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Knowledge and attitudes of students' midwives regarding establishment and function of Birth Centers in Greece.

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Abstract

Introduction: The initiative to establish Birth Centers in Greece was driven by the recognized need for family-centered health services that enhance the natural aspects of pregnancy, childbirth, and postpartum care. These centers aim to provide safe and supportive environments for expectant mothers, staffed by skilled professionals, primarily midwives.

Aim: This study explores the attitudes and knowledge of midwifery students regarding Birth Centers, evaluating their readiness to support and work within such settings, which promote less interventionist birthing practices.

Materials and Methods: A closed-ended questionnaire was administered to midwifery students at the University of West Attica in 2014 and 2024. Responses were analyzed to assess changes in perceptions over time regarding the role and benefits of Birth Centers. Data were coded and analyzed using statistical software to ensure robust comparison and confidentiality.

Results: The study involved 190 respondents, showing a significant endorsement of Birth Centers, with high agreement on their benefits for reducing cesarean rates and enhancing maternal satisfaction. However, there was a noted decline in the preference for working in out-of-hospital settings and a decrease in the perception of Birth Centers' economic benefits to the public health system.

Conclusion: While the majority of midwifery students recognize the value of Birth Centers, there is a shift towards more cautious acceptance and a notable decline in the interest in pursuing long-term careers in such settings. These findings highlight the need for continuous education on the efficacy and management of Birth Centers and may influence future healthcare policies and training programs.

Keywords: Birth Centers; Midwifery Education; Student Attitudes, Greece; Natural Childbirth; Healthcare policy

1. Introduction

The initiative to establish Birth Centers was prompted by the recognized need for facilities offering family-centered health services (1). These centers are staffed by highly skilled professionals whose objective is to enhance the natural aspects of the processes of pregnancy, childbirth, and postpartum, providing support and safety to the expectant mother, thereby ensuring the highest standard of care. Midwives, as outlined in the relevant protocols, are identified as responsible professionals charged with guiding women from the onset of pregnancy, managing childbirth with full accountability, and extending comprehensive care to both the mother and newborn in postpartum period. The array of services provided includes preventive measures, early detection of any complications during pregnancy and childbirth,

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implementation of emergency interventions, and promotion of natural childbirth and breastfeeding, alongside newborn and infant care.

The recent statistical findings from Greece for the years 2019 to 2020 (2) the frequency of cesarean sections was high, with 55.79% of all births performed by the procedure, with Attica having the highest rate at over 58%, with rates significantly higher than the 10-15% benchmark suggested by World Health Organization (3). Such statistics underscore the need for a paradigm shift towards less invasive birthing practices facilitated by Birth Centers in Greece.

This study aims to probe deeper into the attitudes and knowledge of midwifery students regarding Birth Centers, evaluating their readiness to adopt and advocate for these less interventionist birthing options. Understanding their perspectives is crucial as they are the imminent carriers of change in midwifery care. The insights gained could direct educational strategies and curriculum developments to better align midwifery training with contemporary needs in maternal and neonatal care.

2. Materials and Methods

The investigation into knowledge and attitudes towards Birth Centers was conducted using closed-ended questionnaires, which were developed in accordance with the research objectives. The research was initiated by students in the Midwifery Department of the University of West Attica. Additionally, it's noteworthy that the questionnaire was previously administered to students in the same Department in 2014, and a comparison of the results from then and now, a decade later, will be conducted to assess any changes over time. In the questionnaires that were completed, strict anonymity was maintained. In the responses given, Option A was assigned the number 1, Option B the number 2, Option C the number 3, Option D the number 4, and Option E the number 5. After the sampling was completed, the data were coded into a database, so that with statistical analysis tools, such as SPSS, the statistical data and conclusions of the research could be extracted.

3. Results

A total of 190 students (N=190) responded to the questionnaire, with 90 students (n1=90) participating in 2014 and 100 students (n2=100) in 2024. The student responses were divided into 5 main categories:

- Students' perceptions of the emotions of the birthing woman at a Birth Center
- Perceptions of perinatal safety in a Birth Center
- Perceptions regarding the functioning of a Birth Center
- Self-confidence and desire for involvement with Birth Centers
- Economic benefits

