

# The role of a midwife in assisted reproductive units

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## Abstract

**Problem:** The role of midwifery in Assisted Reproductive Units remains unclear.

**Background:** Midwives are valuable health workers in every field or phase of women's health. Their true value has been consistently demonstrated and regards mainly their function in labour. Infertility is a quite new territory in which a great deal of innovating approaches has been made through the years.

**Aim:** The aim of this study is to present the role of midwifery in Assisted Reproductive Units based on scientific data

**Methods:** For this review 3 (three) major search engines were included MEDLINE, PubMed and EMBASE focusing on the role of midwives in the assisted reproductive units.

**Findings:** It seems that midwives have three distinct roles, when it comes to emotional management of the infertile couple, being the representative of the infertile couple and also, performing assisted reproductive techniques in some cases. Their psychomedical support is profound and, in this review, we try to research their potential role in the assisted reproductive units.

**Discussion:** In the literature, only few scientific articles have been conducted in search of the role of Midwifery in Infertility. Their importance is once again undeniable and further research needs to be conducted in order to increase their adequate participation into this medical field.

**Conclusion:** Raising awareness on their true value could potentially promote a better health service for infertile couples worldwide.

## Statement of significance (SOS)

**Problem or Issue:** The role of midwifery in Assisted Reproductive Units remains unclear.

**What is Already Known:** Midwives are valuable health workers in every field or phase of women's health. Their true value has been consistently demonstrated and regards mainly their function in labour.

**What this Paper Adds:** This is the first review of the literature addressing the role of Midwives in Assisted reproductive Units. Infertility is a quite new territory in which a great deal of innovating approaches has been made through the years. Their importance is once again undeniable and further research needs to be conducted in order to increase their adequate participation into this medical field.

## Introduction

The role of midwives in labour is well established during the centuries. Midwives were, traditionally women, that were able to help pregnant women throughout the labour. Over the years this profession has been evolved, and nowadays midwives, men or women, are capable of helping women during antenatal, postnatal and of course during peripartum period. Pregnancy, even if uncomplicated, poses a challenge for every woman who is in times unprepared to accept and adapt to the demands or the changes of this physiological condition. These health professionals provide support for pregnant women not only physically but also, emotionally.

According to the International Confederation of Midwives (ICM) the definition of their profession is that 'A midwife is a person who, having been regularly admitted to a midwifery educational programme, duly recognised in the country in which it is located, has successfully completed the prescribed course of studies in midwifery and has acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery. The midwife is recognised as a responsible and accountable professional who works in partnership with women to give the necessary support, care and advice during pregnancy, labour and the postpartum period, to conduct births on the midwife's own responsibility and to provide care for the newborn and the infant. This care includes preventative measures, the promotion of normal birth, the detection of complications in mother and child, the accessing of medical care or other appropriate assistance and the carrying out of emergency measures. The midwife has an important task in health counselling and education, not only for the woman, but also within the family and the community. This work should involve

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antenatal education and preparation for parenthood and may extend to women's health, sexual or reproductive health and child care. A midwife may practise in any setting including the home, community, hospitals, clinics or health units' (ICM 2005).

Infertility is defined by the failure of conception after 12 months or more of regular unprotected sexual intercourse. Worldwide one out of ten couples suffer from infertility. In Africa the prevalence of infertility reaches rates more than 30% [1]. In Europe 9% to 15% will confront infertility issues during their lives, while 55% of them will eventually seek medical advice [2]. In United States of America in 80 to 100 births only one is a result of reproductive assisted techniques, meaning in vitro fertilization (IVF) [2].

Midwives are playing a crucial role in cases of infertility and are involved in many aspects of infertile couples [3]. These health professionals are taking part on the management of infertility, psychological support of the infertile couple and their role is considered instrumental. According to the European Union, Assisted Reproductive Technology (ART) legal regulations, require, among others, the presence of at least one midwife with at least two (2) years of experience in the field in order for a Fertility and reproductive Unit to function properly [4]. In this review, we explore their true role in infertility and in assisted reproductive units. No other review addressing their function in such units has ever been conducted.

