Differences in the Frequency of Use of Epidural Analgesia between Immigrant Women of Turkish Origin and Non-Immigrant Women in Germany – Explanatory Approaches and Conclusions of a Qualitative Study

Häufigkeitsunterschiede der Periduralanästhesienutzung zwischen türkeistämmigen Migrantinnen und Nichtmigrantinnen – Erklärungsansätze und Schlussfolgerungen einer qualitativen Studie

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Key words
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Abstract

Introduction: The starting point of this study was the considerably lower rate of epidural analgesia use among women of Turkish origin in Germany compared to non-immigrant women in the German Research Foundation (DFG)-funded study entitled "Perinatal Health and Migration Berlin". The study aimed to identify possible differences in the women's attitudes towards epidural analgesia.

Methods: Exploratory study with semi-structured interviews, interviews lasting 17 minutes on average were conducted with 19 women of Turkish origin and 11 non-immigrant women at a Berlin hospital. The interviews were subjected to a qualitative content analysis.

Results: Immigrant women of Turkish origin in Germany more frequently ascribe meaning to the pain associated with vaginal delivery. They more frequently categorically reject the use of epidural analgesia, 1) for fear of long-term complications such as paralysis and back pain and 2) based on the view that vaginal delivery with epidural analgesia is not natural. Information on epidural analgesia is frequently obtained from a variety of sources from their social setting, in particular, by word of mouth. The women in both groups stated that they would take the decision to use epidural analgesia independent of their partner's opinion.

Discussion: The differences in epidural analgesia use rates observed correspond to the women's attitudes. For the immigrant women of Turkish origin in Germany, the attitude towards using epidural analgesia is based in part on misinformation. In order to enable the women to make an informed decision, epidural analgesia could receive a stronger focus during childbirth courses.

Zusammenfassung

Einleitung: Ausgangspunkt der hier vorliegenden Studie war die deutlich niedrigere Periduralanästhesie-(PDA-)Rate bei Schwangeren mit Migrationshintergrund (MH) Türkei im Vergleich zu Schwangeren ohne MH in der DFG-geförderten Studie „Perinatale Gesundheit und Migration in Berlin". Es sollte geklärt werden, ob und wie sich die Einstellungen der Schwangeren bez. PDA unterscheiden.

Methodik: Anhand einer explorativen Studie mit leitfadengestützten Interviews wurden dazu durchschnittlich 17-minütige Interviews mit 19 türkeistämmigen und 11 deutschen Schwangeren in einem Berliner Krankenhaus geführt, die einer qualitativen Inhaltsanalyse unterzogen wurden.

Ergebnisse: Dem Schmerz einer vaginalen Entbindung messen Schwangere mit MH Türkei häufiger eine sinnvolle Bedeutung zu. Eine PDA wird von ihnen häufiger von vornherein abgelehnt: 1) aus Angst vor langfristigen Komplikationen wie Lähmung und Rückenschmerzen und 2) aufgrund der Ansicht, dass eine vaginale Entbindung mit PDA nicht natürlich sei. Informationen zur PDA werden häufiger aus vielfältigen, vor allem mündlichen Quellen aus dem sozialen Umfeld bezogen. Die Schwangeren beider Gruppen gaben an, die Entscheidung bez. einer PDA unabhängig von der Meinung ihres Partners zu treffen.

Diskussion: Die beobachteten Unterschiede in den PDA-Raten entsprechen den Einstellungen der Schwangeren. Diese beruht bei den Schwangeren mit MH Türkei gegenüber der PDA z.T. auf Fehlinformationen. Um den Schwangeren eine informierte Entscheidung zu ermöglichen, könnte die PDA während der Geburtsvorbereitung stärker thematisiert werden.

