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## Determinanty wyboru ośrodka leczenia operacyjnego

## Factors determining the choice of a health centre for surgical treatment

### Streszczenie

**Cel pracy.** Celem pracy było ustalenie, jakie są determinanty wyboru ośrodka operacyjnego leczenia chorób ginekologicznych oraz czym jest to uwarunkowane.

**Materiał i metoda.** Badaniami objęto 272 kobiety, które w okresie 2 miesięcy 2008 roku zgłosiły się do jednego z czterech wybranych szpitali, celem poddania się wcześniej zaplanowanej operacji ginekologicznej. Jako narzędzie badawcze zastosowano specjalnie skonstruowany, dla celów pracy, kwestionariusz. Etap przygotowania narzędzia badawczego zakończyły badania pilotażowe, w których wzięło udział 25 kobiet.

**Wyniki badań.** Zwyczaj kontrolowania swojego narządu rodowego potwierdziło 160 (58,8%) badanych, w tym regularnie co pół roku czyniły to 44 (16,2%) kobiety; co jeden rok – 75 (27,6%); co dwa lata – 41 (15,0%). Pozostałe, w liczbie 112 (41,2%), oświadczyły, iż zgłaszają się na wizytę do ginekologa tylko wtedy, gdy zaobserwują u siebie niepokojące objawy. Choroby, z powodu których miał odbyć się zabieg operacyjny, podzielono na dwie grupy: 1. Zaburzenia funkcji narządu rodowego, powodujące pogorszenie się jakości życia kobiety (n=149; 54,8%). Wśród nich były: krwawienia z dróg rodnych o różnym stopniu nasilenia, dolegliwości bólowe, przemieszczenie i zmiana statyki narządu rodowego, gubienie moczu, trudności z prokreacją; 2. Choroby nowotworowe – guzy złośliwe (z inwazją za pośrednictwem układu chłonnego), łagodne lub graniczne (n=123; 45,2%).

**Wnioski.** Kryteria wyboru ośrodka operacyjnego leczenia chorób ginekologicznych stanowią najczęściej zasłyszane opinie o nim, tj. o wysokich kwalifikacjach zawodowych pracowników medycznych, stosowaniu nowoczesnych procedur, aparatury i/lub wysokim poziomie opieki pielęgniarskiej. Główne kryterium wyboru ośrodka jest istotnie związane z miejscem zamieszkania kobiet, stanem cywilnym i ich wykształceniem.

**Słowa kluczowe:** operacja ginekologiczna, wybór ośrodka leczenia.

### Summary

**Objective.** The purpose of the study was to establish the factors determining the choice of a health centre for gynaecological surgical treatment.

**Material and methods.** The survey covered 272 women admitted to one of four hospitals for elective gynaecological surgery during 2 months of 2008. The questionnaire used was designed for the study undertaken and tested with a pilot study carried out in the group of 25 women.

**Results.** Regular gynaecological check-ups were confirmed by 160 (58.8%) respondents, including 44 (16.2%) - every 6 months, 75 (27.6%) - every year and 41 (15.0%) - every 2 years. The remaining 112 (41.2%) women stated they went for appointments once alarming symptoms occurred. The causes for gynaecological surgeries were divided into two groups. Group 1 included impaired function of the reproductive organ resulting in deteriorated quality of life (n=149; 54.8%), e.g. bleeding of various intensity, pain, displacement and altered stability of the reproductive organs, incontinence and procreative difficulties whereas group 2 – neoplastic diseases, e.g. malignant tumours (invading via the lymphatic system) and benign or marginal borderline tumours (n=123; 45.2%).

**Conclusions.** The criteria of choosing a hospital providing gynaecological surgery are determined by opinions heard, e.g. high qualifications of the medical staff, modern procedures applied, equipment and/or high standard of nursing care. The main criterion of choice is significantly correlated with the place of residence, marital status and education.

**Key words:** gynaecological surgery, choice of hospital.

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According to the national health insurance fund act of 23.01.2003 [1], each person in Poland has the right to choose a primary care physician, a specialist and a hospital to be treated in.

Over the last several decades, the expectations of patients concerning standards of medical care and accessibility to highly specialized hospitals have become increasingly high [2, 3]. Present-day patients have highly specified expectations related to the medical personnel, especially information-related issues. They want to be well informed and affect the choice of treatment options [4]. All this results from better access to information, broader knowledge of patient's rights and medical services provided. Due to higher awareness of their rights, patients search for the best, in their opinion, physicians and medical centres [2].

The aim of the study was to identify the factors determining the choice of a centre for gynaecological surgery.

## MATERIAL AND METHODS

The study was carried out in two teaching hospitals (III referential level) and two regional hospitals (II referential level) in Lublin and Warsaw. The selection of hospitals was based on the number of surgical procedures performed over the year preceding the present study. In each hospital, more than 400 procedures were carried out annually.

