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Pre-service education and continuous professional development on female genital mutilation/cutting for maternal health professionals in OECD countries: A Scoping Review

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Declaration of Competing Interest:

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Ethical approval:

An ethics application for expert interviews was submitted to City, University of London on May, 6th 2023 and with reference number ETH2223-2076 approved on June, 21st 2023. Four expert interviews were conducted in the period of July/August 2023.

STATEMENT OF SIGNIFICANCE:

Problem statement: Due to rising numbers in migration flows, FGM/C has become a global phenomenon. Topic inclusion into training curricula for maternal health professionals is an essential pre-requisite in order to ensure competent practitioners providing high quality services.

What is already known: FGM/C is associated with adverse obstetric outcomes. Case identification, assignment and documentation presents a challenge in practice settings. Health professionals from OECD-member states often experience lack of training. Standardized tools to measure the impact of training interventions are missing.

What this paper adds: Curricula lack clarity on teaching formats, content and duration. Average time spent during teaching is one hour. The topic is often integrated into other categories or conducted ad-hoc via stand-alone trainings. More transparency how competencies are achieved, measured and evaluated is needed. There is no data about how training interventions impact on obstetric outcomes and user satisfaction. Stakeholder discussions about practice scopes with essential, advanced and emergency skills are urgently needed.

Background

The United Nations Sustainable Development Goal number five aims to achieve gender equality and empower women and girls by the elimination of all harmful practices, including Female Genital Mutilation/Cutting (FGM/C), by the year 2030 (United Nations General Assembly 2015). About 200 million women and girls worldwide have undergone this practice (UNICEF 2022). The World Health Organization defines the practice as any procedure involving the alteration of the external female genitalia for non-medical reasons (World Health Organization, 2016). The practice can cause sequelae throughout the life span, which can be of psychological, urogynecological or obstetric nature (Reisel and Creighton, 2015). For example, the reduced elasticity of perineal tissues or obstruction caused by FGM/C may lead to prolonged labour, perineal laceration, episiotomy or instrumental delivery. The evidence points further to increased obstetric risks with more extensive forms of FGM/C such as prolonged second stage of labour, emergency caesarean section, postpartum hemorrhage and low APGAR scores (Kulaksiz et al., 2022; Lurie et al., 2020; Gebremicheal et al., 2018; WHO, 2006). An increase in use of episiotomies has been observed in women with FGM/C in Europe. This form of over-medicalization of intrapartum care may be attributable to a lack of health worker training and dedicated care pathways (Sylla, et al., 2020).

Maternal health professionals should provide evidence-based practice across the continuum of care for pregnant women with FGM/C, which includes the identification, management and documentation of the procedure as well as addressing safeguarding issues and prevention. At global level, there are no competence frameworks for health professionals so far. The need for such frameworks are critical due to rising levels of global mobility and migration. Health professionals in high-income countries need to acquire additional skills to provide appropriate care in the context of FGM/C. They need to be aware of how to respond if clients request them to perform FGM/C or reinfibulation after childbirth (Turkmani et al., 2018; Leye et al., 2008; Tamaddon et al., 2006).

There is evidence to suggest that maternal health professionals lack training on FGM/C (En-Nosse et al., 2023, Ogunsiiji et al., 2023, Fay et al., 2022, Molina-Gallego et al., 2021; Purchase et al., 2013). Research from Belgium and Spain identified shortcomings in knowledge, diagnosis and management (Gonzalez-Timoneda et al., 2018; Sien et al., 2015; Leye et al., 2007). In contrast, studies from Australia showed that midwives generally understand the practice, variations in types, associated health outcomes and obstetric complications (Dawson, 2015). However, there remains a lack of clarity about the classification procedure; for example, midwives in the UK, who refer to such assessments as “outside their usual practice” (Turner & Tancred, 2023). To ensure quality maternity care for women with FGM/C, mandatory training seems vital to equip health professionals with essential competencies. Therefore, health professional associations have issued calls to integrate the topic into training curricula and clinical mentorship programmes (Atkinson and Geisler, 2019; Lane et al., 2019). Whereas some efforts to improve knowledge, attitudes and practices have been observed, the development and implementation of standardized tools to measure outcomes and effect of training interventions is urgently needed (Robinson *et al.* 2023, Abdulcadir *et al.*, 2017).

The purpose of the scoping review is to map the available evidence on pre-service and continuous professional development education and activities on FGM/C for maternal health professionals in OECD-countries. We aim to provide an overview of how FGM/C is currently integrated into curricula, identify developmental needs, and explore how it can best be incorporated into education for maternal health professionals pre- and post-registration, as well as into lifelong learning.

Methods

A scoping review was chosen, as this methodology is used to systematically identify and map the breadth and depth of available evidence, summarize, and disseminate findings and can include a range of key concepts within a complex research topic (Arksey and O'Malley, 2005).

The following review question was developed:

What Pre-Service and Continuous Professional Educational activities on FGM/C are available for maternal health professionals in OECD countries?

Additionally, the review explored the following sub-questions:

- i) How many hours of training do maternity healthcare students or professionals receive on FGM/C?
- ii) What are the training formats and contents covered?
- iii) Which competencies can be achieved? How are they measured and evaluated?
- iv) What is the effect of training on clinical competence, obstetric outcomes and user experience?