## Materials and methods

Three major search engines were included MEDLINE, PubMed and EMBASE. Articles focusing on the role of midwives in the assisted reproductive units were included. The following keywords were used alone or in combination: infertility; midwifery; midwife; assisted reproductive techniques; health professionals in reproduction. Only scientific papers in English were searched for this review. The research team excluded scientific evidence that was addressing the role of midwifery in other fields of Obstetrics and Gynaecology such as post- or antenatal midwifery care. All articles included were reviewed by members of the research team. Information about other health professionals compared with midwives was also included, in order to achieve a better understanding of their role in infertility.

## The role of the Midwife in the Emotional Guidance & Stress Management of the infertile couple

As expected, infertility issues have a strong correlation with stress since the failure attempts terrify women undergoing this procedure [4]. This condition demands a professional approach and awareness of the medical professionals involved [5]. Patients seek to understand the psychological parameters of the condition and midwives embody perfectly this role [6]. The aim of their involvement lies in the continuous support of the infertile woman as well as, counselling the couple throughout this experience. Studies confirm that women remember, first and foremost, the midwives who supported them, rather than the medical staff. In other words, they do not recall the person who provided a solution to their condition but the one who understood them all along [6].

The burden of this medical intervention regards the couple as a whole, since the emotional charge that infertile couples undergo is extensively reported [6]. Studies have shown that chronic stress arises from the feeling of frustration and the fear of failure. Upcoming drug treatment and the participation in this process are also two main components of stress related to infertility [7]. Moreover, fertility and

reproductive interventions require a lot of time during which the couple feels that their options are limited in the face of time [8]. The need to adopt practices that acknowledge this condition, is essential in order to minimise its impact on the infertile couples.

Midwives could be the health professionals that can represent this role of minimizing the negative feelings during and prior ARTs [9]. A recent controlled trial assessed the satisfaction of 166 infertile couples who underwent ART in a fertility and reproductive unit [10]. During their treatment, a questionnaire assessing the approach of both doctors and midwives was given. The results of the questionnaire that all the couples that were accompanied by a midwife, expressed their satisfaction for the midwife's approach [10]. Infertile couples without the presence of a midwife tend to feel less secure. Every couple requested the presence of a health professional as compulsory, a role that can easily be embodied by a midwife [10]. Another study, set Midwifery as a point of reference for infertile couple. More specifically, the study showed that 40% of the couples did not feel that health professionals (doctors, midwives, etc.) understood the impact of this situation on their daily lives [9]. In fact, a study by Stamatis et al. in 2010, A 2010, revealed that midwives perceive the need to acquire knowledge and skills regarding psychological support for couples [11].

Midwives seem to play an important role to stress management of the infertile couple. Till recently the common practice, when dealing with stress in infertility, involved, clinic-based support groups, as a more traditional approach, individual psychological support, counselling and of course online search for current data [12]. Studies have shown that the midwife is enrolled to support this concept. These professional can provide emotional support and evidence based information, they also offer a better communication by respecting the patient's values [12]. Nevertheless, there is insufficient bibliographic data regarding the role of the midwife and its efficacy in fertility and reproductive units. Perhaps a creation of a questionnaire addressing the efficacy of the relationship between the infertile couple and the midwives needs to be conducted in order to improve the current medical service on the field.

## The bidirectional role of the midwife

In an attempt of reinforcing the role of the midwife in infertility and reproductive units, the results were encouraging. In Bristol, the authorities of midwives were augmented so that they could ran the unit, making appointments with the couples and keeping records [13]. The results of Bristol experience revealed an increase the couple's satisfaction, a more efficient appointment planning and better data and accurate patient history recording [13]. When midwives were solely concerned with patient management and took a more active role in appointments for the management and treatment of infertility, the results showed an improvement in the quality of service provided [13,10].

A midwife plays a crucial role when it comes to bridging the gap between the difficult medical terminology and the understanding of the patients [14]. Potential problems arising from the use of medical terminology could perhaps be ameliorated by the presence of a midwife which could solve any misunderstandings [15]. The bidirectional role of the midwife reflects the constant support to the infertile couple's health service as well as, the participation in a medical intervention.

