

# Self-efficacy in breastfeeding support: a research on Italian midwifery students

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**Abstract.** *Background and aim of the study:* Maternal breastmilk represents the best nourishment for the newborn baby during its first six months, as it offers several benefits for the health and well-being of babies and mothers. In order to promote, protect and support effectively mother and child during breastfeeding, it is essential for midwives to be properly educated and to acquire highly professionalizing skills. This study aimed to evaluate the level of self-efficacy of the students attending the Degree Course of Midwifery, regarding the support of mother and child in breastfeeding. *Method:* A questionnaire of 37 items (Blackman et al, 2015) validated in Italian by Mazzeo Melchionda (2019), was sent on-line to students of ten different Midwifery Degree Courses to assess their level of self-efficacy regarding the management of breastfeeding. Statistical analysis was carried out using statistic software R3.4.3 (The Foundation for Statistical Computing). *Results:* 158 questionnaires were collected from ten Italian Midwifery Degree Courses. The areas in which students showed a high level of self-efficacy in managing breastfeeding include: the benefits of breastfeeding; the child's tendency to take the breast within an hour from childbirth and the relevance of skin to skin contact and rooming-in. Low levels of self-efficacy concerned the comfortably breastfeeding in public places and avoiding giving formula to the baby in its first six weeks of life. *Conclusions:* Generally the students attending Midwifery Degree Courses show a high level of self-efficacy in assisting mothers during breastfeeding and they prove to have a good knowledge of the benefits of breastfeeding to improve the health of mothers and their children. ([www.actabiomedica.it](http://www.actabiomedica.it))

**Key words:** breastfeeding, newborn, mother, skills, self-efficacy, midwifery students

## Introduction

Maternal breastmilk represents the best nourishment for newborn babies in their first six months, guaranteeing the prevention of diseases in the perinatal age and a proper growth (1). In order to begin and

maintain breastfeeding with a good outcome, during pregnancy and after childbirth, mothers should be actively supported not only by their families, but also by the healthcare system (2-3). The staff that works in healthcare facilities should try to protect, promote and endorse breastfeeding and should provide con-

sultation on the matter to pregnant women and new mothers (4). UNICEF and WHO recognize a “Children Friendly Hospital” as a healthcare facility that has successfully undergone a transformation regarding the assistance given to mothers and their children in the Maternity Ward, practicing the Ten Steps method (5).

Among healthcare professionals, the midwife has high competencies in early mother-child bonding, in promoting and sustaining breastfeeding, in spreading the notion of willingly donating breastmilk and in joining the international Code for the sale of maternal breastmilk substitutes (6-7).

It therefore becomes fundamental for future midwives to acquire a proper education in order to broaden their knowledge and their skills (8-10) and to promote, protect and support mother and child during breastfeeding.

Several international studies show that a lack of help for mother and child, disagreeing opinions and an inappropriate education of staff can seriously affect breastfeeding results (11-12). For instance, a survey of breastfeeding knowledge of 3500 midwives held by the Australian College of Midwives Inc. (ACMI) estimates that the education program provided by the hospital and by Universities is an essential source of information on breastfeeding and that ongoing education programs are still necessary (13-15).

The University of Brisbane, Australia, took the Breastfeeding Knowledge Questionnaire (BKQ), the Newborn Feeding Ability (NFA) and the scale and the Breastfeeding Initiation Practices scale (BIP) to test the knowledge and practical abilities of breastfeeding

of Australian nurses and midwives in order to improve long-term evidence-based practice (16).

A qualitative study at York University (UK) shows that breastfeeding is getting more and more recognition as a priority health policy. Health professionals who advise and support women on breastfeeding must be adequately educated so that mothers do not interrupt breastfeeding prematurely (17).

A study led by the School of Nursing, Southern Illinois University, shows that Degree Courses do not provide a complete education on breastfeeding for students, but they can influence positively the mother's duration of breastfeeding (18).

The Health Institute of Catalonia, Spain, conducted another study in 33 primary assistance centers, in order to evaluate the basic level of knowledge on breastfeeding among primary care professionals who are involved in giving support to new mothers using a CAPA (Compe-tència en l'Atenció Primària sobre Alletament) survey. This could help in identifying groups of professionals with lower skills on breastfeeding who may mostly benefit from interventions to improve their abilities in boosting and managing breastfeeding (19).