The review was conducted in accordance with the PRISMA Extension for Scoping Reviews (Tricco *et al.*, 2018). A protocol was developed and is available on medRxiv (Apini-Welcland *et al.*, 2022). During the final stages of the review process an ethics application for expert interviews was submitted to City, University of London and with reference number ETH2223-2076 approved. The interviews aimed to gain deeper insights and map the relationship between theory and practice, to explore how FGM is taught, into which modules the topic is integrated and how experts justify the necessity of inclusion. Information about respondents' characteristics can be found in Appendix 1. The decision to conduct interviews in a sub-sample of OECD-countries (Germany, Switzerland and UK) was made as these countries reflect the research guidance on FGM/C during the main author's doctoral study, based in Germany.

Inclusion criteria and information sources

We considered studies, training curricula for the education of midwives, nurses, general practitioners, obstetricians/gynecologists and pediatricians, protocols and guidelines on FGM/C training, and other online FGM/C training resources from OECD countries. Studies in English, Spanish, French, Italian, Portuguese, and German were eligible as these were the language skills available among the review team. Documents from 2010 onwards were included, reflecting a period in which professional and legal guidance relating to FGM has been increasingly produced in OECD countries.

Search strategy

An initial keyword search was conducted and used FGM, female genital mutilation, education, training and health professionals to get an overview of the topic. Further keywords during screening relevant articles and index terms were used to develop a full search strategy

(Appendix 3). The search strategy was verified by a research librarian. Boolean operators (AND/OR) were used during all searches. Documents were searched in March 2022 using CINAHL, Embase and Medline databases. Reference lists of included records were screened to identify further studies and documents. An update was conducted in April and August 2023 to identify any new sources. The search covered unpublished studies, grey literature, websites from WHO, UNICEF and UNFPA, official OECD and European Union documents and sources from individual countries' institutions and professional associations. Following scoping searches, we realised that pre-registration curricular detail is rarely published in accessible form. Therefore, the decision was made to conduct expert interviews in a sub-sample of OECD-countries (Germany, Switzerland, UK) to explore educational content and approaches in more depth.

Source selection, charting and synthesis of results

Identified sources were collated and uploaded into ProQuestRefworks citation management software (Clarivate, Michigan, USA) and duplicates removed. Two independent reviewers screened the records. Disagreement was resolved through discussion and by consulting another member of the team. Reasons for exclusion were recorded and reported. Data was extracted using dedicated tools, which were developed and piloted within the team (Apini-Welcland *et al.*, 2022). The quality of studies was not assessed since this is not required during a scoping review. However, sources' credibility was carefully considered and documented. Data were charted with information about authors, year and type of source, OECD country, population, concept, context, study methods or other information of sources, FGM/C indicators assessing quality of care during service delivery and findings related to the effect of training. Results were summarized in Excel sheets. A narrative synthesis was used to present findings in text and tables.

Recruitment and analysis of expert interviews

A purposive sampling method was applied, excluding any professionals directly involved in the authors' research project. Overall, 23 midwives and gynecologists were approached in Germany, Switzerland and UK. Experts in the area of FGM/C were defined based on a combination of professional experience and specialized knowledge. A response was received from 12 people, from whom four consented to participate. Interviews were analysed by content in order to get a deeper understanding into the real-life context of FGM education. Findings were summarized (Table 5) and included as a narrative alongside data from studies and other educational sources, which intertwined theoretical evidence with practical experience.

Results

Selection and characteristics of evidence

The search identified 224 records, 212 through database searching and 12 through other sources. After the removal of 92 duplicates, 132 records were screened by title and abstract, whereby another 99 records were excluded. Full-text screening was conducted of 33 records, resulting in the exclusion of 17 documents due to irrelevant or redundant information. A total of 4 studies and 12 non-research educational sources were included (Figure 1).

Identifying and analysing curricula for 38 OECD countries posed challenges such as the lack of uniform education standards at national level, or the co-existence of education standards set at multiple levels (e.g. federal, national, regional, or institutional), limiting the scope for international comparisons. The decision was made to focus for a more detailed analysis on three OECD countries: Germany, Switzerland, and the UK, which we considered would be most useful for informing our plans for an exploratory case study, to be conducted in the future in Germany. Additionally, we mapped CPD resources available on FGM/C for health professionals in the UK, taking into consideration that the country is a pioneer in addressing the topic during maternity service provision in Europe (Appendix 2). Findings are presented first in relation to the primary review questions and following this to address the sub-questions.

Available Pre-Service and Continuous Professional Education activities – an overview

Findings on available educational activities are summarized in two sub-sections: a) 'pilot and experimental programmes' drawing on evidence from research studies and b) 'published educational activities and training standards' containing curricula, education standards and legal documents (Table 2) and other educational sources (Table 3). These are documents not directly linked to professional curricula or regulations but offering guidance to improve care, providing information and advocating for change in theoretical and practical knowledge acquisition.

a) Experimental or Pilot Programmes:

From the four studies identified, two related to experimental or pilot programmes and were both conducted in the U.S. The other two studies are not discussed in this overview as their focus was on service provision. Barnawi (2018) used a pre/post-test quasi-experimental design to explore the impact of a digital e-book on FGM/C. Nursing students were enrolled and assessed on knowledge, attitude and self-efficacy levels before and after exposure to the resource. Jacoby and Smith (2013) evaluated a pilot education program on FGM/C for qualified

Certified Nurse-Midwives (CNMs). All CNMs worked in a single hospital triage unit. The training aimed to measure confidence levels pre- and post-intervention in relation to care for women presenting in labour with FGM/C Type III.

b) Published educational activities and training standards:

In the UK, standards for medical education and training (General Medical Council, 2018), FGM/C is covered within the learning objective of safeguarding vulnerable patients (Table 2). Therefore, education providers and local services are bound to include relevant activities during theory and clinical placements.

