



Choosing a Particular Hospital for Giving Birth by Women from Urban and Rural Area

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Abstract

Introduction and objective: Choosing the facility for delivery is important for all women, regardless of their origin and place of residence. However that depends on the healthcare system, cultural and social standards in individual countries. Particularly significant in the perinatal period is the influence of the environment demonstrated by means of epigenetic mechanisms.

The aim of the study was to determine the reason for choosing a particular facility by women from rural and urban areas and how did they gained the information on chosen delivery departments.

Material and method: The study included examination of the distance traveled by the surveyed woman to carry the birth in the chosen hospital. Part of the study was to estimate the distances between the hospitals and the homes of the participants.

Results: Women from rural areas declare they travel a longer distance to a hospital located in the city, if midwives from nearby facilities do not provide access to pharmacological methods to relieve the pain of childbirth. Women from rural area usually travel 40-50 km to the chosen hospital, in contrast to women from the city who travel 7-20 km only. It is interesting to note that most women, both from the city and the countryside do not choose the nearest hospital. Women from rural areas more often indicated the need for neonatal intensive care unit (NICU) at chosen facility in the case of health problem with a baby. When choosing a hospital, it was also important whether a midwife or a doctor was in charge of pregnancy and delivery, were working in this facility.

Conclusions: Women from the rural areas did not differ from women from the urban areas significantly in terms of preferred sources of information on the place to give birth. Most often it was the preference of the mother or the obstetrician recommendation.

Key words: place of birth, intrapartum care, maternity hospital

Introduction

The quality of birth, in accordance to the current guidelines of the World Health Organization, is related to the positive experience of giving birth in two perspectives [1].

Short-term, which consists of women's experience and obstetric-neonatal results, and in the long-term perspective related to future health effects. The conditions of delivery to the world determine the future health and life quality of the mother and the child. Particularly significant in the perinatal period is the influence of the environment manifested by means of epigenetic mechanisms [2]. The quality of obstetrics care includes components related to material resources (equipment of hospital wards), staff resources (number of personnel, experience and competence of medical staff) and components related to the standard of provided medical services [1].

Among the factors influencing the assessment of the obstetric care quality, we can take into account the distance between the place of residence and the facility where the services are provided, proper communication between staff and a patient, friendly arrangement of the facility for pregnant women or parturient and reliable services reflecting the needs of the individual and the local community [1,3,4,5].

Making a decision concerning the choice of hospital to give birth in is part of the process and one of the component of woman preparation to give birth to a child. The time of making decision on particular institution to give birth varies [6]. Women report the need to discuss the choice of place to give birth of birth with obstetrician [7]. Choosing a place to give birth, as well as Staff who is in charge of patient care are important components affecting the quality of birth [5,6,8]. The decision regarding the location of delivery is important for all women, regardless of their origin and place of residence, at the same time it depends on the health care system, cultural and social standards in individual countries [8,9,10]. Women from rural areas declare that they travel a longer distance to a hospital located in the city, if facilities near their residence are run by midwives only, who do not provide access to pharmacological methods to relieve the pain [11].

When deciding whether to choose a place of birth, women consider the safety of mother and child. In undeveloped countries the choice is limited to delivery at home, due to the lack of access to professional obstetrics care. However, the availability of obstetrics services in developed countries does not guarantee that women's expectations are met, and force institutions to raise the standard of provided care [9,10,12].

In Poland, a vast majority of deliveries take place in the hospitals. The choice of a particular institution, apart from the mothers' expectations and the distance from the place of residence, is also restricted due to the limited amount of qualified facilities the patient can be referred to, depending on medical issue. When referring to a hospital, the course of pregnancy, anticipated delivery procedure or the child's birth status, are taken into consideration, because special procedures can only be provided by certain hospitals. So in essence, referral to a hospital is prioritized depending on the gravity of the health problem [1,2,3]. There are 16 voivodeships in Poland, in each of them there are 11-52 maternity units and on average 25 facilities. Universal access to information about the services and quality of an establishment, as well as the ease of obtaining opinions of other women on websites and online portals makes decision-making easier and motivates them go to make an informed choice of a particular institution [13].