The study covered 272 women admitted to the hospital within the two months of 2008 for scheduled gynaecological surgery. The inclusion criteria were as follows:

- the patient's decision to use the surgical procedures offered,
- informed consent for surgery,
- consent for participation in the study.

Forty-three (13.7%) women refused to be involved without giving reasons.

The questionnaire, designed for the purpose of the study, was given to all women on the second postoperative day. It consisted of two parts. The first one was to collect demographic data, i.e. age, level of education, place of residence and marital status. The second part contained questions concerning the study subject, i.e. criterion of centre choice, frequency of gynaecological check-ups, underlying causes (diseases) of surgeries.

The questionnaire was prepared on the basis of general methodological guidelines available in literature as well as suggestions and opinions of experts, including specialists (professors) in gynaecology, sociology and psychology. The design and vocabulary used in questions were adjusted to diverse intellectual levels of respondents, i.e. to their perception-related capabilities. The questionnaire samples were completed with a pilot study involving 25 women, whose findings were ultimately excluded from the present study.

Each respondent was instructed how to fill in the questionnaire; anonymity of the data collected was guaranteed. Moreover, it was explained that the material would be used only for scientific purposes in order to improve the quality of perioperative care provided.

The results were statistically and descriptively analysed. The nominal scale values of parameters were characterized using the number and percentage; the median (Me), plus upper and lower quartile ( $Q_1, Q_3$ ) were used for quotient scale values. Significance of differences or correlations

between non-measurable variables were determined using the homogeneity test or  $\chi^2$  test of independence. The Yates' correction was applied for small size subgroups (fewer than 5).

The acceptance error was set at 5%;  $p < 0.05$  was considered statistically significant [5]. Statistical analyses were based on STATISTICA v. 7.1 software (StatSoft, Polska).

## RESULTS

The age of respondents ranged from 18 to 82 years (Me 44;  $Q_1$  34;  $Q_3$  52). The detailed characteristics of the study group are presented in Table 1.

TABLE 1. Characteristics of the study population.

Variables		n	%
Age (in years)	≤ 49	183	67.3
	> 49	89	32.7
Place of residence	village	70	25.7
	town	202	74.3
Education	lower than secondary	67	24.6
	secondary	104	38.2
	higher	101	37.2
Marital status	married	200	73.5
	single	72	26.5

In total, the respondents listed 632 criteria for choosing the treatment centre, which were divided into four groups:

- Opinions of other people (family, friends) concerning qualifications of medical personnel, equipment, procedures used, quality of nursing care – 342 (54.1%),
- Distance from the place of residence – 116 (18.3%).
- Official assessment, i.e. hospital accreditation, ranking, referential level – 88 (13.9%).
- Other criteria, i.e. short waiting time for the surgical procedure, hospital accommodation, respondents' experience from earlier hospitalizations in the centre, suggestions of referring physicians – 86 (13.6%).

Asked to choose the main criterion, 163 (59.9%) respondents chose one of group I. Sixty four (23.9%) of group II, 29 (10.7%) of group III and 15 (5.5%) criteria of group IV. The correlations between the group of criteria chosen and demographic variables are presented in Table 2 and 3.

TABLE 2. The main criterion for selecting the centre vs. age and place of residence of respondents.

Criterion of group	Age				Place of residence			
	≤ 49 years		> 49 years		village		town	
	n	%	n	%	n	%	n	%
I	106	57.9	57	64.0	26	37.1	137	67.8
II	49	26.8	16	18.0	27	38.6	38	18.8
III	22	12.0	7	7.9	5	7.1	24	11.9
IV	6	3.3	9	10.1	12	17.2	3	1.5
Significance	$\chi^2=6.39; p=0.09$				$\chi^2=36.4; p=0.00000006$			

**TABLE 3. The main criterion for selecting the centre vs. marital status and education.**

Criterion of group	Marital status				Education					
	married		single		lower than secondary		secondary		higher	
	n	%	n	%	n	%	n	%	n	%
I	131	65.5	32	44.4	39	58.2	56	53.8	68	67.3
II	41	20.5	24	33.3	16	23.9	28	26.9	21	20.8
III	17	8.5	12	16.7	3	4.5	17	16.4	9	8.9
IV	11	5.5	4	5.6	9	13.4	3	2.9	3	3.0
Significance	$\chi^2=9.37$ ; $p=0.02$				$\chi^2=9.11$ ; $p=0.03$					

The place of residence, marital status and education of respondents significantly correlated with the groups of criteria the main one was chosen from –  $p=0.00000006$ ;  $p=0.02$ ;  $p=0.03$ , respectively. The age of respondents, on the other hand, had no effect ( $p=0.09$ ).

