Satisfaction Level of New Mothers with Prenatal Care and the Healthcare Professionals Who Provide It

MD Pozo-Cano, RF Castillo, J Francisco Guillen, J Florido, I García García

ABSTRACT

Introduction: *Prenatal care is a key strategy to reduce maternal mortality. The aims of this work were to ascertain the level of satisfaction of new mothers with their pregnancy monitoring and with the medical professionals who provided prenatal care.*

Subject and methods: *A descriptive study was conducted on 265 new mothers, 18−43 years of age, who had given birth at the Virgen de las Nieves University Hospital and the San Cecilio University Hospital in Granada (Spain) in April and May 2012. The data were collected with a questionnaire consisting of 28 items that elicited information from the subjects about their pregnancy, prenatal care activities, the healthcare professionals that provided the care, and those that they would like to monitor future pregnancies. There were also two open questions. The first was about the perceived needs of the participants and the second asked them to suggest ways that prenatal care could be improved.*

Results: *The majority of the subjects (59.6%) had given birth for the first time. The midwife was the healthcare professional who performed most of the monitoring activities and resolved their doubts and problems (32.74%), gave the subjects tranquillity and security (37.86%) and listened to their worries (34.53%). The subjects' satisfaction with the healthcare professionals was generally high. This was particularly true of the midwife (90.75%). Half of the subjects surveyed said that they wanted the midwife, obstetrician and general practitioner to monitor their pregnancy. They also underlined the need for longer and more visits with the midwife as well as more consultations with the obstetrician and higher number of ultrasounds.*

Conclusions: *The subjects were very satisfied with the work of the healthcare professionals that monitored their pregnancy, particularly with the midwife. However, they also highlighted expectations and needs that, if met, would increase their satisfaction.*

Keywords: Patient satisfaction, pregnancy, prenatal care, role of doctors, role of nurses

Satisfacción de Gestantes Españolas con la Atención Prenatal y con los Profesionales que la Realizan

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RESUMEN

Introduccion: *Actualmente la atención prenatal es una estrategia clave para reducir la mortalidad materna. Los objetivos de este trabajo fueron conocer el grado de satisfacción de las mujeres con el control del embarazo y los profesionales que la realizan.*

Métodos: *Se realizó un estudio descriptivo, con 265 puérperas entre 18 y 43 años que dieron a luz en los Hospitales Universitarios "Virgen de las Nieves" y "San Cecilio" de Granada durante los meses de abril y mayo de 2012. Los datos se obtuvieron mediante un cuestionario con 28 preguntas que recogían las características de las gestantes, las actividades realizadas durante la atención prenatal, la satisfacción de las mujeres con los profesionales que las atienden, los profesionales que deseaban les controlaran la gestación y dos preguntas abiertas sobre necesidades y sugerencias para mejorar la asistencia.*

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Resultados: *La mayoría (59.6%) eran primíparas. La matrona fue el profesional que realizó más actividades y resolvió más dudas y problemas (32.74%), transmitió más tranquilidad y seguridad (37.86%) y escuchó más sus preocupaciones (34.53%). La satisfacción con los profesionales fue alta, sobre todo con la matrona (90.75%). La mitad de las mujeres deseaban que les controlaran el embarazo: matrona, tocólogo y médico de familia. Demandaban más consultas y de mayor duración con la matrona y más consultas y más ecografías con el tocólogo.*

Conclusiones: *Las mujeres están muy satisfechas con el desempeño de los profesionales que controlan su embarazo, especialmente con la matrona. Aunque, existen necesidades y expectativas demandadas por las mujeres que mejorarían la satisfacción.*

Palabras claves: Satisfacción con el paciente, embarazo, atención prenatal, rol de enfermería, rol del médico

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INTRODUCTION

Prenatal care is a key strategy to reduce maternal mortality (1). Women with poor prenatal care are at greater risk of adverse pregnancy outcomes. In fact, they have a higher percentage of low birthweight babies, perinatal mortality and pre-term deliveries, among other problems (2).