Table 1 Table of Results

Description	Agreement Rate 2024	Agreement Rate 2014
Childbirth at a birth center will offer greater satisfaction than midwife care in maternity wards	94.1%	100%
Confidence of expectant mothers from birth center	97%	100%
Greater satisfaction from childbirth at a birth center compared to a maternity hospital	93.3%	100%
The operation of an in-hospital birth center is safe	55.2%	55%
Safe operation of an extramural birth center	41.8%	75.4%
Same morbidity and mortality between childbirth at a birth center and a maternity hospital	49.3%	15%
Reduction in maternal morbidity and mortality at a birth center	94.8%	83%
Birth centers should be staffed only by midwives and obstetricians (in emergency cases)	71.6%	83.1%

Importance of creating a birth center in Greece	100%	100%
Creation of a birth center will reduce cesarean section rates	99.3%	100%
Which expectant mothers can give birth at a birth center	79.1% low risk	88.6% low risk
Confidence level for working at a birth center	46.3%	42%
Interest in working and advancing as a midwife at a birth center	56.7%	65%
Preference for working in a birth center within a hospital	47.8%	100% in extramural space
Economic benefit for the Public Health System from childbirth at a birth center	67.9%	79%
Cost-effectiveness of childbirth at a birth center compared to a maternity hospital	53.8%	-

3.1. Students' perceptions of the emotions of the birthing woman at a Birth Center

The survey data compares perceptions of childbirth experiences in 2014 and 2024, focusing on Birth Centers within birth centers versus traditional maternity hospitals. In 2024, 94.1% of respondents agreed that childbirth in Birth Centers within birth centers offers greater satisfaction than receiving care from midwives at maternity hospitals, showing a decline from the unanimous agreement of 100% in 2014. Confidence among birthing women at these centers also remained high, with 97% in 2024 feeling confident, echoing the 100% confidence level in 2014. Regarding overall satisfaction, 93.3% in 2024 preferred the experience at Birth Centers over maternity hospitals, compared to a full 100% in 2014. This data indicates robust support and preference for Birth Centers, though there is a slight reduction in consensus over the decade.

3.2. Perceptions of perinatal safety in a Birth Center.

The survey data presents comparative perceptions on the safety and perinatal outcomes of birth centers for the years 2014 and 2024. Notably, the perceived safety of in-hospital birth centers has remained relatively stable, with a minor increase from 55% in 2014 to 55.2% in 2024, indicating consistent trust in their operations. However, confidence in the safety of out-of-hospital natural childbirth centers has decreased significantly, from 75.4% in 2014 to only 41.8% in 2024, suggesting growing concerns or changing perceptions about their safety standards. Interestingly, there has been a substantial increase in the belief that morbidity and mortality rates are comparable between birth centers and traditional maternity hospitals, rising from 15% in 2014 to 49.3% in 2024. This change may reflect improvements in practices at birth centers or increased awareness of their benefits. Additionally, there is a strong and increasing consensus that birth centers contribute to a reduction in maternal morbidity and mortality, with approval rising from 83% in 2014 to 94.8% in 2024, highlighting their continued importance and effectiveness in promoting maternal health.

3.3. Perceptions regarding the functioning of a Birth Center

The survey data highlights a strong, ongoing commitment among students to the importance of establishing natural childbirth centers in, as evidenced by the unwavering 100% agreement in both 2014 and 2024 that such centers are crucial for Greece. However, there is a notable change in perceptions regarding the staffing of these centers. The agreement that only midwives (and occasionally obstetricians in emergencies) should staff these centers has decreased from 83.1% in 2014 to 71.6% in 2024, perception possibly due to wider acceptance of other professionals (obstetricians) in the childbirth process.

Additionally, there is a strong and consistent belief among students that the establishment of natural childbirth centers would lead to a reduction in cesarean section rates, with near-unanimous agreement across the years. Specifically, 99.3% of respondents in 2024 and 100% in 2014 supported this view. However, there has been a decrease in the agreement on which pregnant women should be candidates for natural childbirth centers, from 88.6% agreeing that only low-risk pregnancies are suitable in 2014 to 79.1% in 2024. This decline suggests that students are more cautious regarding which women should give birth in natural childbirth centers, specifying more stringent criteria for determining eligibility. These shifts in perceptions underscore a nuanced understanding and evolving criteria among students concerning the role and functioning of birth centers in contemporary healthcare.

3.4. Self-confidence and desire for involvement with Birth Centers

The survey data reveals nuanced changes in the attitudes of students towards employment at natural childbirth centers from 2014 to 2024. Confidence in working at such centers has shown a modest increase, rising from 42% in 2014 to 46.3% in 2024, suggesting improved student training and from better educational programs. However, there's a noticeable decline in the interest in pursuing a career and advancing as a midwife in these centers, with agreement decreasing from 65% to 56.7%. This decline might be attributed to changes in work conditions and the growing popularity of other midwifery sectors, such as freelance work, which saw a 24% preference rate.

