

Patient satisfaction with primary health care rendered by community midwives in the area of Poznań

Zadowolenie pacjentek z opieki świadczonej przez położne podstawowej opieki zdrowotnej na terenie Poznania

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Abstract

Objectives: The main objective of this study was to examine the level of patient satisfaction with the care rendered by community midwives in the area of Poznań.

Material and methods: A patient survey was distributed using face-to-face recruitment and with mail collection. Eight hundred new mothers were asked to participate in the study by filling out the questionnaire after eight weeks of the postpartum period. One hundred seventy seven (22.12%) returned completed questionnaires which were then analyzed.

Results: This paper provides information on the high level of patient satisfaction with the services provided by community midwives and the important role community midwives play in caring for and supporting women in the post partum period.

Conclusions: The results of this study indicate that women in the area of Poznań, are satisfied with the care they receive from midwives. They also indicate a lack of association of patient satisfaction scores between groups of patients based on demographic data and reason for using community midwife services.

It was also found that the overall patient satisfaction score depends most heavily on the time frame of receiving community midwife services.

Key words: **midwifery / patient satisfaction / Primary Health Care /**

Streszczenie

Cel badań: Podstawowym celem tej pracy była ocena poziomu zadowolenia pacjentek z opieki świadczonej przez położne podstawowej opieki zdrowotnej na terenie Poznania.

Materiał i metody: Narzędziem badawczym był „Kwestionariusz do pomiaru zadowolenia z opieki położnych środowiskowych”, dystrybuowany osobiście i zbierany drogą pocztową. Osiemset położnic zostało poproszonych o wzięcie udziału w badaniu poprzez wypełnienie kwestionariusza w okresie ośmiu tygodni po porodzie. Kwestionariusze zwrócone przez 177 osób (22,12%) zostały poddane analizie.

Wyniki: Wyniki przeprowadzonego badania wskazują na wysoki poziom zadowolenia pacjentek z opieki świadczonej przez położne podstawowej opieki zdrowotnej oraz na znaczącą rolę jaką pełnią położne podstawowej opieki zdrowotnej w opiece i wspieraniu kobiety w okresie połogu.

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Wnioski: Wyniki przeprowadzonych badań wskazują, że kobiety są zadowolone z opieki świadczonej przez położne podstawowej opieki zdrowotnej na terenie Poznania. Wyniki badań wskazują także na brak wpływu zmiennych demograficznych oraz powodu korzystania ze świadczeń położnej podstawowej opieki zdrowotnej na oceny zadowolenia pacjentek.

Stwierdzono również, że zadowolenie pacjentek zależy od długości okresu korzystania z opieki świadczonej przez położne podstawowej opieki zdrowotnej.

Słowa kluczowe: **położnictwo / satysfakcja pacjenta / podstawowa opieka zdrowotna /**

Introduction

Midwives are important care providers for women in many countries. Therefore, research into primary care midwifery can make an important contribution to the improvement of care by midwives and thus contribute to safety in and satisfaction with childbirth [1, 2, 3, 4, 5, 6].

With increasing competition in the medical marketplace, including the market for Primary Health Care (PHC), there is an increasing demand for tools that are simple and easy to use in monitoring health care quality. This is especially true now, when health expenditures in most countries, including Poland, are growing faster than national income. Collecting the views of service users has long been standard practice in most sectors of the economy [7, 8]. There is also now a demand for research on the quality of community midwifery within the context of PHC in Poland as in other countries [2, 3, 4, 5, 6].

Although community midwives have an established position in Poland, in recent years their work has come under criticism by the Polish Supreme Audit Office (*Najwyższa Izba Kontroli*) [9]. The most serious criticisms came about after an audit in 2010 covering the years 2008-2010. Although the National Health Fund spends a total of about 260 million PLN on midwives to provide PHC, only 15% of this amount is actually payment for medical services and care. The remaining 85% is paid to health care institutions which employ community midwives and to individual community midwives for readiness to provide health care services. This is because the system of financing PHC is based on a capitation fee as a method of payment, and the amount paid to individual providers is dependent almost entirely on the number of patient declarations submitted both for health care institutions which employ community midwives and individual community midwives.

