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Barriers to abortion provision: A qualitative study among medical students and gynecologists in Berlin, Germany

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ABSTRACT

Objective: While abortion is a common medical procedure in Germany, the number of abortion-providing facilities declined by 46% between 2003 and 2022. As existing data do not paint a complete picture of the factors influencing this decline, an understanding into the perspectives of health care professionals (HCPs) is necessary. We set out to examine attitudes of HCPs in Berlin, Germany towards different aspects of abortion, to identify barriers that might prevent them from providing abortions.

Study design: We used a qualitative research design consisting of in-depth semi-structured one-on-one interviews with 14 medical students and 4 gynecologists. We transcribed interviews verbatim and conducted qualitative content analysis.

Results: Many interviewees perceived abortion as a taboo and legally ambiguous intervention. They feared stigmatization when talking about or providing abortions, especially by fellow students or religious family members. Few participants objected to abortion provision on religious grounds. Some medical students underestimated the safety of abortion and overestimated the potential for side effects and complications. Medical students obtained their knowledge about abortion from various sources, such as media, religious school education or personal experience with abortion; the topic was rarely discussed in their medical education. To decide whether to provide abortions later, many students wished for detailed abortion teaching during medical school and residency.

Conclusions: Fear of stigmatization, misconceptions on abortion and religious beliefs reduced HCPs' willingness to perform abortions. Abortion education was widely valued by medical students and could address some of the barriers to abortion provision we found in this study.

Implications: Universities and teaching hospitals should systematically teach about abortion to counteract misinformation and help normalize abortions among HCPs. Moreover, political decision makers should take measures in order to destigmatize abortion, like an abortion

regulation outside the Criminal Code in line with international public health recommendations.

Keywords: abortion; medical education; abortion training; healthcare providers' attitudes; Germany; stigma

1. Introduction

Abortions are a common medical procedure: 104,000 were performed in Germany in 2022. However, over the last 2 decades there has been a clear downward trend in the number of abortion-providing facilities; between the years 2003 and 2022, the total number of facilities declined by 46% (from 2,050 to 1,110 facilities). In the same time period, the absolute number of abortions declined by only 19%, whereas the number of abortions per person stayed stable (from 65 to 62 abortions per 10,000 women of reproductive age) [1]. Accordingly, access to medical care has reportedly become more difficult for abortion seekers [2]. Preliminary results of a study evaluating the first legal telemedical service in Germany found that among 180 persons contacting the service, 60% mentioned the lack of abortion facilities in their region as a reason they sought abortion care via telemedicine [3]. In especially underserved regions, federal state governments have started legislative initiatives to ensure access to abortion services [4]. Moreover, the international telemedicine abortion service *Women on Web* (*WoW)* experienced high demand in Germany both before and during the COVID-19 pandemic. This might illustrate limited access to abortion within the German healthcare system [5].

Most abortions in Germany (80%) take place in outpatient institutions, like OB-GYN practices or family planning centers; a minority (20%) are performed in hospital OB-GYN departments [1]. According to Section 218 and 219 of the German Criminal Code, most abortions in Germany are illegal, but unpunishable under certain circumstances: During the first 3 months of pregnancy, abortion is unlawful but exempt from punishment if the pregnant person received mandatory counselling at a specified site at least 3 days prior to the abortion [6, 7]. Until its recent abolition in June 2022, Article 219a of the penal code prohibited abortion providers from publicizing abortion services. People advocating against abortion rights had used this article frequently to take abortion providers to court, prompting them to censor information from their professional web pages [8]. These court cases attracted substantial media attention and led to a lively sociopolitical debate about abortion providers' rights to inform their patients, but also about current legal regulations on abortion, access to abortion services and the anti-abortion movement in Germany.

Personal convictions of healthcare professionals (HCPs) around abortion impact patients' access to high quality abortion care [9]: Patients consulting WoW from Germany cite providers' attitudes (e.g., judgmental treatment, delayed approval for abortion, lack of assistance) as reasons for seeking online support [10]. Provider's attitudes on abortion also

impact the overall accessibility of abortions, as physicians in Germany are permitted to opt out of providing abortion services on grounds of conscience [11]. Since HCPs' attitudes towards abortion have rarely been investigated in Germany in the last 30 years [9, 12], it is unknown whether the decline of abortion providers in Germany is caused by personal moral conflicts or influenced by other factors such as lack of abortion training, fear of legal problems, or reluctance to provide stigmatized services [11].

The aim of this study was to examine medical students' and gynecologists' attitudes towards different aspects of abortion and to identify barriers that might prevent them from providing abortions. We chose a qualitative research design, since this allows for greater depth of understanding than quantitative methods [13], especially in fields that have previously been subject to little research.