Since 1986, pregnancy monitoring in Spain has been performed by an integrated team of primary healthcare professionals [the family doctor, nurse, and nurse-midwife] (3) and specialized healthcare professionals (obstetrician and nurse-midwife). In the region of Andalusia, this integrated care that covers the pregnancy, childbirth, and postpartum periods [*Proceso Asistencial Integrado del Embarazo, Parto y Puerperio de la Junta de Andalucía*] (4) includes ten visits to the clinic, beginning with the preconception visit (4, 5).

The primary healthcare phase (*ie* with the family doctor, nurse-midwife and nurse) comprises six visits or consultations, which take place eight to nine,16, 24, 28, 36 and 38 weeks of the pregnancy. Their purpose is to monitor the weight and blood pressure of the pregnant women, since hypertension disorders during pregnancy are one of the four main causes of maternal mortality and perinatal morbidity (6).

Furthermore, the risk scale is applied. During these visits, the patient receives guidelines and advice regarding lifestyle and general pregnancy care. Data are recorded in her medical history and pregnancy health record (*ie* a unified medical record for each pregnancy). In the two final visits, the nursing professionals encourage her to consider breast-feeding her baby. They inform her of her rights (7) and explain the delivery process and postpartum as well as how to care for the newborn baby.

In order to evaluate the evolution of the fetus and pregnancy after the 24th week, the symphysis-fundal height is also determined, and the baby's heartbeat is monitored with a fetal Doppler (8). The pregnant woman is also examined for metabolic disorders, such as gestational diabetes, or blood disorders. Care includes the detection and treatment of asymptomatic bacteriuria (9, 10) as well as blood tests to screen the patient for rubella, toxoplasmosis, hepatitis, syphilis and (with the patient's consent) HIV (11). In order to prevent neonatal infection from group B streptococcal infection, a sample of exudate is taken from the recto-vaginal orifices at 35−37 weeks of gestation (12). The prevalence of gestational diabetes in Spain ranges from 6% to 8%. The screening is performed with the O'Sullivan test (13) which is given to all pregnant women.

There are four specialized healthcare visits with the obstetrician at 12, 20, 32 and 34 weeks of pregnancy. Ultrasounds are performed, which identify possible fetal abnormalities. Early screening for fetal malformations, in combination with biochemical markers, evaluates the risk of a chromosomal defect (14) in the fetus. In the third trimester, fetal growth is monitored. From the 39th week until delivery, this is complemented with cardiotographic monitoring for low-risk pregnant women (15).

In 2000, the Health Department [*Consejería de Salud*] of the Regional Government of Andalusia implemented a policy in which quality healthcare is conceived as a concept integrated by a wide range of variables in which user satisfaction is a central component (15). According to Caminal, user satisfaction with medical attention has three dimensions: (i) technical and instrumental aspects of the medical attention, (ii) interpersonal communicative aspects, which include giving and receiving information and (iii) the conditions and context in which healthcare is received (16).

The principal aim of this study was to ascertain the level of satisfaction of new mothers with their pregnancy monitoring and with the medical professionals who provided prenatal care, based on the first two dimensions specified by Caminal. Specific research objectives included: 1) description of the prenatal care and the medical professionals providing it, 2) identification of the level of perceived satisfaction of the subjects with the medical attention received from the obstetrician, family doctor, nurse, and nurse-midwife during pregnancy monitoring, 3) the specification of needs and suggestions from the patients in reference to the healthcare received and 4) the identification of the medical professionals whom the subjects wished to monitor their pregnancy.

SUBJECTS AND METHODS

A descriptive study was performed of 265 new mothers who had given birth at the *Virgen de las Nieves* University Hospital and the *San Cecilio* University Hospital in Granada (Spain) in April and May 2012. The inclusion criteria for all female subjects in the sample were that they had to be between 18 and 45 years of age and agree to voluntarily participate in the study. Their prenatal healthcare had been provided by the public health system in Andalusia. The sampling technique was intentional and the final sample was composed of 265 new mothers.