The negative assessment by NIK of the system for financing community midwife care suggests that there is no guarantee that public spending is targeted, cost-effective and focused on obtaining the best results. That is, it is not clear that the expenditures which the National Health Fund as a public sector entity is obligated to provide are being used in the most effective manner possible [9]. In light of this, the question of measuring patient satisfaction gains added importance since the results could help indicate whether problems with reporting PHC services are primarily clerical in nature or reflect deeper problems with the way that services are rendered to the target population.

The concept 'satisfaction' has been recognized as multidimensional and complex in nature, based on a range of dimensions

[10, 11]. Ware and colleagues proposed that a patient's satisfaction rating is 'a personal evaluation of health care services and providers' [11]. Since satisfaction came to be recognized as a multidimensional and complex concept, it became apparent that there are difficulties in using global measures [1, 5, 12, 13, 14].

For the purpose of this paper and as proposed by Berkowska [1, 12, 13] patient satisfaction is defined as the emotional state of the patient which is a consequence of receiving health care services. It is assumed that patient satisfaction is the affective response of an individual to different aspects of PHC. In accordance with the definition accepted here, the following are recognized as measures of patient satisfaction with services rendered by community midwives:

- perception by the patient that she has been understood,
- perception by the patient that she has received accurate and complete information for self-care,
- and perception by the patient that she has received satisfactory services provided by the midwife.

Objectives

The goal of the research was to evaluate the level of patient satisfaction with care rendered by community midwives in the area of Poznań.

Material and Methods

Design

A patient survey was distributed using face-to-face recruitment of new mothers giving birth in the obstetrics departments of four hospitals in the area of Poznań and with subsequent mail collection.

Sample

Research was carried out over six months (three months of distribution and three months of collecting questionnaires) among new mothers - patients of community midwives contracted by the National Health Fund to perform health care services within the city of Poznań. The study used cluster sampling, as a more cost-effective method for selecting respondents, by geography (Poznań) and time period for distribution of the questionnaires (April 1 to June 30, 2010). Eight hundred new mothers were asked to participate in the study by filling out the questionnaire eight weeks after giving birth. One hundred seventy seven of them (22.12%, which is the percentage of the initial sample selected for the inclusion in the study) returned completed questionnaires, and finally all the returned data sets (100.00%) were analyzed.

Measures

The research instrument used was the specifically-designed multi-dimensional interview "Questionnaire for measuring satisfaction with community midwife care" [13]. It is made up of 18 statements divided into two dimensions as follows:

- The first dimension is 'patient satisfaction with patient education given by the midwife' which consists of a total of 12 questions. It is divided into three sub-dimensions, which are 'feeling by patients that they have been understood' with two questions, 'feeling by patients that they have been competently and completely informed' with seven questions, and 'feeling by patients that they have been prepared for self-care' with three items.
- The second dimension is 'patient satisfaction with the services provided by the midwife', which has six items.

Each statement of the questionnaire had five possible responses (Likert scale) with 5 indicating the highest level of satisfaction. The questionnaire used in this study has demonstrated both face validity and reliability. The reliability of the questionnaire as a whole, as reflected in Cronbach's α (alpha) coefficient, was 0.935 in 2007 [13] and 0.958 in the present study. In addition, the reason for using community midwife services, the time frame of community midwife services and a self-estimation of the patient's health status were requested.

Procedure

Selected midwives and obstetric nurses from four hospitals were instructed to inform all eligible patients individually about the study and invite them to participate. The Questionnaire was distributed by the above mentioned hospital personnel, together with a stamped, addressed envelope and an invitation letter explaining the goal of the study and describing the procedures to be used. The community midwives who provided services for the patients received no information about the study during its course to avoid bias in midwifery practice. Privacy was guaranteed in accordance with Polish legislation and the anonymity of both patients and community midwives was maintained.