2. Methods

We developed a semi-structured questionnaire (Appendix 1) consisting of open-ended questions. We asked respondents about existing knowledge around abortion and how they had acquired it, the quality of their medical training on abortion, their expectations for abortion training, about attitudes towards German abortion law and individual willingness to be involved in abortion provision as qualified doctors. The study focused on abortions up to the twelfth week of pregnancy, which account for >97% of abortions in Germany [1].

As this was an exploratory study, we did not base our interview questions on a specific theory. We developed questions based on a general review of the literature and experiences of the first author as a member of "Medical Students for Choice" Berlin. To strengthen the interview guide, we consulted a clinical reproductive health specialist, and a professor for family planning, both familiar with qualitative research on abortion. We conducted pilot interviews with 3 medical students to refine the simplicity and clarity of questions. We did not include the pilot interviews in our analysis.

We anticipated that we would need 15 interviews to reach thematic saturation: 8 with medical students, 7 with gynecologists or residents in gynecology training. To include as many perspectives as possible on this potentially controversial topic, we chose a maximum-variation purposive sampling strategy [13]. First, we contacted 8 student-organized working groups (e.g., Christian, Public Health) at Charité – Berlin University of Medicine, seeking individuals willing to participate in one-on-one interviews. Only 1 student responded, so we widened the invitation via the university mailing list and social media. We stratified

recruitment based on year of medical school and gender. Of 20 respondents (17 female, 3 male), we included all 3 male respondents to reflect the male/female ratio of medical schools in Germany, where two-thirds of medical students are female. We contacted 52 gynecologists who practice in Berlin; just one responded, and declined the interview, so we used snowball sampling and recruited 4 physicians [14].

We held interviews in person in venues of participants' choice (e.g., university campus, participant's home) between April and June 2018. The interviewers were not aware of any pre-existing relationship with the interviewees prior to their participation. Before the interview, we explained the purpose of the study as a general research interest in this understudied and controversial issue and emphasized that a wide range of opinions was likely. We assured interviewees of anonymity and data protection and sought written informed consent. After each interview, we asked participants to complete a voluntary written questionnaire with open-ended questions on sociodemographic data, e.g., age, gender, and religion.

We audio-recorded the interviews and transcribed them verbatim. We anonymized persons and places, and generated codes to identify interviews. We used MAXQDA 2018 (VERBI, Germany) to organize and analyze our data, focusing on potential barriers for abortion provision. We derived our code system based on Philipp Mayring's principles of qualitative content analysis [15]. We formed categories in a deductive-inductive manner: First, we summarized the interview content according to questionnaire topics. We then focused our analysis on barriers to abortion provision, identified relevant themes from the material and formed categories.

During the interview phase, we iteratively discussed whether we had reached thematic saturation. For medical students, we continued interviewing until no more new themes emerged (14 interviews). For physicians, we did not reach thematic saturation but had to stop data collection due to difficulty in recruiting physicians.

The research team consisted of 2 physicians and 1 political scientist. Neither of the physicians on the research team was an abortion provider at the time of the interviews, though one was active in the student group "Medical Students for Choice". None of the researchers shared their personal opinions or political engagement with interviewees. We discussed, reflected upon, and optimized the analysis in the interdisciplinary qualitative working group at the Charité – Berlin University of Medicine (Institutes of Social Medicine and Public Health). To improve quality and validity of the analysis and ensure

intersubjectivity, the research team met regularly to discuss emerging themes and monitor thematic saturation.

The Charité – Berlin University of Medicine ethics committee granted ethical clearance (EA 1/056/18).

3. Results

We interviewed 14 medical students studying at Charité – Berlin University of Medicine and 4 physicians (3 gynecologists, 1 OB-GYN resident) working in Berlin. At the time of interview, 2 physicians indicated that they did perform abortions; the other 2 did not. Although all participants were based in Berlin, most came from different parts of Germany, except one student from a different European country. The interviews lasted 29–85 (mean 49) minutes. Table 1 shows participants' sociodemographic data and years of medical experience.

Findings from our qualitative content analysis on potential barriers to abortion provision are discussed below. Table 2 summarizes main themes and subsidiary categories that emerged.