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Introduction

Epidural analgesia is the gold standard for pain management during childbirth. Regional analgesic procedures are used in around 20 to 30% of all births in Germany today [1]). In the process of tissue damage, pain perception and pain expression, psychological processes are activated that are influenced by cognitive and emotional elements. Biological, social and cultural-ethnic factors contribute to further modification of this "pain cascade". Pain perception and response to pain vary interculturally [2]. The fact that pregnant immigrants undergo epidural analgesia significantly less often than non-immigrants has also been reported in the United States [3–5]), Canada [6] and Spain [7]. Studies focusing particularly on the use of epidural analgesia by immigrant women with a Turkish background were conducted in Sweden [8], Austria [9] and Germany [10]. There are a variety of explanations for this. One study conducted in the United States, which investigated the lower rate of epidural analgesia use in Hispanic women demonstrated a correlation with the women's linguistic proficiency [11]. This result could point to a language barrier when the patient requests epidural analgesia or to communication gaps when presenting information or during patient consent. A qualitative study from the United States concluded that Hispanic women's decision not to use epidural analgesia was primarily due to misconceptions about the intervention and its risks [12]. Furthermore, in addition to the already mentioned sociocultural differences in pain perception [13], the partner's attitude [14], the attitude of the medical personnel towards immigrant women [15], the women's educational level [3,6] and religious background (secular vs. religious) [16] have also been discussed as influencing factors.

In Germany's currently largest study on perinatal health and migration, significant differences were also observed in the use of epidural analgesia and combined spinal-epidural anaesthesia (together referred to as "epidural analgesia" below) among immigrant women of Turkish origin and non-immigrant women. In the group of women with vaginal delivery, epidural analgesia was used in 28.2% of immigrant women of Turkish origin and in 44.4% of German women ($p < 0.001$) [17]. There are no indications, either in clinical routine or in the published literature, that women of Turkish origin present to the labour ward at a too advanced stage of labour so that the use of epidural analgesia is precluded.

Based on the available research results, it is only possible to speculate about the reasons for the significant differences in the rate of epidural analgesia use among pregnant women of Turkish origin and non-immigrant women. The study presented here aimed to identify possible reasons on the part of the women for the different epidural analgesia rates. To this end, the following questions were raised: Do attitudes towards epidural analgesia differ between women of Turkish origin and non-immigrant women? Which factors influence the attitudes towards epidural analgesia?

Methods

Since quantitative studies have not provided any answers to this question to date, we elected to use an explorative-qualitative approach that allows attitudes and their logical framework to be elucidated.

Inclusion and exclusion criteria

The inclusion criteria were as follows: pregnant women at least 18 years old who consented to complete an interview during antenatal care, at the admissions area of the delivery room and on an obstetrics ward. The exclusion criteria were as follows: women in an advanced stage of labour or those assessed by the personnel as being in a physically or emotionally difficult situation.

Interviews

The interviews aimed to ascertain whether the observed differences in the epidural rates of the immigrant women of Turkish origin and those of non-immigrant women were based on differences in attitude. To this end, after their consent was obtained, the women were interviewed at a Berlin hospital. The interviews were designed as focused (semi-structured) interviews and were tested in a pretest and subsequently modified slightly [18]. Additionally, a brief questionnaire was used to obtain data on the pregnancy and on sociodemographic and immigration background. In the interviews, the women were asked to describe their attitudes towards epidural analgesia during childbirth as well as about the causal framework underlying the attitude. All of the documents used were translated into Turkish by qualified translators. An interpreter was used as needed to simultaneously interpret the interview. The interviews were recorded on a dictaphone. The field notes on the interview context (setting, brief description of the interviewee, rapport, highlights, difficult moments, surprises) were written up in condensed form. All of the interviews were conducted by 1 person (I.P.). After transferring the audio file from the dictaphone to a digital text document, the audio file was deleted from the dictaphone. The data was then pseudonymised. The interviews were transcribed according to the recommendations of Kuckartz et al. (2008) [19] and qualitative content analysis was performed based on the design proposed by Mayring (2002) [20]. Categorisation was undertaken inductively, i.e. using the material provided by the interviews. Within the group of women of Turkish origin the comparison was broken down in more detail with regard to immigrant generation (first vs. second/third), educational level (none/primary vs. secondary/university degree) and parity (nulliparous vs. all others) when appropriate. Due to the high correlation between immigrant generation and German proficiency, no comparisons were undertaken between women with various levels of German proficiency.

The interviews were conducted on 12 days from June to August 2015. Among the women of Turkish origin, 9 were interviewed with an interpreter because they preferred the interview in Turkish. Care was taken to ensure that the interviews did not prolong waiting time or delay planned examinations or consultations. The interviewees were selected randomly. Only 25% of the women who were approached did not agree to be interviewed.