Data analysis

Data were analyzed using the JMP 4.0.2 [15]. A one-way analysis of variance, the Wilcoxon/Kruskal-Wallis and chi-square (χ^2) tests were used to examine the differences between demographic and other data and their influence on patient satisfaction with community midwives (the level of significance accepted for testing was 0.05). Spearman's Rho (R) correlation coefficient was used to measure the linear relationship between scores of dimensions of patient satisfaction and the score of overall patient satisfaction.

Results

Description of patients

The demographic and other analyzed variables of the studied patients included age in years, level of education, source of income and health insurance, reason for using community midwife services, time frame of using community midwife services and health status self-estimation. The specifics of the breakdowns within categories and the numbers and percentages are shown in Table I. The scores of patient satisfaction for the whole sample (N 177) are shown in Table II.

Influence of demographic and other data on patient satisfaction with community midwives

Surprisingly, the results of this study indicate a general lack of association between patient satisfaction scores (both dimensions and three sub-dimensions of patient satisfaction scores and overall patient satisfaction scores) between groups of patients depending on demographic data (age in years, level of education, source of income and health insurance) and reason for using community midwife services (almost three quarters of respondents were using community midwife services after normal delivery and over 20 % following a Caesarean section). The sample was relatively small (177 patients), and this could be one explanation for this situation.

Statistically significant differences were found in the scores of all dimensions of patient satisfaction and the score of overall patient satisfaction between groups of patients depending on the time frame of using community midwife services, with higher overall patient satisfaction mean scores for patients using midwife services for over 12 months (4.55) and for several years (4.37). This relation could be seen as evidence of the influence of a longer time frame of the care given on patient satisfaction. The differences between the scores of all dimensions of patient satisfaction and the score of overall patient satisfaction depending on time frame of community midwife services are shown in Table III.

The influence of time frame of community midwife services on the dimension patient satisfaction with patient education given by community midwives is shown in Table IV.

The next statistically significant differences were found in the scores of patient satisfaction between groups of patients depending on health status self-estimation. Differences were found in the scores for feeling by patients that they have been competently and completely informed (p 0.0244) which was a sub-dimension of patient satisfaction with patient education given by the midwife and this dimension by itself (p 0.0425), where a positive effect of better health status self-estimation on patient satisfaction scores was found.

Although mean scores for overall patient satisfaction between groups of patients divided by health status self-estimation did not differ to a statistically significant degree, a positive effect was observed for better health status self-estimation on patient satisfaction mean scores (rather bad 1 patient – 3.33; average health 9 patients – 3.73; good health 135 patients – 3.89 and excellent health 32 patients – 4.23).

Correlations between overall patient satisfaction and all dimensions of patient satisfaction

Strong positive correlations were detected between overall patient satisfaction and all dimensions of patient satisfaction as well as within dimensions ($R = 0.524 - 0.965$; P 0.0001). The only moderate positive correlation was detected between feeling by patients that they have been understood and feeling by patients that they have been prepared for self-care ($R = 0.381$; P 0.0001).

Discussion

The results of this study indicate that women receiving care by midwives in the Wielkopolska region of Poland are satisfied with the services they receive, which suggest that concerns, raised by NIK, about the provision of services by community midwives are largely misplaced. It may be that documentation and reporting

Table I. Selected characteristics of all community midwife patients studied (N 177).

Variables	Category	Number	Percent
Age (in years)	Under 20	4	2.25
	21-30	115	64.97
	31-40	57	32.20
	41-50	1	0.56
Level of education	Primary	2	1.12
	Vocational	10	5.64
	High school	48	27.11
	Higher education	117	66.10
Source of income and health insurance	Own employment	150	84.74
	Family member's employment	13	7.34
	Disability/welfare	3	1.69
	Other sources	10	5.64
	No insurance	1	0.56
Reason for using community midwife services	Care after normal delivery	130	73.44
	Care after Caesarean section	40	22.59
	Care after assisted delivery	5	2.82
	Other reasons	2	1.12
Time frame for using community midwife services	1-3 months	148	83.67
	4-12 months	1	0.56
	Over 12 months	7	3.95
	Several years	21	11.86
Health status self-estimation	Rather bad	1	0.56
	Average health	9	5.08
	Good health	135	76.27
	Excellent health	32	18.07

Table II. Scores of patient satisfaction with community midwives for entire sample (N 177).