There is a silent agreement, that midwives ought to play a role in assisted reproductive units. This imperative need, is not a settlement to unfilled posts within the unit [13]. Their role between doctors and patients is ideal for promoting a better communication between the two

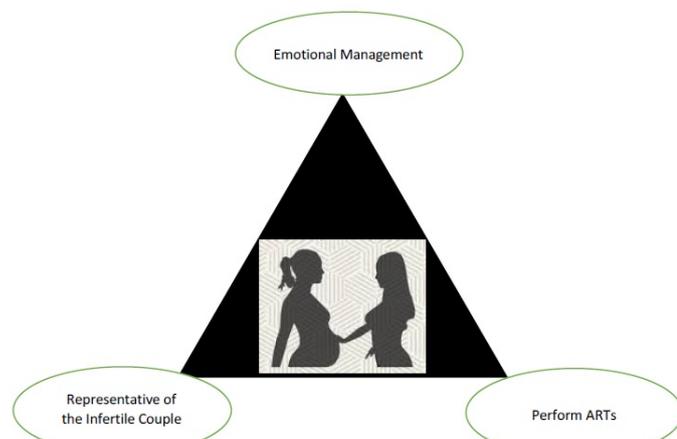
components and providing a safe mechanism, by using knowledge and empathy, in order to suggest proper therapeutic options to the infertile couple [14]. Improving midwifery's role is a personal bet, first and foremost, for each midwife to discover and claim the role that fits him/her best in infertility as a pathological condition [13].

### Reproductive techniques facilitated by midwives

So according to this data the prominent role of the Midwifery summarises in psychological support, in providing information and in being the representative of the woman and generally of the infertile couple [16]. The recognition of the role of midwifery is profound, since infertility patients tend to believe that midwives are rightly not limited in their traditional responsibilities and play an active role. Almost 2 out of 3 patients (68%) agree that midwives provided psychological support, showing clearly their approval [6]. More participation on behalf of midwifery is imperative because, non-health professionals are involved in assisted reproductive units by reducing at the same time, the level of health services provided [13] (Figure 1).

The main question remains whether midwives can keep up with further responsibilities involving medical interventions as efficient as doctors do. A prospective randomized study assessed one hundred and two (102) patients undergoing embryo transfer [17]. The sample was divided into two groups of fifty one (51) patients and in each group the embryo transfer was accomplished by a midwife and a doctor, respectively [17]. The results of this study revealed equal success rates in both groups, highlighting the fact that specialized midwives were capable of performing the procedure as efficient as doctors do. Similar patient satisfaction was also noted.

Nevertheless, midwifery profession is not a precise indicator of the success of ARTs. Moreover, when nurses underwent specialized training, there were able to cope with the demands of an assisted reproductive unit despite the lack of a midwifery education. In other words, being a midwife does not mean necessarily that the staff is capable of contributing effectively in such units [11]. In a study, the attitude towards IVF and infertility between midwives and other health professionals (eg nurses in another health sector) revealing similar results in these two groups of professionals [18]. Furthermore, the need for midwives to review their role is imperative [11]. Specialized training is essential in order to cope with the new territory of fertility and reproduction.



**Figure 1.** The distinct roles of midwifery in the assisted reproductive units

### Conclusions

Midwives need to balance the demands of their profession as well as, their diverse professional relationships, as medical interventions evolve [19]. This group of health professionals is dedicated to the care of women, but at the same time seek recognition of their worth [20]. Midwives tend to treat women just like they are treated in their work environment [21]. Their role needs to get further re-evaluated in order to find their proper place in assisted reproductive units.

First of all, infertility is linked with a great deal of stress throughout its management. Midwives embody the role of emotional supporter during this difficult period. Their knowledge and the level of their empathy provide infertile women or couples with psychological relief. Patients feel more confident when they do have a health professional close to them during the process. They believe that they are not struggling alone and they team up with professionals that release some of the tension.

Furthermore, medical terminology and emotionally detached and impersonal medical interventions pose a threat into the success of fertility treatments. Women are more likely to comply with the therapy needed when they are sure they understand the necessity of the intervention. Midwives are the representatives of the infertile couples. Discussing worries, explaining treatments and providing feedback to the doctors involved has as a result a better healthcare service.

Last but not least, midwives could potentially get involved with some of the medical interventions for fertility reasons. Their role can be further expanded, and they can contribute as well, in an assisted reproductive unit. Specialised training is a must though, in order to maintain a high level of medical skills. Under these circumstances, Midwifery could deliver efficiently in the field but at the end of the day, it is up to midwifery's decision in what extend midwives would want to get involved and participate in the assisted reproductive units.

### Conflict of interest

All authors declare no conflict of interest nor funding of any kind.

### Contribution of the authors

All authors contributed equally.

### Ethical committee

No ethical approval was needed since the research has been conducted on published material. No human or animal models were used.