Data for the study were collected with a questionnaire consisting of 28 closed questions that elicited information about the subjects, such as their age, educational level, their satisfaction with the healthcare professionals providing the prenatal care, the medical care received during pregnancy monitoring (*ie* safety and support activities, weight control, blood pressure measurement, presence of malleolar oedemas [calf swelling], determination of symphysis-fundal height, detection of baby's heartbeat and gynaecological examination). The participants were also asked to specify the health professionals that they would like to monitor future pregnancies. There were also two open questions about their perceived healthcare needs during pregnancy and their suggestions for improving the care received.

The potential respondents were initially contacted in the maternity wards of the hospitals participating in the study. Those who complied with the inclusion criteria were informed of the study and their cooperation and informed consent were requested. When this was obtained, they were asked to fill out the questionnaire, put it in a closed envelope, and then give the envelope to the head researcher.

This study was approved by the Ethics Committee for Research in Humans of the University of Granada. All participants signed an informed consent form certifying their voluntary participation. The analysis of data was performed with the SPSS 15.0 statistical software for Windows.

The descriptive analysis calculated mean values, standard deviations for quantitative variables, and frequencies and percentages for the qualitative variables. Moreover, 95% confidence intervals were computed for the means. Subsequently, a bivariate analysis was performed, using a Student's *t*-test. Significant differences were when $p < 0.05$. The data extracted from the open questions were grouped in units of meaning, whose frequency and percentage of occurrence were calculated.

RESULTS

A total of 300 questionnaires were handed out, 274 of which were completed. Of the initial participants, 10 decided not to finish the questionnaire, 12 lacked sufficient knowledge of Spanish to answer the questions and four never returned the survey material. Of the questionnaires received, nine of the participants did not sign the informed consent. Therefore, the sample was finally composed of 265 women and the response rate was 88.33%.

The age of the women in the sample was 18–43 years with a mean age of 30.7, a standard deviation of 4.52, and 95% a confidence interval (CI) of 29.92, 31.02. The gestational age of the subjects ranged from 28 to 42 weeks with a mean value of 38.30, a standard deviation of 31.96 and 95% CI: 37.91, 38.70.

Of the sample, 239 (90.2%) were native Spaniards and only 25 (9.4%) were immigrants. Of the non-Spaniards, 15 (60%) came from Central or South America, three (12%) were from Africa, six (24%) were from other European countries and one (4%) came from Asia.

Regarding educational level, 92 subjects (34.7%) had attended university, 41 (15.5%) had a secondary school education, 68 (25.7%) had vocational training and 56 (21.1%) had primary school education. In reference to their job status, 128 subjects (48.3%) were employed, 67 (25.3%) were housewives, 37 (14.0%) were unemployed and 26 (9.8%) owned their own business. Finally, 158 subjects (59.6%) had just given birth to their first baby, 87 (32.8%) had had their second baby and only two (0.8%) had three or more children.

Table 1 shows the type of intervention performed by the medical professionals who monitored the pregnancy. The same questions were asked about each professional category and the answers were then calculated as percentages.

Table 2 reflects the subjects' answers in relation to the basic activities performed by the medical professionals providing prenatal care (weight control, blood pressure measure-

Table 1: Interventions performed by medical professionals who monitored the pregnancy

Interventions	Role of the midwife n (%)	Role of the family doctor n (%)	Role of the obstetrician n (%)	Role of the nurse n (%)
Wrote prescriptions	19 (9.13)	134 (64.42)	26 (12.5)	29 (13.94)
Collected data from other medical professionals	118 (23.55)	143 (28.54)	159 (31.73)	81 (16.16)
Resolved doubts and problems	185 (32.74)	140 (24.77)	149 (26.37)	91 (16.10)
Provided information and advice	207 (37.4)	123 (22.36)	138 (25.09)	82 (14.54)
Listened to concerns	173 (34.53)	142 (28.34)	106 (21.15)	80 (15.96)
Gave tranquillity and security	195 (37.86)	123 (23.88)	108 (20.97)	89 (17.28)

