

MATERNAL SATISFACTION WITH MATERNAL-INFANT NURSING CARE IN CAMPECHE, MEXICO

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Objective: Evaluate and compare maternal-satisfaction (global and areas) with maternal-child nursing care (MSMINC) and to explore the relationship of MSMINC with wait time, length of visit, and maternal age and education. Methods: Cross-sectional descriptive study comprising 213 mothers. Group 1 (n = 84), mothers of children aged <1 year, and Group 2 (n = 129), mothers of children between 1 and 4 years of age. The patient satisfaction scale was applied. Results: Global MSMINC was 76.26 and 79.21 for Groups 1 and 2, respectively. No associated factors were found in Group 1. In Group 2, wait time was associated with MSMINC in the technical-professional area (F = 3.13; df = 128; B = -0.21; p = 0.01). Conclusions: The fact that these study participants identified only MSMINC-associated factors in the technical-professional area may indicate that care is centered on technical procedures. Given that MSMINC-associated factors were not identified in Group 1, we recommend exploration of maternal expectations and perceptions of care.

DESCRIPTORS: child care; maternal-child nursing

SATISFAÇÃO MATERNA COM O CUIDADO DE LA ENFERMEIRA MATERNO INFANTIL EN CAMPECHE, MÉJICO

El objetivo de este estudio fue evaluar y comparar la satisfacción materna (global/áreas) con el cuidado de la enfermera materno infantil (MSMINC) y explorar la relación de MSMINC con el tiempo de espera, duración de la visita, edad y educación materna. Se trata de un estudio descriptivo transversal. Participaron 213 madres. Grupo 1, n = 84 madres de niños <1 año y Grupo 2, n = 129, madres de niños 1 a 4 años. Se aplicó la Escala de Satisfacción del Paciente. Se obtuvieron los siguientes resultados: MSMINC global fue 76.26 y 79.21 en los Grupos 1 y 2, respectivamente. No se encontraron factores asociados en el grupo 1. En el Grupo 2, el tiempo de espera se asoció con MSMINC en el área técnico profesional (F = 3.13; df = 128; B = -0.21; p = 0.01). Se concluye que las participantes identificaron solamente factores asociados a la MSMINC en el área técnico profesional lo que probablemente indica que el cuidado está centrado en procedimientos técnicos. No se identificaron factores asociados en el Grupo 1. Se recomienda explorar las expectativas y percepciones maternas sobre el cuidado.

DESCRIPTORES: cuidado del niño; enfermería materno-infantil

SATISFAÇÃO MATERNA COM O CUIDADO DA ENFERMEIRA MATERNO-INFANTIL EM CAMPECHE, MÉXICO

Objetivo: Avaliar e comparar a satisfação materna (global e áreas) com o cuidado da enfermeira materno-infantil (SMAEMI) e explorar a relação da SMAEMI com o tempo de espera e duração da visita, idade e educação da mãe. Métodos: Estudo descritivo-transversal com a participação de 213 mães. Grupo 1, n = 84 mães de crianças <1 ano e Grupo 2, n = 129 mães de crianças de 1 a 4 anos. Aplicou-se a Escala de Satisfação do Paciente. Resultados: O resultado global SMAEMI foi 76.26 e 79.21 para Grupos 1 e 2, respectivamente. Fatores associados não foram encontrados no Grupo 1. No Grupo 2, tempo de espera foi associado à SMAEMI na área técnico-profissional (F = 3.13; gl = 128; B = -0.21; p = 0.01). Conclusões: O fato de que os participantes neste estudo identificaram somente fatores associados à SMAEMI na área técnico-profissional pode indicar que o cuidado está focado em procedimentos técnicos. Fatores associados à SMAEMI não foram identificados no Grupo 1, pelo que recomenda-se explorar as expectativas e percepções das mães com relação ao cuidado.

DESCRIPTORES: cuidado da criança; enfermagem materno-infantil

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INTRODUCTION

One indicator of healthcare quality is patient satisfaction, also denominated consumer satisfaction or client satisfaction. Several studies have considered patient satisfaction as a predictor of treatment compliance, on-going use of healthcare services, recommending healthcare services to others⁽¹⁾, and a valuable feedback to evaluate health programs⁽²⁾.

At present, there is no consensus regarding what the concept of patient satisfaction encompasses. Nevertheless, an early definition of patient satisfaction in outpatient settings with nursing care defines patient satisfaction as an attitude reflecting the extent of congruence between what patients expect and their perception of the care they received⁽³⁾.

Regarding pediatric preventive care in the U.S. and Canada, the main aim of pediatric preventive care, identified as well-child care, well-baby care, health supervision and periodic health care, is to maintain health and prevent diseases. The basic unit of well-child care is the health supervision visit, which can be performed by physicians or nurses. The contents of each visit are infant age-specific, and each visit can be divided into three components: a) detection; b) health promotion and disease prevention, and c) patient handling and follow-up⁽⁴⁾.

In Mexico, maternal-infant nurse (MIN) at the Mexican Social Security Institute (IMSS) deliver health promotion and supervisory care to the pediatric population aged <5 years, considering the following aspects: vaccination surveillance; nutritional surveillance; identification of factors involved in a poor prognosis; clinic evaluation and classification; adequate treatment; maternal training on identification of warning signs, general patient care at home, and stimulating healthcare and treatment in well-child care to check the child's growth and development. The following must be registered at each visit: age; weight; height, and performance of psychomotor-development evaluation.

