessment of the quality of each of the sessions (Table 7). Students were asked to rate each aspect of the ESSENTIAL programme on a 10 point scale, with scores above 6.0 indicating satisfaction with the programme.

Students were asked to answer some questions about which aspects of the programme were most or least useful. Students indicated that honing their skills for debate were valuable, as one participant told us, ‘it showed me the importance of using my own personal power’.

The Dutch Optimality Index (OI-NL) was noted to be of value for students, being viewed as ‘something new’ and ‘a useful tool for discussing how we do things, but especially, why we do the things we do’.

Students also gave verbal feedback in an informal setting following the final educational activity of the ESSENTIAL programme. As participation was voluntary and sessions were offered at moments when students were on clinical placements, sometimes far away from the university, they were asked what encouraged them to participate. Students indicated that they were curious about the content of the programme; one student said, ‘it looked like I might be able to get something (from ESSENTIAL) about leadership. I didn’t want to miss

Table 5
Self-efficacy in communication [range = 0–80].

	N	T1	Std. deviation	N	T2	Std. deviation
Intervention group	20	53.40	9.29	19	61.78	6.45

Table 6
Birth Beliefs [range = 1–5].

	N	Birth as a natural event		N	Birth as a medical event	
		T1	T2		T1	T2
Control group	34	4.41	4.48	28	2.43	2.55
Intervention group	20	4.32	4.38	19	2.77	2.42

Table 7
Evaluation of the ESSENTIAL programme [range = 0–10].

	Session 1	Session 2	Session 3	ESSENTIAL programme as a whole
Mean score	7.5	7.6	8.2	8.2

out'. Students also indicated that choices to continue attending were made on the basis of having enjoyed participating in the initial session. Students described feeling inspired by a 'fantastic guest speaker who I felt I could really learn something from. She is a role model for me'. Another highlighted feeling inspired by realizing that she could learn how to appear more self-assured.

Improvements suggested by students included providing more information ahead of time, attention to which day the programme was scheduled for (scheduling issues meant that one session was planned on a Tuesday). One student told us that she would have liked the programme to have continued to 'the next level – beyond. I would like it (the ESSENTIAL programme) to go further'.

4. Discussion

We evaluated the effect of the ESSENTIAL programme on the self-efficacy for promoting physiologic childbirth with a group of student midwives and compared this to a cohort of student midwives who were not exposed to this programme. Our findings show that the ESSENTIAL programme has promise as an educational intervention that strengthens student midwife self-efficacy for promoting physiological childbirth. This is an important first step in establishing credible and effective midwifery education that supports student midwives in their development as guardians of the physiological childbirth domain.

The importance of the role of the midwife as a professional who is able to promote and facilitate physiological childbirth is well documented (Downe et al., 2018; Organization, 2018). Contemporary midwifery education focuses on the competences of physiological childbirth – the 'what'. There is, perhaps, too little focus on the 'how' – the skills needed to promote physiological childbirth.

In terms of clinical performance, in this case, care practices that support physiological childbirth, it is noted that practical experiences, also termed 'enactive mastery' is the most powerful means of influencing self-efficacy (Dinther et al., 2011). Ideally, practical experience is gained in authentic learning situations in which students are exposed to role models to whom they can look to in order to develop their own professional identity (Ulrich, 2004; Byrom and Downe, 2010; Nieuwenhuijze et al., 2019). There are, however, gaps between ideal and real practice (Argyris and Schon, 1974), particularly in medicalized settings. The evidence notes the importance of communication and collaborative skills in bridging theory-practice gaps (Huston et al., 2018; Leach and Tucker, 2018). Our work confirms this, in particular, in relation to skills for discussion, debate and convincing communication about the evidence for physiological childbirth with other professionals. This justifies the choice made, when developing ESSENTIAL to provide educational content with a focus on developing self-efficacy in convincing communication through active participation in workshops, reflective discussions and debate.

We noted some results that, while not statistically significant, are of interest from an educational perspective. In particular, midwifery self-efficacy in home birth settings increased in both the control and intervention groups, with the intervention group demonstrating a significant increase between their T1 and T2 scores. This may suggest that, for these students, exposure to ESSENTIAL increased their self-efficacy for physiological childbirth in the home setting. For self-efficacious behaviour in hospital settings, the self-efficacy of the control group decreased between T1 and T2. The intervention group, on the other hand, showed an increase in self-efficacy for promoting physiological childbirth in hospital settings between T1 and T2. This is an interesting finding. Our own previous work (Thompson et al., 2016, 2019b) and the work of others (Keating and Fleming, 2009; Pollard, 2011; Kristienne McFarland et al., 2020) highlight the impact of medicalized childbirth setting on midwives in terms of their practices and their willingness to challenge the practice of others. Our findings suggest that focusing on strengthening self-efficacy prepares student midwives for the clinical setting, ameliorating the forces that make it difficult to advocate for physiological approaches to birth.