The aim of the study was to determine the reason for choosing a specific facility among women from rural and urban areas, the source of information on the selected facility and the distance the patient traveled from the place of residence to the selected hospital.

Materials and method

The study was conducted from December 2017 till February 2018 in the obstetric department in the Warsaw Hospital with the scale of priority being 2. There were 720 questionnaires distributed, of which 579 were filled out, and only 509 were correctly completed.

The authors' own questionnaire used in the study included demographic data related to age, marital and economic status, education level, parity, and place of residence.

Women estimated distances between the place of residence and the selected hospital, and concluded whether the chosen maternity hospital was the nearest to their place of residence or not. Also, women were asked to choose between two main reasons out of eleven as to why they chose a specific hospital. It was also questioned if the person overlooking the pregnancy works in the chosen facility and to point what was their source of the information.

This study was authorized by the Bioethics Committee of the Warsaw Medical University as a part of research of quality of childbirth no. AKBE/232/2017.

The following statistical methods were used to analyze the data: frequency tables and frequency of the distribution of responses, bipartite (cross) tables, chi-square independence test or Fisher's test. The analysis was performed at the significance level of 0.05 in the R and Excel programs.

The criteria for inclusion to the study group was delivery in the hospital where the study was carried out, no recommendations for parturition in a II and III (higher) degree of reference of the hospital or no direct transfer from the pathology ward to the delivery room.

Within a radius of 4 km of the hospital where the study was carried out, there were 5 other hospitals (including one which belongs to the private health care sector), there were 12 hospitals contracted for parturition in the whole city.

The majority of women were between 26 to 35 years of age, lived in Warsaw, were married, had a higher education level, and a good economic status. 13.2% of women came from the rural area ($n=67$). There were no statistically significant differences between the groups of women from the countryside and the city in terms of socio-demographic features (Tab. 1).

Table 1. Socio-demographic characteristic of responders

Demographic profile:	Variables	City n (%)	Rural n (%)	N	%
Age	≤20	1	2	3	0,45%
	21-25	5	45	50	10,18%
	26-30	30	138	168	31,22%
	31-35	22	179	201	40,50%
	36-40	6	67	73	15,16%
	>40	3	11	14	2,49%
Education level	elementary/secondary	2	7	9	1,58%
	vocational	1	7	8	1,58%
	post-secondary	15	62	77	14,03%
	master's degree	49	366	415	82,81%
Childbirth	1	32	244	277	55,20%
	2	28	143	171	32,35%
	3	5	39	44	8,82%
	≥4	2	15	17	3,39%
	miss	12	86	98	19,46%
Marital status	married	55	343	398	77,60%
	divorced	0	13	13	2,94%
	poor	1	3	4	0,68%
Economic status	good	50	288	338	65,16%
	very good	16	151	167	34,16%
					32,81%

Results

Figures 1 and 2 graphically present the estimated distances of the surveyed women from urban and rural areas to give birth to a child (Fig. 1). The furthest distance indicated was 100-300 km. Women from the countryside usually covered a distance of 40-50 km, while women from the city only covered a distance of 7-20 km.

Most women, both from the city and from the countryside, chose a different hospital than the one nearest to their place of residence (Tab. 2). In addition, some women who chose the nearest hospital were guided by different selection criteria than proximity to their place of residence.

The most frequently indicated criterion in both studied groups were the conditions of premises (Tab. 3). It was also important whether the midwife or the doctor in charge of pregnancy were working in this hospital. In rural-living women, the possibility of obtaining support in case of a problem in the neonatal pathology department was more often indicated (Tab. 3).

Women from the rural areas did not statistically significantly differ from women residing in the city in terms of the sources of information on the place to give birth. The main source of information was the opinion of other mothers or recommendations of the obstetrician who was in charge of the pregnancy (Tab. 4).