Patient satisfaction dimension/ sub-dimension of patient satisfaction	Mean	Standard Deviation	Median	Range
Patient satisfaction with patient education given by the midwife	3.87	0.73	3.91	1.0 – 5.0
Feeling by patients that they have been understood	4.11	0.77	4.00	1.0 – 5.0
Feeling by patients that they have been competently and completely informed	3.89	0.80	4.00	1.0 – 5.0
Feeling by patients that they have been prepared for self-care	3.80	0.87	4.00	1.0 – 5.0
Patient satisfaction with services provided by the midwife	4.07	0.80	4.16	1.5 – 5.0
Overall patient satisfaction	3.94	0.71	4.00	1.7 – 5.0

procedures need to be improved, but this question lies beyond the scope of this paper.

Nonetheless, the quite high rate of patient satisfaction would indicate that the quality of services provided by community midwives is more than adequate (overall patient satisfaction - mean score 3.94 out of score range 1.7 - 5.0, with 5.0 indicating the highest score). These results are consistent with the conclusions of Marcinowicz and Grębowski, who claimed after an analysis of

the data from several different Polish patient satisfaction studies, that patient satisfaction was high and the percentage of satisfied patients was higher than those unsatisfied [17].

The highest scores were calculated for feeling by patients that they have been understood, a sub-dimension of the dimension of patient satisfaction with patient education given by the midwife - mean score 4.11 and for the dimension of patient satisfaction with services provided by the midwife with a mean

Table III. Influence of time frame on patient satisfaction with community midwives (N 177).

Patient satisfaction dimension	Time frame of community midwife services	Mean (Standard Deviation)	Median (Range)	P*
Dimension: Patient satisfaction with patient education given by the midwife	1-3 months (148) †	3.78 (0.73)	3.91 (1.00 – 5.00)	0.0048
	4-12 months (1)	3.00	3.00 (3.00 – 3.00)	
	over 12 months (7)	4.41 (0.69)	4.83 (3.41 – 5.00)	
	several years (21)	4.31 (0.52)	4.33 (3.50 – 5.00)	
Dimension: Patient satisfaction with the services provided by the midwife	1-3 months (148)	4.00 (0.83)	4.17 (1.50 – 5.00)	0.0120
	4-12 months (1)	3.00	3.00 (3.00 – 3.00)	
	over 12 months (7)	4.50 (0.66)	4.83 (3.50 – 5.00)	
	several years (21)	4.51 (0.43)	4.33 (3.83 – 5.00)	
Overall patient satisfaction	1-3 months (148)	3.85 (0.71)	3.94 (1.77 – 5.00)	0.0024
	4-12 months (1)	3.00	3.00 (3.00 – 3.00)	
	over 12 months (7)	4.55 (0.60)	4.88 (3.72 – 5.00)	
	several years (21)	4.37 (0.46)	4.33 (3.61 – 5.00)	

*P - statistical significance; † () – number of persons in the category

Table IV. Influence of time frame on patient satisfaction with patient education given by community midwives (N 177).

Dimension: patient satisfaction with patient education given by the midwife	Time frame of community midwife services	Mean (Standard Deviation)	Median (Range)	P*
Sub-dimension: Feeling by patients that they have been understood	1-3 months (148) †	4.05 (0.78)	4.00 (1.00 – 5.00)	0.0196
	4-12 months (1)	3.00	3.00 (3.00 – 3.00)	
	over 12 months (7)	4.57 (0.53)	5.00 (4.00 – 5.00)	
	several years (21)	4.45 (0.58)	4.50 (3.00 – 5.00)	
Sub-dimension: Feeling by patients that they have been competently and completely informed	1-3 months (148)	3.81 (0.81)	4.00 (1.00 – 5.00)	0.0242
	4-12 months (1)	3.00	3.00 (3.00 – 3.00)	
	over 12 months (7)	4.42 (0.68)	4.85 (3.43 – 5.00)	
	several years (21)	4.27 (0.57)	4.14 (3.42 – 5.00)	
Sub-dimension: Feeling by patients that they have been prepared for self-care	1-3 months (148)	3.71 (0.87)	4.00 (1.00 – 5.00)	0.0140
	4-12 months (1)	3.00	3.00 (3.00 – 3.00)	
	over 12 months (7)	4.28 (0.82)	4.66 (3.00 – 5.00)	
	several years (21)	4.28 (0.67)	4.33 (2.66 – 5.00)	