Both a Swedish (20) and an Israeli (21) studies examined the opinions of Nursery students on the benefits of breastfeeding, and they confirmed the importance of promoting it in future Nursery education programs. The study led by the College School of Nursing Chicago-Malcolm, Illinois, and the University of Pennsylvania, Philadelphia, assessed that students are not properly prepared to aid breastfeeding women, so they developed a kit full of educative

**Table 1.** Ten steps to successful breastfeeding

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1. Have a written infant feeding policy that is routinely communicated to staff and parents.
  2. Ensure that staff has sufficient knowledge, competence and skills to support breastfeeding.
  3. Discuss the importance and management of breastfeeding with pregnant women and their families.
  4. Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth.
  5. Support mothers to initiate and maintain breastfeeding and manage common difficulties.
  6. Do not provide breastfed newborns any food or fluids other than breast milk, unless medically indicated.
  7. Enable mothers and their infants to remain together and to practice rooming-in 24 hours a day.
  8. Support mothers to recognize and respond to their infants' cues for feeding.
  9. Counsel mothers on the use and risks of feeding bottles, teats and pacifiers.
  10. Coordinate discharge so that parents and their infants have timely access to ongoing support and care.
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evidence-based material on the topic, in order to supply future nurses with the necessary skills to support effective breastfeeding (22).

A systematic review highlighted that in order to promote and support breastfeeding an accurate education and adequate structures are fundamental for midwives and doctors (23).

A revision of 14 studies conducted by the School of Nursing and Midwifery at Western Sydney University states that it is essential to offer Nursery and Midwifery students educative strategies including academic lectures, simulations, evidence-based conferences with clinic cases, in order to increase their confidence in helping and guiding breastfeeding mothers and to guarantee future healthcare professionals who are well prepared to support breastfeeding (24).

## Aim

This study aims to evaluate the knowledge and the level of self-efficacy of Italian Midwifery students in managing, advising and supporting the new mothers in order to point out possible difficulties that can affect their acquisition of basic skills towards breastfeeding.

## Methods

### *Study Design*

The study has descriptive purpose and uses a quantitative design.

### *Instrument*

An on-line questionnaire (37 item) was chosen. The instrument was designed by Blackman et al. (25) and was validated in Italian by Mazzeo Melchionda et al. (26). It measures the perception of students of the Midwifery Course of Degree regarding their level of self-efficacy in helping breastfeeding mothers. The questions were measured with a Likert scale (1= it is really easy for me to do; 2= it is easy for me to do; 3= it is difficult for me to do; 4= it is really difficult for me to do).

Table 2 shows the item of the questionnaire.

### *Participants*

Through a convenience sampling, participants were selected from ten Midwifery Degree Courses in different Italian Universities: University of Rome La Sapienza, University of Ferrara, University of Modena and Reggio Emilia, University of Monza, University of Milano, University of Parma, University of Brescia, University of Bologna, University of Trieste, University of Pavia.

All the participants attending the third year and they accomplished a stage of at least 100 hours in the Maternity Ward.

### *Data analysis*

For each of the 37 items we calculated mean, median, standard deviation values and percentage of answers equal to 3 (It's difficult for me to do it) or 4 (It's very difficult for me to do it).

The mean score values were assessed in order to highlight the areas where students reported the greatest and the lowest self-efficacy. If present, missing values were excluded from the analysis and only valid responses were considered. All statistical analyses were carried out using R 3.4.3 statistical software (The R Foundation for Statistical Computing, Wien)

## Results

158 questionnaires were collected. Of these, 131 (82.9%) did not have any missing value in all the 37 items of the questionnaire. 29 questionnaires were gathered at the University of Rome – La Sapienza, 28 (100% of the students attending the third year) at the University of Ferrara, 23 (100% of the student attending the third year) at the University of Modena and Reggio Emilia, 15 (85% of the students attending the third year) at the University of Parma, 13 (80% of students attending the third year) at the University of Milan (Monza Hospital), 13 (80% of the students attending the third year) at the University of Brescia, 11 (59% of the students attending the third year) at