A potentially useful resource, but no longer accessible at the time of writing, was the United to End Female Genital Mutilation (UEFGM) knowledge platform (Table 3). The latter aimed to enhance professionals' skills in supporting or offering protection to women and girls affected by the practice (Kouta et al., 2020). The target audience included a broad spectrum of professionals (health professionals, teachers, migration workers, policymakers, NGOs). The platform was an EU-funded project and contained country specific information of 11 European member states.

Another UK document, the National Health Service Standards (Table 3), focused on clinical leaders, emphasizing their legal obligation to facilitate mandatory FGM/C training activities (NHS England, 2018). It introduced four different training levels, as not all staff groups require the same amount of knowledge. Maternal health professionals are allocated to levels 3 and 4: level 3 includes general practitioners, midwives, nurses, health visitors, obstetricians and gynecologists, as they might treat patients with FGM/C or receive a disclosure. Level 4 includes specialists, particularly those requiring skills to perform deinfibulation or a pediatric examination to identify FGM/C.

The remaining two documents were published by the World Health Organization, advising on how to include FGM/C in curriculum development or training workshops (Table 3). The first is a clinical handbook providing evidence-based recommendations for the management of health complications in affected girls and women (WHO, 2016). The target audience are people involved in curriculum development for pre-service or service training in medicine, nursing, midwifery or public health. The second is a practical guide for integrating FGM/C into nursing and midwifery curricula targeted at pre- and post-registration curriculum planners (WHO, 2022). A content guide for a two-day in-service workshop on FGM/C is appended.

Training formats, contents and duration

Information from studies

The cross-sectional survey from Donnerwirth et al. (2021) in the U.S. revealed that almost three-quarters of survey respondents from nursing schools did not include FGM/C in their curricula. When FGM/C was included, it was mostly during undergraduate studies and covered in under one hour of time. Nursing schools were more likely to include the topic in their curricula in geographic areas where nurses are accustomed to caring for women with FGM/C. This aligns with insights from the expert interview with Midwife 2 (2023), who noted that FGM/C has attracted increasing attention in midwifery education over recent years.

Findings from Jansson's (2021) qualitative study revealed that FGM/C was included in the midwifery programme for professionals with post-registration status in Sweden. Generic information was provided whilst teaching the anatomy of female genital organs. Students expressed the wish for more teaching on FGM/C, as the only option for them to deepen their knowledge was within individual assignments. One lecturer mentioned it would be helpful to have national guidelines on educational content to ensure coverage of FGM/C in midwifery programmes. Similar challenges were noted by experts: Gynecologist 1 (2023) shared that FGM/C is still not mandatory in medical curricula in Germany. He referred to one exception, which was the CPD regulation for doctors in the federal state of Baden-Württemberg. Gynecologist 2 (2023) said that FGM/C was currently not included in pre- and post-registration medical training in his federal state in Germany. Therefore, he arranged a CPD activity for his team. Midwife 1 (2023) shared that CPD activities for midwives in UK are mostly on an ad-hoc basis.

The pilot education programme described by Jacoby and Smith, (2013) took place over three full days but authors do not state whether participation was mandatory or voluntary. Gynecologist 1 (2023) noted the recent development of Global Health Modules in Germany, within which FGM/C is sometimes integrated (Table 5). This was echoed by Midwife 1 (2023) from the UK, where the topic is also integrated into safeguarding or public health modules.

Table 5: Findings of Expert interviews

	Gynecologist 1	Gynecologist 2	Midwife 1	Midwife 2
Topic inclusion	Not mandatory, often in Global Health Modules	Not mandatory, training provided ad-hoc	Varies - safeguarding modules, midwifery study days or ad-hoc	Not mandatory, training provided ad-hoc
Content	Unclear which content belongs to medical profession	Varies due to medical placement (Community vs. Hospital)	No training standards. Focus: Classification, deinfibulation, cultural safety, medicalisation	Unclear which content belongs to midwifery
Challenges	Openness to talk about sexual organs;	Deinfibulation with language barrier	Lack of time, decision of	Interdisciplinary team

	differentiation: deinfibulation vs. reconstruction		lecturer whether topic is included	preparedness during labour
CPD training	Anatomy and Global Health	Health issues in different cultures, counselling and surgical skills	Classification, deinfibulation, including counselling, FGM/C during infancy	Trauma-sensible care
Suggestions for measurements of competencies	User satisfaction, long-term outcomes after deinfibulation	E-learning with a post-test	Cases seen and diagnosed, deinfibulations performed	User satisfaction, obstetric outcomes

Curricula, education standards and regulations

Pre-registration

For medical graduates in the UK, the minimum practice standards for doctors are awareness and adherence of professional responsibilities regarding procedures for non-medical reasons (e.g. FGM/C) and how to raise concerns. There is lack of information about respective training formats, which is in line with the experience from Midwife 1 (2023), who shared that topic inclusion is “often handled very flexibly”.

The second document where FGM/C is mentioned was the German Study and Examination Guidelines for Midwives, where the topic is included within the competence section (Bundesministerium für Gesundheit, 2020). Midwives to be are expected to promote autonomy and self-determination of women, identify special care needs, (e.g. FGM/C), advise women and families on support services in any case of violence, and deal with safeguarding concerns. Whereas the guideline contains a statement about training formats, there is no reference about content, meaning the teaching approach used can be determined by each university.