When planning the study, it was assumed that around 50 interviews per group would be required to obtain sufficient information. However, among the non-immigrant women, a content-related "saturation" was achieved after 10 interviews, so that interviews of this subgroup were discontinued after the 11th interview. In the interviews with the immigrant women of Turkish origin, content-related "saturation" was achieved after 19 interviews.

Due to the interpreting required in some cases, the interviews with the women of Turkish origin took longer than the interviews with the non-immigrant women (average 21 minutes compared to 13 minutes, respectively).

Table 1 Sociodemographic data on the interviewees (n = 30).

	All (n = 30)	Immigrant women of Turkish origin (n = 19)	Non-immigrant women (n = 11)
Age (years)			
▸ Median (range)	29 (21–41)	29 (21–41)	29 (25–37)
Gestational age (weeks)			
▸ Mean (range)	34.7 (25–41)	34.1 (25–41)	35.8 (30–40)
Parity			
▸ Nulliparous, % (n)	33.2 (9)	42 (8)	9.1 (1)
▸ Multiparous, % (n)	66.8 (21)	58.0 (11)	90.9 (10)
Secondary school completion			
▸ None/primary school, % (n)	20 (6)	31.6 (6)	0
▸ 9 years, % (n)	6.7 (2)	10.5 (2)	0
▸ Secondary school, % (n)	30 (9)	26.3 (5)	36.4 (4)
▸ University degree, % (n)	43.3 (13)	31.6 (6)	63.7 (7)
German proficiency (self-assessment)			
▸ Very good, % (n)		52.6 (10)	
▸ Good, % (n)		15.8 (3)	
▸ Moderate, % (n)		5.3 (1)	
▸ Little, % (n)		26.3 (5)	
Resident in Germany			
▸ Since birth, % (n)		52.6 (10)	
▸ 5–15 years, % (n)		55.6 (5)	
▸ < 5 years, % (n)		44.4 (4)	
Partner			
▸ Yes, % (n)	93.3 (28)	100 (19)	81.8 (9)
▸ None/single, % (n)	6.7 (2)	0	18.2 (2)
Religion			
▸ None, % (n)	26.6 (8)	5.3 (1)	63.6 (7)
▸ Muslim, % (n)	60 (18)	94.7 (18)	0
▸ Christian, % (n)	13.3 (4)	0	36.4 (4)

Statistics and vote of the Ethics Committee

The descriptive statistical analysis of the brief questionnaire was undertaken using the SPSS statistics software (Version 23.0, IBM). A positive vote of the Ethics Committee is in place for the overall project, the German Research Council (DFG)-funded study "Perinatal Health and Migration in Berlin" (FKZ EA1/235/08). The project presented here was separately approved by the Charité Data Protection Officer.

Results

In total, after the interviews 552 minutes of audio material was available, with transcription of the material requiring around 64 hours altogether.

The interviewees were 30 pregnant women, 19 of them women of Turkish origin and 11 non-immigrant women. The sociodemographic data are presented in **Table 1**.

The content analysis encompassed 18 interviews of immigrant women of Turkish origin and 10 interviews of non-immigrant women.

In the brief questionnaire, the interviewees were asked to name the most important people for them in the event of questions on pregnancy and childbirth. For the women of Turkish origin, this was the obstetrician, followed by the midwife and the woman's mother. For the non-immigrant women, the most important people were the obstetrician, the midwife and the partner.

In the section below, the results of the interviews with respect to labour pain (feelings and meaning), attitudes towards and sources of information on epidural analgesia and the role of the partner are presented.

Labour pain

Feelings arising at the thought of labour pain included a) fear, b) fear mixed with confidence, c) serenity and d) other (e.g. uncertainty). These items were mentioned equally often in both groups. The women were also asked, *"Do you think labour pain is meaningful?"* Non-immigrant women responded more frequently that they did not think that labour pain is meaningful (5 out of 9 vs. 1 out of 12). However, they were often of the opinion that *"childbirth without pain is not possible"* or that pain belongs to childbirth as a *"necessary evil"*. Immigrant women of Turkish origin more frequently said that the pain was meaningful or had explanatory models for it (11 out of 12), such as the separation or detachment of the child: *"Yes, it's natural for it to be that way, because a child becomes detached from the woman. That's way it has to be (…) connected with pain. A part becomes separated from the body"*. (Inter. 28, Turkish origin) and "Labour pain as a signal". In this respect there were no differences between the immigrant generations.