Table 2: Monitoring activities and professionals who provided prenatal care

Professional/s who performed the activity	Weight control n (%)	Malleolar oedemas n (%)	Blood pressure n (%)	Fetal heartbeat n (%)	Symphysis-fundal height n (%)	Gynaecological examination n (%)
Midwife	61 (26.75)	42 (29.57)	49 (20.3)	42 (17.8)	70 (33.98)	37 (26.61)
Obstetrician	33 (14.47)	7 (4.92)	6 (2.49)	21 (8.93)	32 (15.53)	53 (38.12)
Family doctor	24 (10.52)	40 (28.17)	14 (5.81)	21 (8.93)	20 (9.70)	8 (5.75)
Nurse	15 (6.57)	7 (4.92)	37 (15.35)	14 (5.95)	18 (8.73)	4 (2.87)
All professionals	12 (5.26)	4 (2.81)	23 (9.54)	22 (9.36)	8 (3.88)	3 (2.15)
Obstetrician and midwife	26 (11.40)	5 (3.52)	14 (5.81)	2 (0.85)	26 (12.62)	1 (0.72)
Obstetrician and nurse	4 (1.75)	–	9 (3.73)	55 (23.4)		4 (2.88)
Obstetrician and family doctor	6 (2.63)	4 (2.81)	8 (3.12)	6 (2.55)	7 (3.40)	22 (15.82)
Obstetrician, midwife and nurse	3 (1.31)	–	2 (0.82)	8 (3.40)	2 (0.97)	–
Obstetrician, midwife and family doctor	9 (3.94)	4 (2.81)	1 (0.41)	22 (9.36)	5 (2.42)	2 (1.44)
Obstetrician, family doctor and nurse	7 (3.07)	–	24 (9.95)	–	–	–
Family doctor and midwife	20 (8.77)	19 (13.38)	27 (11.2)	12 (5.10)	7 (3.40)	2 (1.44)
Family doctor and nurse	3 (1.31)	7 (4.92)	11 (4.56)	7 (2.97)	11 (5.34)	–
Family doctor, midwife and nurse	–	1 (0.70)	6 (2.49)	–	–	–
Midwife and nurse	5 (2.19)	2 (1.40)	10 (4.15)	3 (1.27)		3 (2.15)
Total	**228 (100)**	**142 (100)**	**241 (100)**	**235 (100)**	**206 (100)**	**139 (100)**

ment, symphysis-fundal height measurement, presence of malleolar oedemas, fetal heartbeat monitoring and gynaecological examination).

Table 3 shows the level of satisfaction of the participants in the study with the healthcare received from the medical professionals who monitored their pregnancy. Given that the level of satisfaction was regarded as the sum of satisfied and very satisfied, then the nurse-midwife is the professional that was the most highly valued by the subjects (90.75). The next highest evaluation was obtained by the family doctor (73.84%), followed by the obstetrician (70.86%) and the nurse (64.18%).

Table 3: Satisfaction with these professionals (n = 265)

Level of satisfaction	Midwife n (%)	Obstetrician n (%)	Family doctor n (%)	Nurse n (%)
Very satisfied	126 (52.94)	46 (18.11)	80 (30.77)	53 (24.65)
Satisfied	90 (37.81)	134 (52.75)	112 (43.07)	85 (39.53)
Indifferent	10 (4.20)	45 (17.71)	36 (13.84)	58 (26.97)
Slightly satisfied	10 (4.20)	27 (10.63)	21 (8.07)	10 (4.65)
Not satisfied	2 (0.84)	2 (0.78)	11 (4.23)	9 (4.18)
Total	**238 (100)**	**254 (100)**	**260 (100)**	**215 (100)**

Significant differences were found between the subjects' satisfaction with the nurse-midwife and the rest of the healthcare professionals. More concretely, the significance level between the nurse-midwife and the obstetrician was $p = 0.016$; the significance level between the nurse-midwife and the family doctor was $p = 0.000$ and finally, the significance level between the nurse-midwife and nurse was $p = 0.024$.