Moreover, there's been a significant shift in workplace preference among students, especially regarding the location of birth centers. While there was a 100% preference for working in out-of-hospital settings in 2014, by 2024, only 47.8% preferred working within hospital-based birth settings. This substantial change reflects a shifting perception concerning the safety of these environments, access to medical support, or a desire to be part of more well-organized centers. These trends indicate evolving preferences and perceptions among future healthcare professionals about the context and conditions of their prospective workplaces in natural childbirth scenarios.

3.5. Economic benefits

The survey data presents insights into students' perceptions regarding the economic benefits of childbirth in birth centers compared to traditional maternity hospitals. In 2024, 67.9% of students agreed that childbirth in such environments provides economic benefits to the Public Health System, showing a slight decline from 79% in 2014. This decline could be attributed to a significant portion of students (25.4%) who believed there would be no difference in economic benefits between birth centers and traditional maternity hospitals. Additionally, regarding the cost-effectiveness of childbirth in birth centers compared to maternity hospitals, 53.8% of students in 2024 expressed agreement, although there was no data available for 2014 for comparison. Overall, while the majority still perceive birth centers as economically advantageous for the Public Health System, there's a notable shift in perceptions, with some students expressing skepticism about the extent of these benefits. This highlights the need for further research and discussion to understand the economic implications of different childbirth settings comprehensively.

4. Discussion

The examination of the knowledge and attitudes of student midwives regarding the establishment and function of Birth Centers in Greece over a ten-year span provides a unique insight into the subtle yet significant shifts in perceptions toward childbirth environments. Set against a backdrop of parallel academic studies and dynamic public health policies, this analysis charts not only the evolution of opinion but also intersects with broader debates about maternal care practices. As the survey unfolds, it captures the changing trends in preference and safety perceptions, revealing a complex narrative of adaptation and reevaluation in response to emerging evidence and societal expectations. This paper delves into these transformative attitudes, offering a critical perspective through which to view the past, present, and future of birth centers in our healthcare system.

In 2024, 94.1% of respondents recognized greater satisfaction of women which giving birth in birth centers compared to traditional maternity hospital settings, a slight decline from 100% in 2014. This suggests a still strong but slightly waning confidence in alternative birthing environments. Research by Mocumbi et al. 2019 (4) similarly found high satisfaction rates in birth centers, attributed to the personalized care and relaxed environment, aligning with our findings of 97% confidence among women in birth in 2024.

The observed stability in the perceived safety of in-hospital birth centers contrasts sharply with the notable decline in confidence for out-of-hospital natural childbirth centers. This discrepancy underscores a critical need for ongoing evaluation and communication regarding the standards and practices of out-of-hospital facilities. The decline in perceived safety of these centers might suggest a public response to adverse events or perhaps a broader shift in healthcare delivery expectations. Similarly, a study by Brocklehurst et al. (6) found that while birth centers offer a safe alternative to hospital births for most women, certain cases still require the advanced medical capabilities of traditional hospitals, which may influence public perception negatively towards out-of-hospital settings when complications arise. Moreover, the increased belief in the comparability of morbidity and mortality rates between birth centers and hospitals indicates a growing acknowledgment of the professionalism and capability of birth centers. This aligns with findings from Stapleton et al. (7), which reported that well-integrated birth centers could achieve maternal and neonatal outcomes comparable to those of hospital births, even suggesting a potential for better outcomes in low-risk pregnancies. Our findings highlight the importance of enhancing public education and transparency to ensure all potential parents make well-informed decisions regarding their choice of birth setting, potentially improving overall confidence in various birth environments.

Our survey findings regarding the perceptions of students on birth centers in Greece reveal nuanced shifts that can significantly inform healthcare policy and educational initiatives in obstetrics. The unwavering agreement on the importance of these centers from 2014 to 2024 underscores a consistent recognition of their value in the healthcare system. This aligns with global trends where there is increasing advocacy for natural childbirth options to improve maternal outcomes (8). However, the evolving perspective on the staffing of these centers, with decreasing insistence on exclusive midwifery care unless in emergencies, suggests a shift towards integrating obstetricians more regularly. This could be indicative of a broader acceptance of a multidisciplinary approach to childbirth, reflecting changes seen in other European countries (9). Additionally, the strong belief in the efficacy of birth centers in reducing cesarean rates is consistent with literature that supports lower intervention rates in such settings (10).