Attitudes towards epidural analgesia

The responses to the question *"What is your position regarding epidural analgesia?"* were categorised into a) agreement, b) agreement if necessary – defined as both the necessity from the perspective of the personnel and the necessity from the perspective of the pregnant woman – and 3) rejection. There were significant differences in the acceptance of epidural analgesia from the beginning. Non-immigrant women had a much more positive at-

Table 2 Summary and overview of the interview statements.

Immigrants of Turkish origin	Non-immigrant women
Commonalities	
▶ There are no differences among the groups with respect to feelings at the thought of labour pain.	
▶ The pregnant women in both groups reported with equal frequency that they obtained information on epidural analgesia from the internet/books or from a previous childbirth, if applicable.	
▶ The majority of the women take the decision for or against epidural analgesia without regard for their partner's attitude.	
Differences	
Significance of labour pain	
▶ Labour pain is often considered to be meaningful.	▶ Labour pain is not considered to be meaningful.
Attitudes towards epidural analgesia	
▶ The use of epidural analgesia is more frequently categorically rejected.	▶ More frequent categorical acceptance of epidural analgesia.
Reasons for rejecting epidural analgesia	
▶ There are more often concerns about the procedure and the complications (paralysis, back pain). ▶ For one-third of the women, a vaginal delivery with epidural analgesia is no longer a natural childbirth.	▶ Over half the women expected that epidural analgesia would provide pain relief.
Sources of information on epidural analgesia	
▶ Information on epidural analgesia is frequently obtained from the social setting.	▶ The obstetrician, childbirth course, etc. are frequent sources of information.

titude towards epidural analgesia, which is reflected by the following statement: *"To be honest, if it's possible to have something like that, why not use it?"* (Inter. 22, non-immigrant). Women of Turkish origin expressed rejection more often: *"Even if it's unbearable, I wouldn't have the injection"*. (Inter. 27, Turkish origin) The results were the same for women of different parity. Multiparous women rejected the use of epidural analgesia as often as nulliparous women (4 out of 9 vs. 3 out of 8). However, there were differences in the attitudes towards epidural analgesia with respect to immigrant generations. First-generation immigrant women more frequently categorically rejected epidural analgesia (6 out of 8 vs. 1 out of 9), while second-generation immigrant women more frequently considered epidural analgesia to be an option ("if needed") (6 out of 9 vs. 0 out of 8).

The immigrant women of Turkish origin frequently justified their (negative) attitudes with their concerns about the placement of the epidural analgesia (4 out of 16 vs. 1 out of 9) and about complications (8 out of 16 vs. 1 out of 9): *"I'm afraid of it, because I have friends who have had back pain ever since they had the epidural"*. (Inter. 29, Turkish origin). Both women with lower education levels (secondary school not completed, primary school) and those with higher education levels (Realschule, school-leaving exam [Abitur], university studies) had these concerns (3 out of 6 vs. 5 out of 10). The information and consent consultation, the scope of the information and consent sheet and the requirement for a signature all contributed to fears with respect to the risks of epidural analgesia: *"But then I wonder why you have to give your signature while you are in labour. […]. Three or four pages, I've heard. You don't have to give your signature for other pain relievers, like laughing gas or whatever"*. (Inter. 17, Turkish origin)

The opinion that vaginal delivery with epidural analgesia no longer constitutes natural childbirth was expressed only by pregnant women of Turkish origin (5 out of 16 vs. 0 out of 9): *"For me, when it comes down to it, natural childbirth means doing it without an epidural"*. (Inter. 17, Turkish origin).

Sources of information on epidural analgesia

Equal numbers of immigrant and non-immigrant women stated that their sources of information on epidural analgesia were books/internet and a previous childbirth. However, differences were also observed: Immigrant women of Turkish origin obtained their information on epidural analgesia more frequently from their social environment (5 out of 14 vs. 0 out of 7) and from friends and relatives (4 out of 14 vs. 0 out of 7): *"In our community, they say that you'll have back pain later or permanent damage or […] you even have the risk that you […] will be paralysed …"* (Inter. 13, Turkish origin). In the group of pregnant women of Turkish origin, this was especially true for nulliparous women compared to multiparous women (6 out of 6 vs. 3 out of 8). As expected, the latter group obtained information on epidural analgesia frequently through a previous childbirth. Non-immigrant women more frequently used other sources to obtain information on epidural analgesia: obstetrician, antenatal course, job-related health care setting, television (6 out of 7 vs. 2 out of 14).