It should be noted that we measured self-efficacy among our groups of midwifery students at two points during their third year of education. A period of four months elapsed between the measurements at T1 and those at T2. During that time, the student had periods of theoretical and clinical education, both of which may also increase self-efficacy (Artino, 2012; Alavi, 2014). This exposure to an authentic learning setting, for the group exposed to ESSENTIAL, may have provided the opportunity for 'enactive mastery' (Dinther et al., 2011) allowing this group to apply what they had practiced in a simulated setting (workshops, reflection and discussion) to the authentic practice setting.

By comparing the two cohorts – which are broadly homogeneous – we were able to take possible changes to self-efficacy caused by maturation into account. While there were small increases in self-efficacy in the control group, the significant increase in self-efficacy in the intervention group cannot be explained by maturation alone and is a likely effect of the intervention.

4.1. Strengths and limitations

As far as we know, this is the first study to evaluate the effect of midwifery education aimed at strengthening self-efficacy of student midwives in their role as advocates of physiological childbirth. It was paramount to be able to test the ESSENTIAL programme in a real-world setting (Peters et al., 2013). This, plus the small numbers of participants available in the third year of our Bachelor of Science programme contributed to our choice for a quasi-experimental study design (Handley et al., 2018). Testing and evaluating the effect of the ESSENTIAL programme indicates its promise in producing strengthened self-efficacy for physiological childbirth with significant effect observed in general self-efficacy and in self-efficacy when advocating for physiological childbirth.

A limitation was our choice not to use a repeated measures design. This was due to the limited participation of students from one university. Their participation was both voluntary and anonymous and we prioritized the guarantee of anonymity out of sensitivity for the student participants. Because of this guarantee, we were unable to ascertain whether students who participated in T1 also participated in T2. This means that while we can interpret effect over each cohort, without a pairwise comparison we cannot detect individual effects. While this is a methodological limitation, the observation of a statistically significant effect in general self-efficacy and self-efficacy related to discussion skills provides a foundation from which to implement the ESSENTIAL programme and collect more data in a larger study in order to confirm these findings and gain new insights.

In assessing midwifery self-efficacy, we used the work of Teeuw, Jerusalem and Schwarzer (Teeuw et al., 1994, and, as recommended, added a domain-specific self-efficacy scale to supplement the GSES. We

were, however, unable to identify a domain specific, validated midwifery self-efficacy scale. To this end, we relied on creating a scale that captured the construct of physiological childbirth care in the Netherlands (Thompson et al., 2018), in combination with skills that midwives and student midwives themselves highlight as pre-requisite skills for physiological childbirth advocacy (Thompson et al., 2016, 2019b) While both the constructs of physiological childbirth care processes and the necessary advocacy skills were derived from recent literature from the Netherlands, it was outside of the scope of this study to validate this measure. This study highlights the need for a specific midwifery self-efficacy scale and developing and validating such a scale should be a focus for further research.

5. Conclusion

Our results create the foundation for building future interventions within midwifery education. We believe that our study offers promising new insights on the effect and value of midwifery education that focuses on strengthening self-efficacy. Midwifery education should ensure that student midwives develop the necessary competencies to be able to practice midwifery, including the competency to function as a guardian of physiological childbirth (International Confederation of Midwives, 2019a, 2019b). Other research has confirmed the importance of self-efficacy for the development of professional identity (Alavi, 2014; Klassen and Klassen, 2018); our study shows how increasing student midwife self-efficacy can help midwives to maintain their unique and important professional identity (Kristienne McFarland et al., 2020) as champions of physiological birth.

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Credit statement

Suzanne Thompson: conceptualization, methodology, investigation, formal analysis, writing original draft, project administration.

Lisa Kane Low: conceptualization, methodology, writing, review, editing.

Luc Bude: formal analysis, data curation.

Raymond de Vries: conceptualization, methodology, writing, review, editing.

Marianne Nieuwenhuijze: conceptualization, methodology, writing, review, editing, supervision.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Zuyd University of Applied Sciences, The Netherlands

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