*P - statistical significance; † () – number of persons in the category

score 4.07. The lowest score was calculated for the dimension of patient satisfaction with patient education given by the midwife with a mean score of 3.87 and similarly for two sub-dimensions of this dimension, namely the feeling by patients that they have been competently and completely informed - mean 3.89 and the feeling by patients that they have been prepared for self-care - mean 3.80.

It is commonly believed that patient satisfaction with health care may be dependent upon variables such as social class, marital status, gender, and in particular age [16], with a body of evidence from various countries to suggest that older patients tend to be more satisfied with health care than are younger people [14,

16]. In this study a tendency was noticed for higher scores in patient satisfaction among older patients in the group 31-40 years of age with a mean of 4.1, although the difference was not found to be statistically important.

Educational attainment in the literature on patients satisfaction has been identified as having a significant bearing on satisfaction, the trend being that greater satisfaction is associated with lower levels of education [16]. This tendency was not confirmed in this study, but the fact that a majority of respondents had higher education (higher education 117 patients – 66.10 %; high school 48 patients – 27.11 %; vocational 10 patients – 5.64 % and primary 2 patients – 1.12 %) should be taken into account.

The relationship between satisfaction and social class is less consistent, a problem being that socioeconomic variables are often not assessed [16]. In this study, source of income and health insurance was used as an indicator of a socioeconomic variable (own employment 150 patients – 84.74%; family member's employment 13 patients – 7.34 %; disability/welfare 3 patients – 1.69 %; other sources 10 patients – 5.64 % and lack of insurance 1 patient – 0.56 %) but no statistically important differences in patient satisfaction were found related to this.

In the 2007 study and in the present one as well, statistically significant differences were found in the means of patient satisfaction scores for feeling by patients that they have been competently and completely informed which was a sub-dimension of patient satisfaction with patient education given by the midwife between groups of patients depending on health status self-estimation [1].

Statistically significant differences were found in the scores of all dimensions of patient satisfaction and the score of overall patient satisfaction between groups of patients depending on the time frame of community midwife services (1-3 months 148 patients – 3.85; 4-12 months 1 patient – 3.00; over 12 months 7 patients – 4.55 and for several years 21 patients – 4.37), with higher overall patient satisfaction scores for patients using midwife services for over 12 months (4.56) and for several years (4.37).

This relation could be seen as evidence of the influence of a longer time frame of care on satisfaction, which has also been confirmed in other studies [3], in which it was found that care by community midwives delivered over a longer period of time resulted in improved patient satisfaction in all dimensions. Community midwives are responsible for caring for women throughout their lives. The results of the present study corroborate the idea that community midwife care is crucial for the well-being of new mothers and their newborn children [1, 2, 3, 4, 5, 6, 13, 14]. Future research requires a combination of qualitative and quantitative approaches provided at the same time in order to increase understanding of patient satisfaction and patient perspectives on community midwife care.

Conclusions

In the group of patients studied it was found that the overall patient satisfaction score depends most heavily on the time frame of receiving community midwife services.

The results of this study generally indicate a lack of association between patient satisfaction scores (both dimensions and all three sub-dimensions of patient satisfaction scores and overall patient satisfaction scores) and demographic variables.

Despite its limitations, this paper gives information on the important role community midwives play in caring for and supporting women after giving birth and patient satisfaction with the services provided by community midwives.