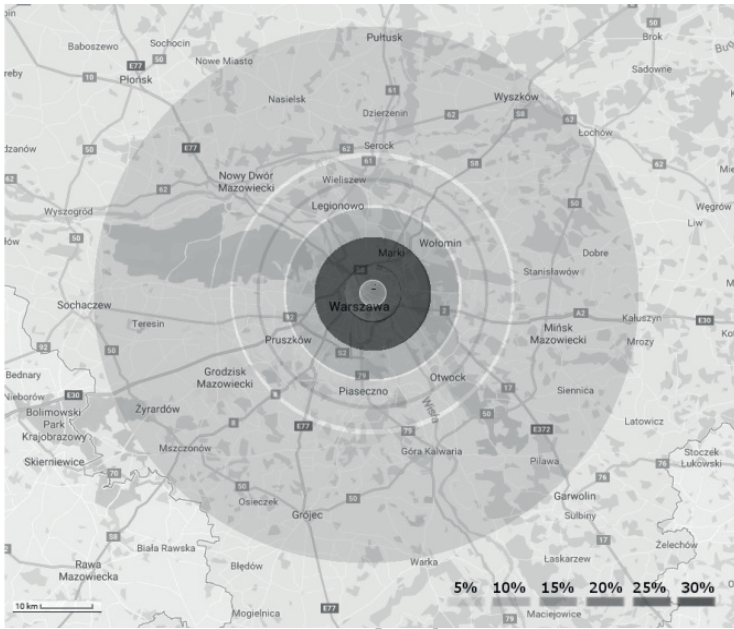


Figure 1. A map of the distance travelled by women living in the countryside (rural)

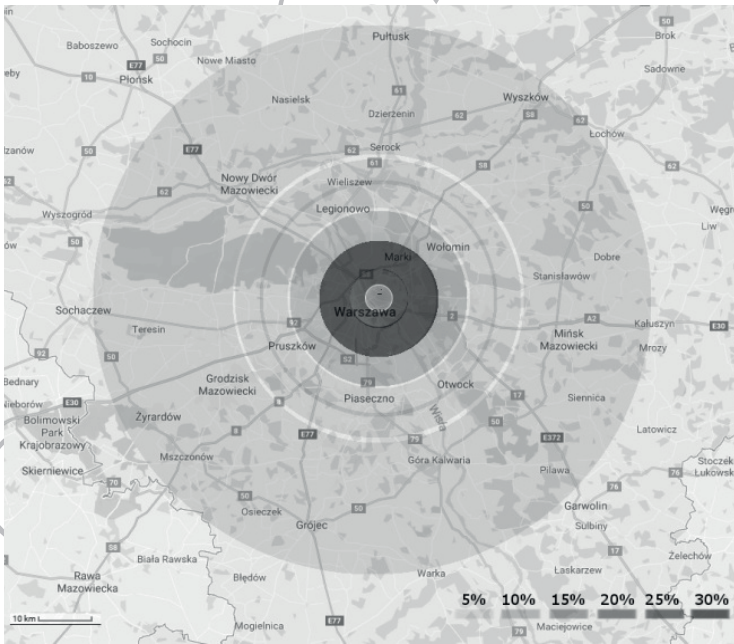


Figure 2. A map of the distance travelled by women living in the urban area

Table 2. Choosing a hospital with regard to the place of residence n=494

Variables	Rural		City		Statistical analysis
	n	%	n	%	
The nearest hospital	3	4,5%	150	35%	X ² (1)=24,8831 P<0,05
Farther hospital	63	95,5%	278	65%	

Table 3. The most important reasons for choosing a maternity hospital among women from the countryside and the city
(n=509, multiple choice question)

	Rural		City		Total	
	N	%	n	%	n	%
I chose the nearest hospital to my place of residence	3	2,24%	97	11,01%	100	9,85%
Newborn pathology department (possibility of getting support in the event of a problem)	21	15,67%	93	10,56%	114	11,23%
The doctor / midwife who was overseeing the pregnancy, works in this hospital.	29	21,64%	138	15,66%	167	16,45%
Good premises conditions of delivery rooms and maternity ward.	37	27,61%	212	24,06%	249	24,53%
Because it is a Child-Friendly Hospital	11	8,21%	62	7,04%	73	7,19%
Physician has a high position in the ranking of foundation "Rodzic po Ludzku"	8	5,97%	57	6,47%	65	6,40%
Because a friend / someone from my family recommended this place.	10	7,46%	98	11,12%	108	10,64%
Because someone from the family or my friends works there.	4	2,99%	29	3,29%	33	3,25%
Because there were no spots available in any other hospital.	3	2,24%	18	2,04%	21	2,07%
I did not think about choosing a hospital	3	2,24%	15	1,70%	18	1,77%
I've been hospitalized here before and had a positive experience.	5	3,73%	62	7,04%	67	6,60%