**Table 2.** The questionnaire

Item	To answer the questions: 1 = very easy, 2 easy, 3 difficult, 4 very difficult.
1	Hold her baby comfortably during breastfeeding
2	Position her baby correctly at her breast
3	Focus on getting through one feed at a time
4	Recognise the signs of good attachment
5	Take her baby off the breast without pain to the nipple
6	Determine if the baby is getting enough milk
7	Gain her family's support in her decision to breastfeed
8	Motivate her to breastfeed successfully
9	Breastfeed her baby without using formula as a supplement
10	Ensure that her baby is properly attached for the whole feed
11	Manage her crying baby who wants to breastfeed
12	Keep her baby awake during feeding
13	Maintain her milk supply by using demand feeding
14	Not to bottle-feed for the first 6 weeks
15	Feed her baby only breast milk
16	Keep mother motivated to breastfeed her baby
17	Get her friends to support her decision to breastfeed
18	Feed her baby every 2–3h
19	Comfortably breastfeed with her family members present
20	Comfortably breastfeed in public places
21	Finish feeding on one breast before changing to the other
22	Explain the rationale of demand feeding to the mother
23	Provide the mother with the rationale for feeding the baby overnight
24	Encourage the mother to exclusively breastfeed her baby for at least 6 months
25	Identify if the mother is satisfied with her breastfeeding experience
26	Convey the fact that breastfeeding can be time-consuming
27	Provide mother with strategies to meet her baby's breastfeeding demands
28	Tell when her baby is finished breastfeeding
29	Explain to the mother the benefits of breastfeeding
30	Explain to the mother the rationale for avoiding the use of a dummy (pacifier)
31	Explain why it is important that mother and baby should have skin to skin contact for at least 1 h immediately after birth
32	Provide the reasons to the mother why "rooming in" is important
33	Identify to the mother the support services that are available to her as a breastfeeding mother
34	Instruct the mother in the differing positions that she can use for breastfeeding her baby
35	Identify if the baby sucking properly at her breast
36	Give rationale for the first breastfeed within the first hour after birth
37	Give rationale for not using a nipple shield

the University of Trieste, 10 (50% of the students attending the third year) at the University of Bologna, 9 (45% of the students attending the third year) at the University of Milan (Mangiagalli Hospital) and 7

(42% of the students attending the third year) at the University of Pavia.

The mean score values for each item of the questionnaire are reported in Table 3.

**Table 3.** Descriptive statistics of self-efficacy for the 37 items

Item	All students (n = 158)			
	Mean	SD	Median	% ≥ 3
1	1.68	0.63	2	5.1%
2	1.80	0.62	2	7.0%
3 (*)	1.90	0.62	2	10.8%
4 (*)	1.57	0.71	1	6.4%
5	1.82	0.76	2	19.0%
6	2.13	0.64	2	25.3%
7 (**)	2.26	0.64	2	37.2%
8	1.82	0.64	2	8.2%
9	2.20	0.61	2	29.1%
10	1.82	0.62	2	9.5%
11	2.06	0.69	2	22.8%
12 (**)	1.98	0.70	2	23.1%
13 (*)	1.94	0.71	2	18.5%
14 (*)	2.20	0.69	2	31.8%
15 (**)	2.06	0.73	2	26.3%
16	2.07	0.71	2	23.4%
17 (***)	2.12	0.68	2	27.1%
18 (*)	1.87	0.61	2	10.2%
19 (***)	1.94	0.66	2	14.8%
20 (****)	2.23	0.70	2	31.2%
21 (*)	1.94	0.66	2	16.6%
22 (**)	1.73	0.68	2	7.7%
23 (**)	1.94	0.61	2	11.5%
24 (****)	2.06	0.76	2	24.7%
25 (*)	1.90	0.64	2	13.4%
26	1.70	0.63	2	7.6%
27 (**)	2.14	0.60	2	24.4%
28 (***)	1.92	0.72	2	18.1%
29 (*)	1.43	0.66	1	4.5%
30 (**)	1.67	0.72	2	12.2%
31 (**)	1.35	0.64	1	3.8%
32 (**)	1.35	0.63	1	3.2%
33 (**)	1.99	0.73	2	25.6%
34	1.56	0.64	1	7.0%
35 (*)	1.56	0.61	2	3.8%
36	1.47	0.67	1	5.1%
37	1.99	0.70	2	22.2%

Notes: SD = standard deviation; % ≥ 3 = percentage of answers equal to 3 (It's difficult for me to do it) or 4 (It's very difficult for me to do it); (\*) = 1 missing value; (\*\*) = 2 missing values; (\*\*\*) = 3 missing values; (\*\*\*\*) = 4 missing values.