Implications for practice

Based on the above information, it must be concluded that services rendered by community midwives should start during the early stages of pregnancy. This is because long term and continuous care, education and support services could lead to better care and improvement of patient satisfaction.

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References

1. Biskupska M, Niewiadomski T.J. Patient satisfaction in primary health care delivered by community midwives. In: Wellness and support in good health and sickness. Wiktor H (ed.). Lublin: Wydawnictwo NeuroCentrum. 2008, 19-25.
2. De Koninck M, Blais R, Joubert P, [et al.]. Comparing women's assessment of midwifery and medical care in Québec, Canada. *J Midwifery Womens Health*. 2001, 46, 2, 60-67.
3. MacArthur C, Winter HR, Bick DE, [et al.]. Redesigning postnatal care: a randomised controlled trial of protocol-based midwifery-led care focused on individual women's physical and psychological health needs. *Health Technol Assess*. 2003, 7 (37), 1-98.
4. Manniën J, Klomp T, Wiegers T, [et al.]. Evaluation of primary care midwifery in the Netherlands: design and rationale of a dynamic cohort study (DELIVER). *BMC Health Serv Res*. 2012, 12 (69).
5. Rudman Al. Women's evaluations of intrapartum and postpartum care. Stockholm: Karolinska Institutet, 2007. <http://diss.kib.ki.se/2007/978-91-7357-273-6/thesis.pdf>
6. Rudman A, El-Khoury B, Waldenström U. Women's satisfaction with intrapartum care - a pattern approach. *J Adv Nurs*. 2007, 59 (5), 474-487.
7. Ware JE, Hays RD. Methods for measuring patient satisfaction with specific medical encounters. *Med Care*. 1998, 26 (4), 393-402.
8. Hundley V, Penney G, Fitzmaurice A, [et al.]. A comparison of data obtained from service providers and service users to assess the quality of maternity care. *Midwifery*. 2002, 18 (2), 126-135.
9. Najwyższa Izba Kontroli Delegatura w Krakowie. Informacja o wynikach kontroli realizacji zadań położnych środowiskowych w zakresie podstawowej opieki zdrowotnej. Najwyższa Izba Kontroli, Kraków, 2011. <http://www.nik.gov.pl/plik/id,3004,vp,3795.pdf>
10. Linder-Pelz SU. Toward a theory of patient satisfaction. *Soc Sci Med*. 1982, 16 (5), 577-582.
11. Ware JE Jr, Snyder MK, Wright WR, Davies AR. Defining and measuring patient satisfaction with medical care. *Eval Program Plann*. 1983, 6 (3-4), 247-263.
12. Berkowska M. Jakość usług medycznych a satysfakcja pacjentów. W: Wypracowane narzędzie do oceny jakości usług medycznych w podstawowej opiece zdrowotnej. Red. Berkowska M, Niewiadomski T, Brzezińska K, [et al.]. Poznań: Biuro Wielkopolskiej Unii Opieki Zdrowotnej, 1998, 3-19.
13. Biskupska M, Niewiadomski T.J. The development of a questionnaire for measuring satisfaction with community midwife care. In: Wellness, quality of life and care in sickness and disability. Daniluk J. (ed.). Lublin: Wydawnictwo NeuroCentrum, 2008, 21-28.
14. Kraśnianin E, Semczuk M, Skręt A, [et al.]. Level of satisfaction in patients giving birth in Poland/ Rzeszów and in the Federal Republic of Germany/Gross-Gerau. *Ginekol Pol*. 2013, 84 (01), 17-23.
15. SAS Institute Inc. JMP 4.0.2. Cary, North Carolina, USA, 2000.
16. Sitzia J, Wood N. Patient satisfaction: a review of issues and concepts. *Soc Sci Med*. 1997, 45 (12), 1829-1843.
17. Marciniowicz L, Grębowski R. Satysfakcja pacjentów w świetle polskich badań empirycznych – próba wyjaśnienia zagadki wysokiego poziomu zadowolenia z opieki. *Pol Merkur Lek*. 2005, 18, (108), 663-666.