Gynaecological check-ups were confirmed by 160 (58.8%) respondents, including 44 (16.2%) who had them every 6 months, 75 (27.6%) – every year, and 41 (15.0%) – every other year. The remaining respondents – 112 (41.2%) stated they had gynaecological appointments once worrying symptoms developed.

Diseases being the causes of surgery were gathered into two groups:

- I. Impaired function of reproductive organs resulting in deteriorated quality of life ( $n=149$ ; 54.8%), among them bleeding from the reproductive organs of various severity, pain, shifting and altered stability of reproductive organs, incontinence, difficulties in procreation.
- II. Neoplastic diseases – malignant tumours (invading through the lymphatic system), benign or borderline tumours ( $n=123$ ; 45.2%).

The relation between the group of criteria determining the choice of the centre and check-ups of the reproductive organs as well as underlying diseases are presented in Table 4.

**TABLE 4. The main criterion for selecting the centre, gynaecological check-ups and underlying diseases.**

Criterion of group	Gynaecological check-ups				Group of diseases			
	regular		sporadic		I		II	
	n	%	n	%	N	%	n	%
I	97	60.6	66	58.9	70	56.8	93	62.4
II	35	21.9	30	26.8	35	28.5	30	20.1
III	19	11.9	10	8.9	12	9.8	17	11.4
IV	9	5.6	6	5.4	6	4.9	9	6.1
Significance	$\chi^2=1.24$ ; $p=0.74$				$\chi^2=2.63$ ; $p=0.45$			

No significant relation between gynaecological check-ups, groups of underlying diseases and groups of choice criteria were demonstrated,  $p=0.74$ ;  $p=0.45$ , respectively.

## DISCUSSION

New organizational solutions introduced during the latest reform of health protection triggered the mechanisms of competitiveness increasing the patients' freedom of choice [6].

The choice of the centre for gynaecological treatment was most commonly based on good opinions about the place. The opinions, however, did not come from advertisements as such actions are against the Polish law [7, 8] but were associated with the satisfaction of other patients treated earlier and/or their families, friends with high quality of medical services provided there. Thus, according to respondents, the provision of the highest quality of nursing and medical care in the hospital should be a priority as it helps to stand up to the increasingly high competition [3].

High quality of care is inseparably related to patients' satisfaction with the services [9-15], which in turn shapes the social rank of the hospital and increases the competitiveness. High standards of care require considerable expenditure, mainly associated with the purchase of new equipment and postgraduate trainings of medical personnel, which is the basis for institution of modern procedures [3, 10, 16]. In many centres, their financial shortages are such a barrier that, despite efforts of the staff, modern challenges cannot be faced up to. The centres lose with competitors and have no good social opinion.

The distance between the place of residence to treatment centre as a criterion of hospital choice was chosen by 23.9% of respondents, with the twice higher percentage of those from villages compared to respondents from towns (Table 2). Based on the collected material, the reasons are difficult to explain conclusively. Respondents living in the country are likely to be closer with their families and longer distances from home enhance their fears related to surgery, hospitalization as well as separation with their relatives. This issue, however, requires further studies.

It seems surprising that a low number (10.7%) of respondents based their decisions about the centre on official assessment, i.e. accreditation, rankings and/or referential degrees. The explanation is simple – a substantial proportion of the society do not know what the meaning of assessment elements is. According to Bojar *et al.* [2], 44% of respondents did not know the term of "accreditation" whereas 62.9% did not know whether the hospital they were in had such an accreditation. According to those women, free info line and promotion actions should help to choose the centre for treatment. However, the percentage of gynaecological patients undergoing surgeries in this population is unknown. The study was performed amongst patients of obstetric-gynaecological departments yet the cause of hospitalization was not specified. The findings were analysed according to demographic data (age, place of residence, marital status, and education), profession, assessment of income and having children.

The main criteria of choice from the group "others" were rarely selected - only 5.5% of all respondents. Some of those criteria are fully understandable and important, e.g. short waiting time for surgery; the literature data demonstrate that awaiting surgery is an extremely difficult situation for each woman. [17-20]. Therefore, short waiting time offered by a given centre may be decisive.

Our results revealed the diversity of criteria for choosing the gynaecological surgery centre. Statistical analyses showed that the choice is determined by the place of residence, marital status and education of women. Further studies are needed to define whether and what kind of assistance the women expect from health care workers.

The findings of such studies should be of informative and practical value.

## CONCLUSIONS

1. Criteria for selecting the centre for gynaecological surgery are mostly based on opinions heard about high qualifications of medical staff, modern procedures used, equipment and/ or high standards of nursing care.
2. The main criterion affecting the selection of the centre is significantly correlated with the place of residence of women, their marital status and education.

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