Post-registration

The Curriculum for Obstetrics and Gynecologists in the UK covers FGM/C under the theme of building professional identity and championing healthcare needs for women within all groups of society. The key skill linked is to create awareness of broader social and cultural determinants of health (RCOG, 2019). Obstetricians and gynecologists need to assess interactions between women’s health and cultural beliefs and practices. Midwife 1 (2023) underlines the importance about the necessity of this skills acquisition also for midwives, as she points out that “(...) midwives need to be specialists in FGM because you never know what you’re gonna get on labour ward”.

The pediatric curriculum in UK moved from a disease-focused structure to a more whole-population approach, where patients' needs and complexities should be addressed individually (RCPCH, 2023). In the area of child health, pediatricians are supposed to take responsibility for articulating concerns, whereby FGM/C falls under the learning outcome of safeguarding children. There is a mandatory requirement to refer cases of FGM/C, if there is a visible sign of the practice or when a differentiation between types of FGM/C is required.

In the federal state of Baden-Württemberg in Germany, the Advanced Training Regulations for medical doctors aimed to create a shift from a time and number-based to a competence-based approach (Landesärztekammer Baden-Württemberg, 2020). In the regulations, FGM/C is included in O&G specialty training and integrated in the knowledge section of age and culturally related diseases. Specialists must recognize symptoms of sexual and physical violence, where FGM/C is particularly mentioned. Additionally, knowledge on plastic and reconstructive surgery is needed for its management.

Other educational sources

Besides the six additional educational sources, the CPD landscape was reviewed on the country example of UK. Nine digital CPD training resources were identified (Appendix 2). Types of training varied from information material accessible via the use of an app or website, processing a case study, accessing a specialist network, participating in individual modules or complete training courses. This finding is inline with information provided by Midwife 1 (2023), who referred to e-learning modules about FGM/C as accessible CPD resources for health professionals in UK. Various training providers and partnerships were identified. Purchasable resources were often awarded with CPD points. Another observation was that the development of training resources received funding in the past, e.g. aiming to improve health outcomes for black and minority ethnic communities.

Evaluation and effect of training

Two studies reported a training effect: Barnawi (2018) investigated with a pre-/post-test design the impact of the FGM/C e-book on attitude, knowledge and self-efficacy levels of students. Findings revealed that post-test positive attitude and self-efficacy scores were improved, suggesting that the e-book optimized clinical and culturally competent care. Jacoby and Smith (2013) used a confidence survey tool, completed before and after the education intervention. Results showed an increase in confidence in their knowledge and ability to identify contraindications for the performance of a deinfibulation or repair. A lack of knowledge was identified regarding cultural beliefs, legal requirements and reinfibulation. Additionally, the

aspect of reinfibulation remained unclear, as the author referred twice within the context of deinfibulation and repair to the procedure of a reinfibulation, which would indicate women getting restitched after childbirth, a procedure which is illegal in many countries.

Education curricula and training standards predominantly use annual progression reviews for medical doctors with pre-and post-registration status to ensure FGM/C was taught. However, there are no direct measurements in place for frontline staff to assess, measure and evaluate individual levels of clinical competence, as well as their impact on obstetric outcomes and user satisfaction. Whereas regular re-evaluations of professional curricula should ensure quality of care during training and practice, there is no evidence on how topic inclusion impacts on these various aspects.

The training standards from NHS England (2018) refer to experts from O&G and pediatrics, where an assessment is supposed to take place prior to competence release. Professionals in training require a learning log observing two consultations and conducting three consultations themselves under supervision of an expert. Other curricula, however, did not mention a specific number of cases (e.g. deinfibulation) to become a confident practitioner. While clinical competence could be achieved using the above-mentioned procedure, there was a lack of evidence on how this may impact obstetric outcomes. We did not identify any mechanisms in place to evaluate direct training effects with maternity service provision on FGM/C, as well as with user satisfaction.

Discussion

This scoping review mapped pre-service education and continuous professional training activities on FGM/C for maternal health professionals in OECD-countries. Three main findings were identified from reviewing theoretical evidence: (1) Training programmes vary in format, content, and duration, which is often limited (2) lack of consistent approach on how competencies are achieved, measured, and evaluated, (3) no data on how training programmes impact on obstetric outcomes and service user experience. Expert interviews complement this evidence with two more findings: Lack of (4) training standards and (5) lack of mandatory training for professionals.

Variations in training programmes

Despite advocacy for topic inclusion in academic curricula for over two decades (WHO, 2001), this scoping review highlighted that FGM/C is often included ad-hoc or stand-alone during training programmes (Gynecologist 2, 2023; Midwife 1, 2023; Midwife 2, 2023; WHO, 2022)

and mostly covered within one hour (Donnenwirth et al., 2021; Jansson, 2021). Additionally, FGM/C is often not mentioned and hidden behind indirect themes, e.g. cultural competence, mainstreaming health service delivery or working with diverse communities. Whilst being open and ensuring nobody is left behind, the use of indirect themes leaves the interpretation of education contents to individuals or specific teams during teaching, meaning content inclusions may rest on the interpretation of lecturers, their individual experience and expertise. Professional associations and health organizations published position papers and recommendations regarding the care of women and girls with FGM/C (College of Physicians and Surgeons of Alberta, 2023; Familienplanungszentrum Balance, 2021; Australian Medical Association, 2017; Young *et al.*, 2015; Schweizerische Gesellschaft für Gynäkologie und Geburtshilfe, 2013). However, it remains unclear who has the responsibility to include FGM/C in pre- and post-registration training.