### References

1. Burns LH (2007) Psychiatric aspects of infertility and infertility treatments. *Psychiatr Clin North Am* 30: 689-716. [Crossref]
2. Boivin J, Griffiths E, Venetis CA (2011) Emotional distress in infertile women and failure of assisted reproductive technologies: Meta-analysis of prospective psychosocial studies. *BMJ* 342: 481.
3. Gameiro S, Boivin J, Dancet E, De Klerk C, Emery M, et al. (2015) ESHRE guideline: Routine psychosocial care in infertility and medically assisted reproduction - A guide for fertility staff. *Human Reprod* 30: 2476-2485. [Crossref]
4. Sydsjo G (2002) Relationships and parenthood in couples after assisted reproduction and in spontaneous primiparous couples: a prospective long-term follow-up study. *Hum Reprod* 17: 3242-3250. [Crossref]
5. Lindberg I, Christensson K, Öhrling K (2005) Midwives' experience of organisational and professional change. *Midwifery* 21: 355-364. [Crossref]
6. Hammarberg K (2001) Women's experience of IVF: a follow-up study. *Hum Reprod* 16: 374-383. [Crossref]

7. Massarotti C, Gentile G, Ferreccio C, Scaruffi P, Remorgida V, et al. (2019) Impact of infertility and infertility treatments on quality of life and levels of anxiety and depression in women undergoing in vitro fertilization. *Gynecol Endocrinol* 35: 485-489. [[Crossref](#)]
8. Heimdal T (1978) Midwife's functions in infertility. *Sykepleien* 65: 338-340.
9. Wilson C, Leese B (2013) Do nurses and midwives have a role in promoting the well-being of patients during their fertility journey? a review of the literature. *Human Fertil* 16: 2-7. [[Crossref](#)]
10. Anderheim L, Holter H, Bergh C, Möller A (2010) Extended encounters with midwives at the first IVF cycle: a controlled trial. *Reprod Biomed Online* 14: 279-287. [[Crossref](#)]
11. Stamatis P, Evangelia N, Martha M, Dimitrios H (2010) Assisted reproduction and midwives: Student and certified midwives' educational needs on reproductive biology. *Sex Reprod Healthc* 1: 163-168. [[Crossref](#)]
12. Allan HT (2013) The anxiety of infertility: The role of the nurses in the fertility clinic. *Human Fertil* 16: 17-21. [[Crossref](#)]
13. Ashcroft S (2000) Developing the clinical nurse specialist's role in fertility: Do patients benefit? *Human Fertil* 3: 265-267. [[Crossref](#)]
14. Sandall J, Devane D, Soltani H, Hatem M, Gates S (2010) Improving quality and safety in maternity care: The contribution of midwife-led care. *J Midwifery Women's Heal* 55: 255-261. [[Crossref](#)]
15. Koch-Weser S, Dejong W, Rudd RE (2019) Medical word use in clinical encounters. *Heal Expect* 12: 371-382. [[Crossref](#)]
16. Allan H, Finnerty G (2007) The practice gap in the care of women following successful infertility treatments: Unasked research questions in midwifery and nursing. *Human Fertil* 10: 99-104. [[Crossref](#)]
17. Bjuresten K, Hreinsson JG, Fridström M, Rosenlund B, Ek I, et al. (2003) Embryo transfer by midwife or gynecologist: A prospective randomized study. *Acta Obstet Gynecol Scand* 82: 462-466. [[Crossref](#)]
18. Papaharitou S, Nakopoulou E, Moraitou M, Hatzimouratidis K, Hatzichristou D (2007) Reproductive health and midwives: Does occupational status differentiate their attitudes on assisted reproduction technologies from those of the general population? *Hum Reprod* 22: 2033-2039. [[Crossref](#)]
19. Levy V (2006) Protective steering: a grounded theory study of the processes by which midwives facilitate informed choices during pregnancy. *J Adv Nurs* 29: 104-112. [[Crossref](#)]
20. McCrea H, Crute V (2019) Midwife/client relationship: midwives' perspectives. *Midwifery* 7: 183-192. [[Crossref](#)]
21. O'Cathain A, Thomas K, Walters SJ, Nicholl J, Kirkham M (2002) Women's perceptions of informed choice in maternity care. *Midwifery* 18: 136-144. [[Crossref](#)]