Table 4 shows the answers to the first open question in which the participants listed their perceived needs of prenatal care. However, only 16 of the respondents answered the second open question in which they were asked to give suggestions on how to improve this care. The data grouped in semantic clusters were the following: four subjects (25%) mentioned the lack of medical and human resources; four subjects (25%) wished to always be treated by the same doctor; six subjects (37.5%) were very satisfied with the midwife, whose role was more important than that of the family doctor; and two subjects (12.5%) wished for there to be a telephone number to call when they had doubts about their pregnancy.

Table 5 shows the medical professionals from whom the subjects wished to receive prenatal care in a future pregnancy.

Table 4: Needs and suggestions regarding prenatal care (n = 110)

Needs and suggestions	n (%)
More visits and more time for consultation with the midwife	27 (24.50)
More visits to the obstetrician with more ultrasounds and gynaecological examinations and afternoon consultations	50 (45.50)
More communication and better coordination between the family doctor and the midwife, more personalized treatment and access to someone that can resolve doubts	26 (23.60)
More involvement of the family doctor in the pregnancy and more precise diagnoses	2 (1.80)
More maternal education classes, supported by written information and with afternoon sessions	5 (4.50)

Table 5: Professionals providing prenatal care

Professionals who attended to the subjects	n (%)	Professionals whom the subjects wish to monitor their pregnancy	n (%)
Obstetrician and midwife	23 (8.70)	Obstetrician and midwife	55 (20.75)
Obstetrician, midwife and family doctor	102 (38.50)	Obstetrician, midwife and family doctor	133 (50.18)
Obstetrician, midwife and nurse	21 (7.90)	Obstetrician, midwife and nurse	33 (12.45)
Obstetrician, family doctor and nurse	36 (13.60)	Obstetrician, family doctor and nurse	5 (1.89)
Obstetrician, family doctor, midwife and nurse	73 (27.50)	Obstetrician, family doctor, midwife and nurse	9 (3.40)
Obstetrician, midwife, family doctor, nurse and others	10 (3.80)	Midwife and nurse	4 (1.50)
		Always the midwife	18 (6.80)
		Always the obstetrician	6 (2.27)
		Always the family doctor	2 (0.75)

DISCUSSION

The response rate in this study was higher than that in similar research studies (17) on prenatal care. In our opinion, this higher rate was related to the time when the survey was administered and/or the data collection procedure. The subjects were personally contacted the day after childbirth while they were still in the hospital, whereas in other studies, contact was made three months after childbirth (14) or six weeks afterwards and by mail (18).

The mean age of the respondents was similar to that of the samples in other previous research (19) and slightly lower than the mean age in Spain, according to the Spanish National Statistical Institute (20). Nevertheless, in other studies, the participants were somewhat younger (2). The percentage of immigrants in our sample coincides with that of a study on fertility in Spain (19). Although other authors (21) obtained higher percentages, this is probably due to the fact that their research was carried out in the southeastern part of Spain where there is a large immigrant population.

One-third of the women in our sample had university education, a percentage similar to that in other research (22). Nevertheless, in certain studies, the sample was composed of a majority of women with secondary school education (21). Over half of the respondents in our study worked outside the home, which is a higher percentage than in another similar study.

In regards to number of children, in practically all previous research studies, the largest group in the samples was composed of primiparous women. The reason for this may lie in the fact that in today's world, couples tend to postpone having children and/or only have one child. In contrast, when there is a large immigrant population, there is a higher percentage of women with more than one child.