However, the more stringent criteria for candidate selection for natural childbirth, as perceived by the students, could be a response to increased awareness of the complexities and risks associated with childbirth, urging a more cautious approach.

The survey data underscores notable changes in student attitudes towards employment in natural childbirth centers over a decade, reflecting broader shifts within the field of midwifery and the healthcare system at large. The increase in confidence about working in these centers, from 42% in 2014 to 46.3% in 2024, likely indicates enhancements in educational curricula and training that better prepare students for such environments. Conversely, the decrease in interest for long-term careers as midwives in these settings, from 65% to 56.7%, may suggest evolving career aspirations influenced by broader employment trends within healthcare, including the rise of freelance midwifery, which aligns with findings from Sandall et al. (2016) who noted an increasing preference for flexible work arrangements among healthcare professionals (11). Furthermore, the dramatic shift in workplace preference, from unanimous approval in 2014 for out-of-hospital settings to a near-even split in 2024 regarding hospital-based settings, might be influenced by changing perceptions of safety and organizational structure in these environments. This substantial shift mirrors trends identified by another Greek research who observed a growing inclination among healthcare providers to seek positions in settings that offer better support and infrastructure (12). These changing preferences among students are critical for healthcare policymakers and educators, suggesting a need to adapt training programs and work conditions to align with these evolving expectations and ensure that birth centers continue to attract skilled professionals.

The observed decline in student perceptions of the economic benefits of childbirth in birth centers, from 79% in 2014 to 67.9% in 2024, raises important considerations for the economic evaluation of healthcare settings. This reduction suggests a growing skepticism among future healthcare professionals about the cost-effectiveness of birth centers compared to traditional maternity hospitals. A portion of the student body, 25.4%, perceived no difference in economic benefits, indicating a shift towards a more critical view of the financial advantages traditionally attributed to birth centers. This skepticism is mirrored in research by Henderson et al. (2008), who analyzed the cost implications of various birth settings and suggested that while birth centers can offer cost savings, these are highly contingent on operational efficiencies and the integration within broader healthcare systems (13). Furthermore, with 53.8% of students in 2024 still affirming the cost-effectiveness of birth centers, it is evident that many retain a positive view, albeit less unanimously than before. This mixed perception underscores the need for ongoing research to thoroughly assess the economic impact of birth centers, perhaps considering factors like patient outcomes, resource utilization, and systemic integration, which are critical for informed policymaking in maternal health care.

5. Conclusion

This study has charted a decade of shifting perceptions among midwifery students in Greece, illuminating a complex landscape of evolving opinions toward the role and efficacy of birth centers. Over the period from 2014 to 2024, we observed a sustained recognition of birth centers' crucial role in providing family-centered, less invasive childbirth options. Despite some decline in absolute enthusiasm, a substantial majority still views birth centers as beneficial alternatives to traditional maternity hospitals, particularly in terms of patient satisfaction and reduced cesarean rates.

However, our findings also reveal a growing caution and critical assessment among students, particularly concerning the safety and staffing of out-of-hospital birth centers. The decline in confidence in these centers, from 75.4% in 2014 to 41.8% in 2024, suggests a significant shift in risk perception that might influence future healthcare practices and policy decisions. This trend could be indicative of a broader desire for more robust support systems and multidisciplinary teams within birth settings, reflecting a shift towards models that integrate the skills of both midwives and obstetricians more fluidly.

The decrease in interest among students in pursuing long-term careers exclusively in birth centers suggests concerns about professional growth and work conditions. This points to a potential need for enhancements in job structuring and career path planning within these specialized settings to retain skilled professionals.

Economically, while the majority still perceive economic advantages to the Public Health System from operating birth centers, the noted decline in this perception and increasing skepticism about their cost-effectiveness suggest that it's essential to conduct more comprehensive, nuanced economic evaluations. These should consider not just the immediate costs but also long-term health outcomes and system efficiencies.

In response to these insights, it is crucial for educational institutions and healthcare policymakers to adapt their strategies. They should focus on enhancing educational programs to better prepare midwives for the evolving complexities of childbirth settings, incorporating interprofessional education and expanding practical training in diverse environments. Moreover, health policy must be responsive to these changing perceptions, ensuring that birth centers are not only integrated efficiently within national health systems but also supported by policies that foster safety, efficacy, and economic sustainability.

Ultimately, the insights garnered from this decade-long survey of midwifery students serve as a vital gauge of future trends in maternal care. They underscore the need for ongoing dialogue, research, and adaptable educational and policy frameworks to meet the evolving demands of healthcare delivery in the field of midwifery.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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