Table 4. The relationship between the source of information and the place of residence (n=508)

The sources of the information about chosen hospital	Rural		City		Total	
	n	%	n	%	n	%
Other mothers opinion	29	43,3	179	40,6	208	40,9
gdzierodzić.info	2	3,0	53	12,0	55	10,8
Doctor	18	26,9	65	14,7	83	16,3
Midwife	2	3,0	26	5,9	28	5,5
Parents classes	5	7,5	43	9,8	48	9,4
Hard to say	3	4,5	17	3,9	20	3,9
Others	8	11,9	58	13,2	66	13,0
summary	67	100	441	100	508	100

Discussion

The study showed that the average distance that women travel from their place of residence to the place of birth is from 7 to 20 kilometers. Most of the respondents gave birth in a more distant hospital than the one nearest to their place of residence, or did not choose the nearest hospital because of its proximity and relied on other criteria's.

These results are different than those obtained by Adamska-Sala et al. 2018. In their study which was conducted on 8000 women giving birth in Poland, the choice of a particular hospital was most often given as its reason for proximity to the place of residence (36%) [13].

The tendency we observed was to choose a further hospital by both women from the city and the countryside does not appear in the results obtained by the Pitchort team. In their study conducted in Scotland in rural areas, although women declared their willingness to travel to a chosen facility, an important criterion for selection was a close location enabling the family to visit [11]. Similar preferences were used by women who were in their first pregnancy in the Borrelli et al. studies, where the proximity of the hospital was one of the most important elements in choosing the place of birth of the child [14].

In our study the presence of a properly equipped neonatal intensive care unit was not a significant criterion in the selection of a specific facility as opposed to Adamska-Sala results, where right after the criterion of proximity – the presence of a well-equipped neonatal pathology department significantly influenced the choice of childbirth (23%) [13]. The criterion of presence of neonatal intensive care unit becomes a differentiating element between women giving birth at home and choosing childbirth in a hospital [8,15]. Also, in the study Broda et al. The proximity of the hospital to the place of residence and the presence of the neonatal intensive care unit were the main reasons for choosing a specific hospital [7]. A low priority for this criterion in our study may result from the fact that each hospital within a few kilometers from the tested hospital has adequate facilities to care for a newborn baby requ-

iring special care, which is why this criterion did not differentiate these facilities.

In our studies, the main reason for choosing a specific hospital were the conditions of premises. Hospitals located within 5 kilometers of the hospital, which held our studies, differ in the décor, standard and equipment of delivery rooms and rooms in maternity wards. This criterion for choosing a child's place of birth was similar to the women examined by Borrelli et al [14].

The surveyed women from both the city and the countryside considered importance of place of employment of a doctor or midwife in the hospital chosen to lead their pregnancy. These results are confirmed by observations from Adamska-Sala et al., Showing that half of the women are delivering in hospitals employing a physician who oversees their pregnancies [13].

Most studies, including ours, show that women most often learn about the hospital they have chosen from their family and friends. These opinions are especially important in the case of the birth of the first child [14,16]. During the subsequent births, similarly as in our respondents, their own experience was helpful, allowing them to repeat the choice or in the case of traumatic deliveries – to change the place of birth in the event of a second pregnancy [17]. Some women were guided by the selected hospital's high rankings in the gdzierodziec.info.

Research conducted in the United Kingdom indicated the Internet as one of the most important sources of data taken into account in the decision-making process for choosing a place to give birth. Research shows that women are looking at the opinion of other mothers about the given hospital on the internet, searching the websites of hospitals to check the conditions offered by the facility and checking the status of hospitals and departments in the rankings [7,17].

Conclusions

1. Most women do not choose to give birth in the hospital nearest to them.
2. Good infrastructure is the main factor when choosing the obstetric hospital for the childbirth for women, both from the city and from the countryside.
3. The source of knowledge when selecting a hospital for childbirth is mainly influenced by the opinions of other mothers, as well as the recommendation of the doctor who is leading the pregnancy for women coming from the urban and from the rural areas.

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