3.1. Abortion stigma and taboo

Interviewees widely perceived abortion as a tabooed and stigmatized procedure in society in general, but particularly in medicine. Some interviewees could not talk openly about abortion with people in their professional environment for fear of rejection or hostility. A student in her last year of medical school expressed how she experienced the stigmatization around abortions among her fellow students: *"It's such a hot potato that no one wants to touch. (...) I experience it myself when I say that I am not an anti-abortion activist (...) that I sometimes get strange looks. Or actually experience hostility."* (Student 10, 6th year) One gynecologist who does not perform abortions (Physician 3) described how she was aware of the taboo around abortion even in a hospital where some staff provided them: discussions about who in her team was providing abortions and who was not, were held in the *"copy room"*, not in official team meetings. Similarly, some interviewees described difficulties discussing abortion even in a private environment: *"I don't always dare to talk openly about it with friends, because you don't know what your friends' attitudes are.*" (Student 5, 2nd year)

3.2. Understanding of abortion law

Many medical students perceived the abortion regulations as complicated. Some were confused by the regulation within the criminal law: "*I was really shocked that it is regulated within the penal code."* (Student 8, 2nd year) Other medical students misunderstood content and localization of the law: *"I recently read this paragraph: that the constitution states that abortion is murder."* (Student 14, 4th year) Although the physicians were in general aware of the content of the abortion law, those who did not provide abortions described the law as confusing: *"I've already read through this [abortion law] 50 times, but I can't actually recapitulate it."* (Physician 3) All but one interviewee considered the right to object to abortion provision on personal grounds fundamental.

3.3. Role of religion

Participants' religious beliefs and the influence of their religious environment resulted in negative attitudes towards abortion. Of 11 interviewees who indicated being Christian in the written questionnaire (see Table 1), 2 described themselves as practicing Christians during the interviews and were against abortion provision because of their own religious beliefs: *"From baptism on, I definitely had the opinion that every child is a creature planned by God, and that therefore every abortion is ultimately murder."* (Student 14, 4th year)

Regardless of whether they reported a personal objection to abortion based on their own religious beliefs, the fear of stigmatization through religious family members was an obstacle for some medical students: *"Prevent me (from performing abortions)? I must admit: the personal environment. I think the rest of my family is still somewhat influenced by the church. And I think there would already be prejudices there."* (Student 5, 2nd year) Similarly, a gynecologist described the crucial influence of her Catholic personal environment: *"I myself have never performed abortions. Because I come from a very Catholic background, from a very Catholic family (...). In my family, my entire field of activity is the reason for a lot of discussions, and that's why it's always a difficult topic for me."* (Physician 3)

Furthermore, religious education during high school was formative for some interview participants: *"Other images that come to mind are pictures that my religion teacher brought us: pictures of fetuses that were taken after abortions, which looked quite frightening."* (Student 13, 1st year) Similarly, religious class at school impacted one physician. She reported that up to her gynecologist specialist examination, these classes were the only occasion during her education when abortion was ever discussed. *"It was conveyed at this*

Catholic school in a form that was cruel, frightening and so on, and (...) shaped us very much." (Physician 3)

3.4. Misconceptions about abortion

Some medical students misconceived abortion as an intervention with severe side effects, both psychiatric (depression, traumatization) and physical (infertility). On these grounds, they perceived mandatory counselling as an important support for people with unwanted pregnancies, by helping them to reflect on their situation, and thereby preventing them from potentially dangerous complications.

"And I think (...) that many people might have other thoughts (when being counselled). For example, that (...) in the worst case, you could not have another child. Because (...) such an abortion carries risks. Or that in many cases women get depression, so to speak. And that many also regret it afterwards. So I think it's good that there is this obligation (for counselling)." (Student 9, 4th year)

Some students misunderstood first-trimester abortion procedures or used medically incorrect terms (e.g., *syringe* or *injection* instead of *abortion pill* or *vacuum aspirator*; *child* instead of *embryo*/*fetus*). Such misconceptions influenced participants' opinions about performing abortions: *"Well, if I had to decide that now, I wouldn't do it, from what I know. Because I simply couldn't give the injection into the heart of a child."* (Student 12, 3rd year)

3.5. Various sources of knowledge about abortion

Many students expressed insecurity concerning their knowledge and feelings about abortion. Most mentioned the media as a source of reference (e.g., TV documentaries, newspaper articles), as opposed to medical education. Female medical students often obtained their knowledge from online sources when they or their friends were concerned about an unwanted pregnancy.