Assessment of competencies

Even in cases where FGM/C is included, we could not identify measures in place to assess how competencies were achieved, maintained, and evaluated. The consequences are reflected along the continuum of care from caregivers working in maternity services, where research recommends improving education and skills training for professionals (Gonzalez-Timoneda et al. 2018, Turkmani et al., 2018; Dawson et al., 2015; Leye et al., 2008). Interestingly, training standards for health professionals in UK demand general knowledge on FGM/C for all staff in contact with affected women during service delivery (NHS England, 2018). A differentiation between essential skills for individual assessments, communication, the identification of safeguarding issues as well as the need for specialist services is recommended and represents a demarcation to advanced skills in providing diagnosis, treatment, and interdisciplinary care.

However, working as an advanced practitioner requires different training, where skills acquisition (e.g. deinfibulation, pediatric examination) is documented and supervised. All experts interviewed advocated differentiation, stating that health professionals require essential, advanced and emergency skills during maternity service provision for women with FGM/C. Turner and Tancred (2023) argue that to ensure quality of care, advanced skills should be performed in facilities with specialist services, whereas emergency skills, like an unexpected deinfibulation during childbirth, could be integrated into mandatory study days for maternal health professionals (Midwife 1, 2023), alongside other emergency skills such as shoulder dystocia, breech delivery or newborn resuscitation.

Impact of training programmes

Only two of four research articles attempted to assess impact on outcomes, finding that training on FGM/C enhances knowledge, attitude levels and self-efficacy of health professionals pre- and post-registration (Barnawi, 2018; Jacoby and Smith, 2013). Findings were confirmed in a study from Liberia, where workshops on FGM/C improved health professional's knowledge and self-perceived skills (Nordmann *et al.*, 2022). However, none study impacted on care and little is known about how an increase in knowledge scores is transferred into clinical practice. Interestingly, there was no study found from a pre- and post-intervention on FGM/C from the medical profession. In a multi-stage sampling study from Sweden, interviewing midwives with experience of caring for women with FGM/C, findings reported lack of clarity regarding professional responsibilities between doctors and midwives, uncertainties of FGM/C being classified for low-risk pathways and deinfibulation requiring improvisation within unexpected situations (Widmark *et al.*, 2002). Exploring obstetric outcomes with FGM/C in OECD countries, recognition and coding capacities remain a challenge. En-Nosse *et al.* (2023) conducted a regional survey in South-Germany with maternal health professionals, where only one third of respondents knew how many FGM typologies occur according to the WHO classification. In Swiss university hospitals, a higher level of coding capacity was identified in departments with regular CPD activities (Cottler-Casanova *et al.*, 2021).

Lack of training standards

The review identified a lack of training standards on FGM/C for maternal health professionals with pre- and post-registration status. Expert interviews underlined this finding and call for professional accountability during childbirth, especially in the context of how the type of FGM/C affects the birthing process and if an intervention through a professional is required (Gynecologist 2, 2023). The Lancet Series on Maternal Health call for every woman to have the right to receive timely, appropriate and high-quality maternity care (Miller *et al.* 2016). By not addressing this knowledge gap, women with FGM/C may be vulnerable between the "too little, too late" and "too much, too soon" continuum on maternity service provision in OECD-countries, where care might be affected by lack of training and leading either to an insufficient or unnecessary interventions.

Mandatory training activities

Knowledge, attitude, and practice about FGM/C are essential skills for health professionals and are required to detect the practice, refer to specialized services and perform emergency procedures when necessary. A competent practitioner must also realize individual boundaries

and limitations. Regular CPD activities are needed to ensure competent and quality care for women with FGM/C, where the focus is on interdisciplinary care, guidance from experts and accepting the individual novice status during this journey. However, scoping the topic revealed that many FGM/C training activities are on a voluntary basis. In the UK, the topic is already included in mandatory midwifery study days or safeguarding trainings (Midwife 1, 2023), but not yet on a universal basis. Beside the responsibility of each health care organization, national policy commitment is urgently required. A treaty to accelerate national progress in Europe is the Convention on preventing and combating violence against women and domestic violence (Council of Europe, 2011). It's the first treaty in Europe acknowledging FGM/C and systematically addressing it. The convention states that regular country monitoring processes should be in place and help to evaluate progress on data collection, training of professionals, criminal law, FGM/C prevention, as well as support and referral services (Council of Europe 2022).

Implications for practice

The development and implementation of training standards for maternal health professionals from OECD-countries, using an interdisciplinary approach, could mark the beginning of a collaborative commitment towards topic inclusion at national level. Beside already existing global recommendations (WHO 2022, WHO 2016) and education sources from different health professions (Royal College of Nursing, 2023; Abdulcadir et al. 2022, NHS England, 2018), available evidence could be reviewed, acknowledged, and integrated into the process. Training standards could be piloted in a selection of OECD-countries in order to develop baseline data for FGM/C education of maternal health professionals. Further research should investigate whether improved knowledge on FGM/C has an impact on case detection and quality of care. Krasa (2010) referred to knowledge gaps of medical professions resulting in women in Europe receiving either inappropriate treatment or insensitive care. Scamell and Ghumman's (2019) qualitative synthesis on maternity care experience from women with FGM/C found that women often perceive a negative attitude when accessing services.