Role of the partner

The interviewees were asked about the partner's attitude towards epidural analgesia and the role of his opinion in electing to use epidural analgesia or not. The majority of both groups of women reported that they took this decision themselves, as reflected by the following statements: *"He respects my decision. He says he will adjust to it"*. (Inter. 6, Turkish origin) and *"He supports me in the way I decide and wouldn't have much chance to disagree"*. (Inter. 16, non-immigrant)

Table 2 presents a summary of the pregnant women's attitudes and opinions and presents differences and commonalities between the 2 surveyed groups.

Discussion

In principle, all women should have all options for pain management during labour available to them after they have received adequate information. There should be no discrepancies in pain relief provision either on the part of the hospital or due to the patient's social or insurance status. Considering that adequate options are available for pain-free childbirth, the question arises as to why some women elect to use these options while other women choose to tolerate the labour pain. The interview-based qualitative study presented here aimed to identify factors behind

the women's decision to agree to epidural analgesia or reject it. A qualitative study is particularly well-suited for investigating this question.

There were significant differences in the attitudes of the 2 interviewed groups of women towards epidural analgesia. In contrast to the non-immigrant women, the majority of the pregnant women of Turkish origin categorically rejected the use of epidural analgesia. The study identified 3 main reasons for this:

1. concerns regarding the direct placement of epidural analgesia
2. concerns regarding long-term sequelae (back pain, paralysis) and
3. the desire for natural childbirth.

Identical concerns were expressed by Hispanic women in a study performed in the United States [12]. In another study conducted in the United States, 54% of the women surveyed stated that they rejected the use of epidural analgesia due to their concern about possible risks to their own health. In this population, Hispanic women constituted the largest ethnicity and also constituted the largest group that did not use epidural analgesia [14].

The desire to experience an unmedicated birth as grounds for rejecting epidural analgesia has also been reported in other studies [14,21,22]. The pregnant women of Turkish origin surveyed obtained information about epidural analgesia from their social environment (relatives, neighbours, friends, acquaintances) more frequently than non-immigrants. While the women were not asked about their current state of knowledge about epidural analgesia, similar to a study performed in the United States, statements such as *"That's what I heard"* or *"That's what they say"* suggest that the rejection of epidural analgesia is not based on an informed decision and may actually be based on misunderstandings [12]. Another study performed in the United States described a similarly diverse range of sources of information about epidural analgesia. However, there was no correlation between the source of information and the actual use of epidural analgesia [14].

Strengths of the study

1. This study offers approaches for explaining the lower rate of use of epidural analgesia among immigrant women of Turkish origin compared to non-immigrants, as they were documented both in an analysis of data from the 1990s [23] and of current data [17] in Berlin. The results can most likely also be transferred to pregnant women of Turkish origin in Austria, where a lower rate of use of epidural analgesia has also been reported [9].
2. The explorative-qualitative methodology allows to identify differences in the attitudes of the 2 groups of women.
3. Using an interpreter allowed to include and evaluate the attitudes of women with limited German proficiency.
4. The study was conducted with 1 method, at 1 location and by 1 (female) interviewer. Therefore there is no interobserver bias.

Limitations

This study considered only the women's perspective. Other possible reasons, such as the attitude of the obstetric personnel towards the two groups of women or towards the intervention were not investigated.

Conclusions

1. Based on the results of this study, it can be concluded that the attitudes towards epidural analgesia among pregnant women of Turkish origin are based on misconception and fear of complications. Since obstetricians and midwives are among the most important persons for women of Turkish origin, members of these 2 professions could make an effort during their antenatal care to mitigate existing fears of long-term sequelae due to epidural analgesia. For women whose German proficiency is insufficient, it would be a good idea to offer printed materials in Turkish on the subject. For illiterate patients, providing a professional interpreter and/or care by German- and Turkish-speaking obstetricians and midwives during antenatal care would be desirable. Women making an informed decision can also elect not to have epidural analgesia, for example, if they wish to experience an unmedicated birth. This decision should be respected whether or not the woman is an immigrant.
2. For non-immigrant women, the study results show that the higher rate of epidural analgesia use corresponds with their attitudes and desires.

Conflicts of interest

▼

No conflicts of interest indicated.

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