The Andalusian Regional Health System and the Spanish Society of Obstetrics and Gynecology have established standard protocols for pregnancy monitoring, which include the healthcare activities listed in Table 2. A high percentage of the respondents did not mention a specific medical professional that performed these protocols. This could be because the question was asked after childbirth and the answer depended on the memory of the woman. Except for the gynaecological examination which was performed by the obstetrician, the other activities were mostly carried out by the nurse-midwife.

In the opinion of the subjects, the nurse-midwife resolved most of their doubts and problems. She was the one that most often listened to their worries during the pregnancy and who gave them security and peace of mind. In line with our results, Corrêa *et al* (23) found that women placed a high value on the preparation and competence of midwives who helped them to cope with their psychological and emotional needs as well as with those of their partner. They wanted the midwives to listen to them and to treat them as individuals. According to these authors (24), most prenatal care activities were provided by the family doctor, followed by the obstetrician, and finally, the midwife.

Numerous studies (2, 3, 13, 14, 17, 21, 22) not only focus on how pregnancy is monitored but also on the satisfaction of the pregnant women with the healthcare given. Besides indicating the extent to which the health system responds to the needs of pregnant women, it is also a quality reference.

The satisfaction of the women with the care provided during pregnancy by different medical professionals is very high. This coincides with the results of other studies also carried out in Spain (25), which seems to indicate that the women generally felt well cared for during their pregnancy. Nevertheless, there are other aspects that are open to improvement, such as the need for more flexible consultation hours, for better coordination between medical professionals, and for always being treated by the same doctor, as affirmed by women who opt for private clinics.

The open questions in our study allowed the respondents to provide data concerning aspects not included in the questionnaires. Their answers could contribute to improve certain aspects of prenatal care from the perspective of the users of this service.

The number of prenatal visits is an indicator of good prenatal care, and is regarded as a referent in studies consulted. The World Health Organization (WHO) recommends a minimum of four visits, whereas in Spain, women visit the clinic between six (26) and ten times during pregnancy. In this last study (27), as well as in our own, despite the fact that the number of visits exceeded the recommendations of the WHO, the women requested even more visits and longer consultations in order to resolve doubts and fears. The women surveyed in other studies (21) also wanted easier access to the midwife, more ultrasounds, and a telephone number for personal attention.

Half of the respondents in our study stated that during their pregnancy, they would like to be monitored by the obstetrician, nurse-midwife, and family doctor. The reason for this is that pregnant women regard the obstetrician as the medical professional that has always been linked to their reproductive health, and who also performs ultrasounds, an activity highly valued and requested by women. The midwife is a nurse who is specialized in female health and reproduction. Accordingly, the pregnant women identify her as the healthcare professional that helps, supports and informs them about pregnancy, childbirth and the postpartum period. Finally, after *Ley 14/1986 General de Sanidad* [the Health Act of 1986] was enacted in Spain, the family doctor also began to officially provide primary prenatal care, and thus is well known and trusted.

Nevertheless, our study has certain limitations. Firstly, the open questions were answered by relatively few of the participants. Another limitation stemmed from the immigrant women, whose needs and suggestions were not addressed, either because they were only a small percentage of the sample or because of their non-participation due to the language barrier.

The care given to women during pregnancy as well as the medical professionals providing the care coincide with the guidelines and protocol for pregnancy, childbirth and postpartum as specified by the Regional Government of Andalusia. It was found that 75% of the pregnant women in the sample were satisfied with the care given by the medical professionals that monitored their pregnancy. This was particularly so in the case of the midwife, who was the most highly valued professional, followed by the family doctor, obstetrician and nurse. In fact, 50% of the women in the sample stated that they wanted their pregnancy to be monitored by the midwife, family doctor and obstetrician. However, despite the subjects' positive evaluation of the prenatal care received, there were still needs to satisfy and suggestions for improvement, which the women perceived as weaknesses in the healthcare system. Perhaps the most salient was their demand for more personalized attention to emotional needs and the resolution of worries and doubts during this important stage of life.

AUTHORS' NOTE

The authors declare that they have no conflict of interest.

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