The areas in which students reported the lowest self-efficacy were: gaining the family support concerning the decision to breastfeed (item 7 with mean score = 2.26 and median score = 2), comfortably breastfeeding in public places (item 20 with mean score = 2.23 and median score = 2), breastfeeding the baby without using formula as a supplement (item 9 with mean score = 2.20 and median score = 2) and not to bottle-feeding for the first 6 weeks (item 14 with mean score = 2.20 and median score = 2).

On the other hand, the areas in which students reported the highest self-efficacy were: explaining why it is important that mother and baby should have skin to skin contact for at least 1 hour immediately after birth (item 31 with mean score = 1.35 and median score = 1), providing the reasons to the mother why “rooming in” is important (item 32 with mean score = 1.35 and median score = 1), explaining to the mother the benefits of breastfeeding (item 29 with mean score = 1.43 and median score = 1) and giving the rationale for the first breastfeed within the first hour after birth (item 36 with mean score = 1.47 and median score = 1).

## Discussion

This study aimed to estimate the knowledge and the level of self-efficacy of Italian Midwifery students in managing, advising and supporting new mothers who intend to breastfeed.

The selected survey (25) evaluated not only theoretical and practical knowledge, but also the abilities the participants believed they possessed in managing effectively complex situations during breastfeeding.

From the results it comes up that students from different Universities think they own the main skills which are necessary to support adequately the path of breastfeeding.

Analyzing in detail the results, students reported the highest self-efficacy in encouraging that mother and baby should have skin to skin contact for at least 1 hour immediately after birth (item 31), as described in the fourth step of breastfeeding according to WHO, comprehending the reasons why “rooming in” is important (item 32), which reflects the WHO seventh step

of breastfeeding, knowing the benefits of breastfeeding (item 29), thus showing that they have acquired WHO and UNICEF principles, to convey them to new mothers and finally that they have acquired the notions of skin to skin contact within the first hour after child birth (item 36), necessary condition for a good breastfeeding start according to WHO.

The four areas in which students reported a lower self-efficacy were: gaining the family support concerning the decision to breastfeed (item 7), supporting new mothers in comfortably breastfeeding in public places (item 20), encourage the mother to breastfeed the baby without using formula as a supplement (item 9) as well as not to bottle-feed for the first 6 weeks (item 14).

It would be thus necessary to organize workshops for students regarding the items where it resulted difficult to support breastfeeding women. To do that, WHO and UNICEF proposed several campaigns aiming to promote breastfeeding through education and information of healthcare professionals (27).

It would be beneficial to a better education for midwives to credit the Midwifery Degree Course as “friendly to breastfeeding”, as in Italy only 3 of 47 Courses of Degree are (28).

## Limits

Since the study did not evaluate every single Degree Course as one, it is not possible to estimate the hours involved in theoretical preparation, practical labs and focus groups. The only common parameter is the 100 hours in the Maternity Ward. As the number of participants was quite limited it was not feasible to compare different context and outline differences among the realities examined.

## Conclusions

The educative/formative context of the students attending the Midwifery Degree Course is multifactorial, varied and complex. Education of professionals has always been based on a strict relation between Theory and Practice and it becomes more and more imperative to combine the two. The level of empathy,



preparation and support from the midwives benefit an exclusive and continuative breastfeeding with numerous advantages for both mother and baby.

The level of autonomy of new midwives is nowadays a neglected topic for scientific research. The fields in which a midwife can operate are wide and complex, so it is difficult for Degree Courses to evaluate it effectively only by the number of autonomous performances carried out in the three years of education.

People Healthy 2020 aims to increase the percentage of breastfed babies to 81,9% and the percentage of exclusively breastfed for six months to 25,5% (29). For this reason, it is important to widen the knowledge and skills on breastfeeding and the association between those and the practical activity.

**Conflict of interest:** Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article

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