Health services also need to ensure that maternal health professionals are competent practitioners during service delivery for women with FGM/C. Mandatory training updates, which could either be in person or with the use of e-learning resources (Gynecologist 2, 2023) could be a useful tool to facilitate knowledge, reflect on attitudes and refresh care-pathways. Additionally, regular skills training on how to perform a deinfibulation during childbirth could ensure emergency skills acquisition and maintenance. Findings from a quasi-experimental study with nursing students in the U.S. showed that standardized patient dramatization simulation if for FGM/C seems to be an effective education strategy (Hess et al. 2022).

Learning from other emergency trainings to improve obstetric outcomes, there have been significant improvements in management and long-term of outcome of shoulder dystocia detected, since the introduction of the programme in UK (Crofts et al. 2016).

The implementation of accountability mechanisms plays a vital role towards health equity. Multiple actors at various levels need to engage into this process. Although, the state owes the role as key actor and interacts closely with civil society, corporate partners, professional bodies and associations (WHO 2019). It is already known that equity in health care is based on the principles of making quality of care accessible to all, which means that also health services are accountable to promote policies to ensure equitable care, instead of assuming that universal health coverage by law fulfills this obligation (Whitehead 1992). In the context of FGM/C, improved case documentation mapped to respective obstetric outcomes is urgently needed. Less is known about user satisfaction and long-term outcomes from women with FGM/C in context of maternity service provision. Findings from a systematic review of women's maternity experiences from FGM/C practicing countries suggest a focus on women-centered care practices using a culture-sensitive approach and creating mutual trust between themselves and care providers (Turkmani *et al.*, 2019). Therefore, it is crucial to include the service user perspective into this process to ensure health needs are getting addressed. Monitoring and evaluation systems need to be implemented at various state levels (local, regional, national) in order to collect data on health outcomes, identify service discrimination and address them effectively into policy.

Limitations

The limited body of research on FGM/C inclusion into training activities posed an initial challenge to overcome, especially when the topic was hidden behind broader concepts of care, and it could not be assessed how it was integrated into teaching. Therefore, it is possible that programmes which integrated FGM/C into modules focusing on culturally competent care or women in global health, may have been missed. Another limitation was to ensure completeness of reviewing curricula and training standards from 38 OECD countries. The challenge was addressed by using a specific keyword internet search with the combination of training, profession and one of the 38 OECD countries. Some sources might have been missed whilst scoping data in languages using their own characters (e.g. Slavic language family). The scope of the review was intentionally broad with a focus on 38 OECD countries but had to be narrowed to investigate country levels more in-depth. Therefore, findings are not generalizable and reflect country perspectives, partly even focusing on federal state level regulations, but were chosen as useful cases for the review and to initiate wider discussion.

Conclusions

In recent years, some progress has been made in addressing FGM/C in education curricula for maternal health professionals. However, we found inconsistency and lack of clarity about coverage, with much of what was identified in the form of guidelines or non-mandatory provision, with only very limited time identified as included in pre-registration curricula. Similarly, there is a lack of a consistent approach or clarity on which competencies should be achieved, measured and evaluated, or on educational approach and format. Additional challenges arise when FGM/C finds itself under various umbrella themes such as child protection, anatomy or global health. The diversity of approaches used in education fails to adequately address the complexity of the topic.

An interesting finding was the consciousness among professionals regarding topic significance. Maternal health professionals request evidence-based recommendations and training activities to provide culturally competent care. There is awareness of an essential and advanced skills set needed, which may vary between different levels of service provision as well as during basic and emergency care. Also, professionals do understand their boundaries, but might be in a position in labour ward, where skills are needed urgently and without training it may either lead to a caesarian section or to improvisation of care. This dilemma needs to be discussed and statutory responsibilities addressed. How a critical incident like this reflects on the obstetric outcome, quality of care, patient experience and follow-up care, or stress and anxiety for professionals has not yet been openly discussed or researched. Therefore, the findings of this review may initiate a new conversation about scopes of practice, what essential versus advanced maternity care skills are, and which skills are feasible during emergency situations.

There is an urgent need for more transparency in training regarding how competency levels are achieved, maintained and evaluated. With further research and interdisciplinary discussions, standardized training modules could be developed globally, piloted and implemented in OECD-countries, which could lead to an increased visibility of FGM/C within educational curricula and contribute to service improvement over time. Additionally, ongoing measurements regarding the adherence to training guidelines, quality of care indicators and the associated impact on women need to be evaluated and should be publicly accessible in order to improve life-long learning and accountability.

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Appendix 1: Overview of professionals during expert interviews

Professional role	Pseudonym	Years of experience	Area of speciality / expertise	Professional involvement	Country
Specialist Midwife	Midwife 1	>20 years	FGM Specialist Midwife; involved into teaching activities and skills training	Pre- and Post-Registration	UK
Senior Midwife and clinical placement facilitator	Midwife 2	>20 years	experience in teaching midwifery students, currently working as clinical placement facilitator and labour ward midwife	Pre-Registration	Germany
Gynecologist	Gynecologist 1	>40 years	FGM/C advocacy since >25 years; teaching medical students; gynecology services in a practice at community level, assessments of FGM/C for residency procedures	Pre- and Post-Registration	Germany
Gynecologist	Gynecologist 2	>40 years	Chief physician in a hospital providing specialist maternity services; involved into teaching doctors during clinical specialty training	Pre- and Post-Registration	Germany