Some students mentioned learning about abortion from pro-choice or anti-choice advocacy groups. Some specifically mentioned the student working group "Medical Students for Choice" Berlin, which since 2015 has been offering extracurricular courses on abortion at the Charité – Berlin University of Medicine. One student described the influence of an anti-choice pamphlet on his perception of abortion: *"I think I got my knowledge from certain anti-abortionists who gave me a flyer saying that you (...) give an injection."* (Student 4, 3rd year)

Few medical students and none of the physicians learned about abortion during their university studies. A final-year student answered the question of how she came into contact with the topic during her medical studies in Berlin: *"Very little. Almost not at all. In the tenth or ninth semester (...) we had a course where abortion was mentioned. And you had to be able to list the conditions under which an abortion (...) remains unpunished. But that's all. (...) What methods are there? You don't learn all this as a medical student if you're not interested in it by yourself and if you don't inform yourself."* (Student 10, 6th year)

Some students specified that they would like to provide abortions later on, but would first require more information about the medical and surgical treatments, including side effects. *"Not being taught [abortions] could prevent me [performing them]. That I am not confident enough and don't know how to do it."* (Student 2, 1st year) These students also stated that being able to watch an abortion procedure and talk to persons seeking an abortion would be necessary as part of their training. Many students mentioned that enough time for ethical discussions and exchange of personal opinions in small seminar groups was essential for them to decide whether to provide abortions. Gynecologists, on the other hand, did not wish for detailed medical education during medical school per se but a de-emotionalized and professional approach in residency. One abortion provider mentioned the consequences of lack of abortion teaching during residency: *"And there are some colleagues who have come to us from hospitals that don't provide abortions, who in the end did not know the whole procedure so well."* (Physician 2)

4. Discussion

In this qualitative study of 14 medical students and 4 physicians in Germany, interviews showed continuities of barriers to abortion provision from medical education to clinical practice. We found 4 barriers to abortion provision, including fear of stigmatization, misconceptions of abortion methods, personal objection on religious grounds, and lack of formal medical education.

Numerous international studies have described the fear of hostility and stigma experienced by abortion providers [16, 17]. HCPs in Germany encounter hostility in charges against doctors and anti-choice demonstrations outside medical practices. Poor conditions for abortion providers in Germany are acknowledged by the former president of the German Medical Association, who expressed his sympathy for any doctor reluctant to perform abortions under the current circumstances [18]. Although participants in our study did not

mention German abortion regulation as a direct barrier to abortion provision, the regulation within the Criminal Code is likely to perpetuate the abortion-related stigma they experienced [19].

Improved medical education might contribute to destigmatizing abortions [20]. However, lack of such education is a common global problem [21]. In Germany, requirements for medical students' state examination focus on knowledge of the legal aspects of abortion [22]; an understanding of abortion methods, however, are not a compulsory part of medical education. Accordingly, abortion teaching in German medical schools varies widely and often focuses on ethico-legal, not clinical, aspects [23]. Similar to a recent qualitative study from the UK [24], most medical students in our study desired more information on and discussions about abortion-related topics. For some student interviewees, practical experience with the procedure was even a prerequisite to decide whether to provide abortions. Studies have shown that doing a rotation in an institution where medical students can witness or participate in surgical abortions, indeed increases their willingness to provide abortion care in the future [25, 26]. Similarly, routine training during residency and a higher number of abortions performed in training correlate with future provision [27].

In Germany, medical professionals gain practical skills mainly during the last year of medical school and during their selected residency. An OB-GYN residency lasts 5 years, taking place mainly in gynecological departments of German teaching hospitals. However, some teaching hospitals do not provide abortions, partly due to moral objections [2]. Others use outdated methods for abortion, such as sharp curettage instead of vacuum aspiration [1]. Hence, OB-GYN residents do not systematically gain practical experience with abortion management, including abortion counselling, uterine aspiration and medication abortion.

In our study, students overemphasized the potential for side effects and complications or used medically inaccurate terms, such as "killing" or "murder" to refer to abortion, and such as "child" to refer to embryo/fetus. This potentially demonstrates lack of medical education and the influence of anti-abortion propaganda on them. Inclusion of abortion training into medical education is necessary to counteract such misinformation, and is likely to decrease negative views about abortion among HCPs. Evidence from programmes that have integrated abortion education into preclinical and clinical curricula have found high acceptance of and satisfaction with such education programmes among HCPs. Even learners who had initially planned to only partially participate in a rotation had significant changes in attitudes after training [27].

Increasing HCPs' impartiality, skills and willingness to provide abortions becomes particularly important as the recent steep decline in abortion-providing facilities in Germany hints at a generational shift of HCPs becoming increasingly unwilling to perform abortions. A study focusing on abortion provision in the United States found less support for legal abortions among younger providers of reproductive health care, which could indicate future difficulties in maintaining a clinical workforce willing to provide abortion care [28].