Appendix 2: Digital CPD Resources on FGM: Country Example UK

Resource Type	Provider	Provider Specification or Specialty	Free access	
			Yes	No
E-Learning	Government	Health Education England in Partnership with Professional Health Association	X	
Online-Training Course	Government	Home-Office and E-Learning Provider	X	
FGM App and Website	Government	National Health Service in South-East England	X	
Instant Access E-Learning Module	Professional Association	Physicians and Surgeons of Wales	X	
I-Learn Module	Professional Association	Midwifery	X *	
Case Study	Professional Association	Gynecology and Obstetrics		X
E-Platform	Professional Health Associations and Human Rights Charities	Midwifery sector and partner associations, charities, survivors and activists*	X **	
E-Learning	Charity Organisation	Community service for diverse populations		X
Online Training	For-Profit organization	Digitally-led learning products		X

*: only for members of association

** : after registration

Appendix 3: PCC-Search strategy

Population: Maternal health professionals

Details: Maternal health professionals, midwives, midwifery, gynecologists, obstetricians, paediatricians, nurses, general nurses, obstetric nurses, paediatric nurses, anesthetists, general practitioners.

Index Terms: Health Personnel (MeSH for PubMed)

Concept: Pre-service education and CPD activities on FGM/C

1. Female genital mutilation, female genital cutting, female circumcision, FGM, FGC, FGM/C
2. Education, pre-service education, continuous professional development, CPD, curricula, competencies
3. Combined search of 1+2
4. CPD resources on FGM/C at the country sample of UK

Index Terms for 2: Education Medical, Professional competence, professional development (MeSH for PubMed)

Context: OECD-countries

1. OECD-countries, Europe, Asia, Americas, Oceania
 2. Individual country search: Australia, Austria, Belgium, Canada, Chile, Columbia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovenia, Slovakia, Spain, Sweden, Switzerland, Turkey, UK, United States
-

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Credit authorship contribution statement:

Lisa Apini-Welcland: Conceptualization, Methodology, Data curation, Writing: original draft, **Marina A.S. Daniele:** Methodology, Data curation, Writing: review and editing, **Lucia Rocca-Ihenacho:** Conceptualization, Supervision, Writing: review, and editing **Christine McCourt:** Conceptualization, Methodology, Data curation, Supervision, Writing: review and editing.

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Figures

Figure 1: PRISMA flow diagram

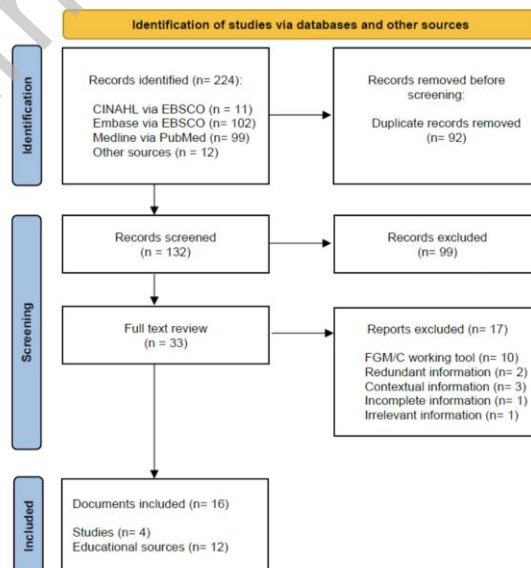


Table 1: Studies identified in the Scoping review

Author and Date	OECD Region & location	Sample and analysis	Staff cadre	Research design & methods
Donnerwirth <i>et al.</i> , (2021)	Americas Ohio, U.S.	1.496 Nursing Schools contacted, 403 answered (Response rate: 29,9%) Analysis with SPSS and descriptive and inferential statistics	Education providers in Nursing	Descriptive cross-sectional survey
Jansson, (2021)	Europe Växjö, Sweden	6 qualitative interviews with midwifery students (3) and teachers (3) Thematic Analysis	Midwifery Students and Lecturers	B.Sc. thesis with a qualitative, abductive cross-sectional design
Barnawi, (2018)	Americas New York State, U.S.	86 Undergraduate Nursing Students Mean differences for attitude, knowledge and self-efficacy where tested	Undergraduate Nursing	PhD thesis with a Pre/Post Test quasi-experimental design
Jacoby and Smith, (2013)	Americas Maine, U.S.	50 invitations sent, 11 participants (Response rate: 22%) Confidence level of learning objectives at 2 different times; Means calculated with Microsoft Excel and descriptive analysis	Certified-Nurse Midwives	Pilot study with evaluation

Table 2: Characteristics of curricula, education standards and regulations

Author, Date and Country	Registration Status	Target population	Purpose	Type of source
General Medical Council, (2018), UK	Pre-registration	Newly qualified doctors	Outline of practical skills, procedures and minimum standards	Standard guidance and curricula
Bundesministerium für Gesundheit (Ministry of Health), (2020), Germany	Pre-registration	Study and Examination Guideline for Midwives	Higher education institutions with undergraduate midwifery programmes	Legal document
Royal College of Obstetricians and Gynecologists, (2019), UK	Post-registration	Doctors obtaining a certificate of completion in O&G; plus: Training program directors	Training framework to reach consultant level	Curriculum
Royal College of Pediatrics and	Post-registration	Specialty Training for Pediatricians, plus:	Training framework to reach consultant level	Curriculum

Child Health, (2023), UK		Deaneries and local Education Training Boards		
Landesärztekam- mer (Federal Medical Council) Baden- Württemberg, (2020), Germany	Post- registration	Medical doctors	Federal CPD regulation for doctors in Specialty Training	Legal document
Bundesärztekam- mer (National Medical Council), (2020), Germany	Post- registration	Doctors and Therapists working in psycho- traumatology with work experience	Standards for assessment of psychological reactive trauma consequences for residencies	Curriculum

Table 3: Overview of other educational sources

Author & Date	Registration Status	Target population	Purpose	Type of source
Krasa (2010), Germany	Pre- registration	Doctors trained in German speaking countries, France, UK	Legal and ethical impli- cations of FGM during medical training	Scientific contribution
NHS England, (2018), UK	Post- registration	All staff working in healthcare settings	Statutory guidance and responsibility of FGM training	Training Standard
Kouta <i>et al.</i> , (2020), Europe	Post- registration	Professionals involved into the care of with FGM/C affected women	FGM/C skills enhancement	Information on training resource
Kaplan <i>et al.</i> , (2017), Europe	Pre- and Post- registration	Future professionals and specialists from different disciplines	FGM/C integration into academic curricula: Pilot at six European universities	Multi- academic Training Guide
World Health Organization, (2016), Global	Pre- and Post- registration	Health professionals, people involved into curricula development	Evidence-based recommendations for the management of health complications	Guideline
World Health Organization, (2022), Global	Pre- and Post- registration	Curriculum planers in nursing and midwifery education	Integrating FGM/C into curricula as a global sector response	Practical Guide

Table 4: Overview of training formats, duration, contents and competencies

Author and date	Training format and duration	Training content of FGM/C	Competencies achieved
Donnerwirth <i>et al.</i> , (2021)	Textbooks, journal articles, case studies, guest speakers, skills lab sessions and simulation trainings. On average one hour of training.	-	-
Jansson (2021)	Lectures. Training duration about one hour of time.	during anatomy of female genital organs	-
Barnawi (2018)	Online module about FGM/C	information, clinical knowledge about maternity care and related frameworks (e.g. scope of practice, ethical aspects, policies)	Improved test scores on knowledge, attitude and self-efficacy levels
Jacoby & Smith, (2013)	education program on FGM/C	recognition of FGM/C, communication and documentation, deinfibulation during childbirth	Increased confidence in knowledge and midwives' ability to identify contraindications to perform a deinfibulation or repair.
General Medical Council (2018)		included into training of safeguarding vulnerable patients	Identify and protect patients at risk
Bundesministerium für Gesundheit (Ministry of Health), (2020)	mix of theoretical lectures, skills lab sessions and practical placements	-	Promote autonomy, sensitivity for special care needs, counsel and support in any case of violence, safeguarding infants
Royal College of Obstetricians and Gynecologists (2019)	-	Awareness of broader social and cultural determinants of health	Assess interactions between women's health and cultural beliefs/ practices. Knowledge and adherence to national legislation
Royal College of Pediatrics and Child Health, (2023)	-	Included into training of safeguarding vulnerable patients	Identify children at risk, report concerns, document procedure and refer to specialized services.
Landesärztekammer (Federal Medical Council) Baden-Württemberg, (2020)	-	Assigned to age and cultural related diseases during O&G training	Recognize symptoms of sexual and physical violence. Specialist knowledge on plastic and reconstructive surgery to manage FGM/C cases.
Bundesärztekammer (National Medical Council), (2022)	Theoretical module with role plays, group work, case studies,	Residence law, consequences of trauma, working with	Knowledge, attitudes and clinical skills

	problem-based learning, simulation trainings. FGM/C training duration: 12 teaching sessions.	interpreters and transcultural aspects within expert appraisals.	
Krasa, (2010)	-	Not part in curricula during medical training	-
NHS England (2018)	Level 3: E-learning or face-to-face sessions, including discussion elements reflecting on clinical cases or scenarios. Level 4: Face-to-face trainings with pre-/posttest approach, skills training	Level 3: Training for maternal health professionals, who may treat patients with FGM/C or receive a disclosure. Level 4 are specialists, who may perform a deinfibulation or pediatric examination	Level 3: Identification of FGM/C, physical examination, documentation, referral pathways Level 4: Treatment plans, identify mental health needs, leadership skills for multidisciplinary teamwork, safeguarding issues and skills development for staff.
Kouta <i>et al.</i> , (2020)	Online platform with webinars, case studies, videos and discussion forum	Foundation modules: and specialist modules for certain professions.	Enhance professional skills and provide support for women and girls at risk.
Kaplan <i>et al.</i> , (2017)	FGM/C inclusion into academic curricula. Formats: Presentations, audio-visual resources, debates, interviews, evaluation exercises.	Sociocultural perspectives, prevalence rates, migration/criminal law, professional content, resources for specialized care	Use of a cultural comprehensive approach and ensure familiarization with real cases to understand the complexity of care.
World Health Organization, (2016)	clinical handbook for management of health complications from FGM/C	Information and Education, Deinfibulation, Mental Health and Female Sexual Health	Knowledge on how to implement, monitor and evaluate FGM/C care
World Health Organization, (2022)	Practical guide to integrate FGM/C into nursing and midwifery curricula. Training duration for the workshop: 2 days.	Guidance for curricula update. Plus: Content guide for an in-service workshop.	To develop, update, pilot and evaluate curricula content on FGM/C.

Declaration of interests

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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