Our study has several limitations. Personal views and biases of the research team could have affected the interviews and data analysis, and social desirability bias from participants may have impacted responses. Interviewees' attitudes may not be representative of HCPs across all regions of Germany. Moreover, we conducted our interviews before a curriculum change at Charité – Berlin University of Medicine in 2019, when a seminar on abortion was added to the syllabus following pressure from the Berlin student group "Medical Students for Choice". Since then, attitudes towards abortion education among medical students in Berlin may have changed. Additionally, our sample was insufficient to map all existing barriers of abortion provision. We did not reach thematic saturation for gynecologists, and some barriers to abortion provision discussed in the literature (e.g., financial, bureaucratic, administrative) did not come up at all in our interviews.

Based on the international literature and our own results, we propose the systematic inclusion of abortion teaching in university curricula, as well as abortion training offered to all OB-GYN residents at German teaching hospitals. But changes in medical teaching only address part of the problem: for normalization and destigmatization of abortion among HCPs, structural change is essential [29]. Thus, we recommend political interventions to protect HCPs against stigmatization. In June 2022, the abolition of the German Criminal Code Section 219a, which prohibited doctors from providing information on abortion, was a first step towards more legal certainty for physicians. However, abortion itself remains regulated within the Criminal Code, perpetuating abortion-related stigma. The German government should recognize abortion services as essential healthcare and regulate abortions in line with international public health recommendations [30].

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Competing interests

None.

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447 **<TABLES>**

448 **Table 1**
449 Sociodemographic data and years of medical experience of interview participants in Berlin,
450 Germany, 2018

	Gynecologists	Students
Mean age in years (range)	37.5 (27-46)	25.2 (18-41)
Gender		
Female	4 (100)	11 (79)
Male	0 (0)	3 (21)
Religion		
Christian*	3 (75)	8 (57)
No answer	1 (25)	6 (43)
Year of studies at university		
1st	NA	2 (14)
2nd	NA	3 (21)
3rd	NA	3 (21)
4th	NA	3 (21)
5th	NA	2 (14)
6th	NA	1 (7)
Years of medical practice		
0	1 (25)	NA
7	1 (25)	NA
15	1 (25)	NA
20	1 (25)	NA

451 Data are shown as n (%) except where stated otherwise.

452 * We categorized the answers ‘Catholic’, ‘Protestant’, and ‘Baptist’ as ‘Christian’.

453 NA: not applicable.
454

455 **Table 2**

456 Overview of themes and categories that emerged from the interviews with 14 medical

457 students and 4 gynecologists in Berlin, 2018

Themes	Categories
Abortion stigma and taboo	• Negative reactions from professional environment • Negative reactions from personal environment
Understanding of abortion law	• Irritation due to regulation in the Criminal Code • Misunderstanding of content and localization of the law • Confusion due to complexity of legal regulations
Role of religion	• Own religious beliefs • Religious beliefs of family members • Religious class at school
Misconceptions about abortion	• Overestimation of abortion risks • False understanding of abortion procedure
Various sources of knowledge about abortion	• Media, social media • Online research when being personally affected • Pro-choice or anti-choice advocacy groups • Gaps in formal medical education

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APPENDIX: Interview guide

I. General

- What thoughts come into your mind when you hear the word *abortion*?
- How have you encountered the issue of abortion so far?

II. Training

- How did you come into contact with the topic of abortion during your medical studies and OB-GYN residency?
- What would you have wished for?
- In your opinion, should abortion be an integral part of medical studies? Of residency? In what form?

III. Abortion seeker

- In your opinion, does the person seeking an abortion bear any responsibility? If so, what is it, and to whom?

IV. Reasons for pregnancy termination

- What do you think are the reasons why a person wants an abortion?
- Is there a moral difference for you between different reasons?

V. Embryo/foetus

- How do you see the embryo/foetus? Does the gestational age have any significance for you? Should it have an influence on the legal regulation?

VI. Legal situation and social debate

- What have you witnessed so far in public discussions on abortion?
- What do you know about the current legal situation of abortion in Germany?
- What do you think about it? What do you think about compulsory counselling and the 3-day waiting period?
- There is a so-called “ban on advertising” in Germany, which prohibits gynecologists in private practice from stating on their practice website that they perform abortions. Have you heard about this? What do you think of it?

VII. Methods

- What methods of abortion do you know? In which contexts do you consider each method to be useful?

VIII. Gynecologist

- What should be the role of the gynecologist towards the woman seeking an abortion?
- What role should the doctor’s personal views play in the treatment?
- What do you think of the right to object to abortion provision on personal grounds?
- Students: Would you provide abortions yourself?
- Doctors: Are you an abortion provider? Why do you (not) provide abortions?
- If you provide abortions: How do you feel about performing the procedure? Is it comparable for you to other gynecological procedures?
- What could prevent or motivate you to provide abortions?