Given the baby's rapid growth and development during the first year of life, visits to the MIN are scheduled every 2 months. Moreover, the MIN is responsible for providing nutritional and weaning education related to exclusive breastfeeding during the first 4 months. If complementary feeding is required after this age, the MIN provides

commercial infant-formula donations (30 cans) during scheduled visits until the age of 12 months. After the first year of life and up to the age of 4 years, visits to the MIN are scheduled every 6 months.

A literature review showed that there are several factors (independent variables) associated with patient satisfaction (dependent variable), including the following: a) wait time; b) length of visit⁽⁵⁾; c) age of patient, and d) educational level of patient⁽⁶⁾. Wait time comprises a factor of service access⁽²⁾. A study conducted at public and private hospitals identified that one half (42.54%) or 870 respondents felt that they had not waited for services. The majority of individuals who sought care at private hospitals experienced less wait time than those at public hospitals⁽⁷⁾.

Another study assessing parental satisfaction with healthcare for young children in a sample of 2,068 participants that employed telephone interviews found that perceiving the visit length as short was a factor associated with low satisfaction⁽⁸⁾. At the IMSS, duration of well-child care visit is 10 min; it was usually the mother who attended the visit to the MIN with her children.

Other factors that have been explored as associated with parental satisfaction with the healthcare their children receive include parental age and parental education. One study identified that satisfaction is lower for children whose mothers are <20 years of age (odds ratio [OR], 0.30; 95% confidence interval [95% CI], 0.15–0.62) than for children with an older mother; maternal education is not associated with any satisfaction measurement⁽⁹⁾.

One important dimension of patient management that lacks well-child care-related satisfaction measurements, according to literature in the U.S., is that there is no instrument to assess satisfaction levels associated with parents' perspective on preventive healthcare for children aged <3 years. Measuring instruments for the parents' satisfaction were designed to assess parental satisfaction with neonatal intensive care, for parents of children with special-needs care, parental perceptions of pediatric in-patient quality of care, and pediatric familial satisfaction^(1,9-11).

Given that the previously mentioned instruments are not applied in outpatient settings, we consider that the Patient Satisfaction Scale (PSS) can

be used to evaluate maternal satisfaction with maternal-infant nursing care (MSMINC) (dependent variable). This global scale consists of three subscales, including technical-professional, educational relationship, and trusting relationship⁽³⁾.

The IMSS envisions the delivery of healthcare at a high level of patient satisfaction. To date, few studies have evaluated the MSMINC. Therefore, we carried out this study with the following objectives: 1) To evaluate and compare the MSMINC (global and areas) in two Mexican maternal groups (mothers of children <1 year of age, and mothers of children 1–4 years of age) at an IMSS Family Medicine Unit in the Mexican state of Campeche, and 2) to explore the relationship of certain factors with the MSMINC (global and areas).

METHODS

Study design and sample

Cross-sectional descriptive study. The convenience sample included 213 volunteer and unrelated mothers who together with their children attended well-child care visits to an MIN at a Family Medicine Unit in the southeastern Mexican state of Campeche from August to October, 2006.

Given the baby's rapid growth and development during the first year of life, visits to the MIN are scheduled every 2 months. Moreover, the MIN is responsible for providing nutritional and weaning education related with exclusive breastfeeding during the first 4 months. If complementary feeding is required after this age, the MIN provides commercial infant formula donations (30 cans) during scheduled visits until the age of 12 months. After the first year of life and up to the age of 4 years, visits to the MIN are scheduled every 6 months. In accordance with these criteria, the sample was classified into two groups: Group 1, mothers of children aged <1 year ($n = 84$), and Group 2, composed of mothers of children between 1–4 years of age ($n = 129$).

Inclusion criteria comprised mothers having attended the visit to the MIN, and that mothers have at least 6th-grade education. No mother refused to participate, and all questionnaires were applied by the same researcher. Mothers were

approached when they left the MIN's office. When she indicated that she was the child's mother, she received explanations on the research objectives and was invited to participate in the study voluntarily by means of written informed consent. Next, the mother was taken to another office away from the MIN area, where she were asked to answer the study instrument. No economic compensation was provided to the mothers for their participation in the study. This study was carried out in line with ethical guidelines proposed in the General Health Law for Health Research of Mexico.

Measurements

The PSS (dependent variable) consisted of 25 items that evaluate patient satisfaction with nursing care in ambulatory settings. It is a self-applied instrument with three subscales: a) Technical-professional area (seven items) related with the functions of instrumental nursing care); b) educational relationship area (six items), about information exchange between mothers and nurses, and c) trusting relationship area (with 12 items), including verbal and non-verbal communication measurements. The reliability coefficient reported was 0.912 and the author of the PPS does not provide reference values for classifying satisfaction scores at the different levels⁽³⁾.

The instrument employs a 1–5 Likert scale with 10 negatively directed items that were recoded for statistical analysis (Social Research Methods, 2008). In addition, the questionnaire included four independent variables: wait time and length of visit as perceived by the mother, maternal age and maternal education.

Analysis

Data were analyzed using SPSS V12.0 software. First, descriptive statistics of independent variables was performed for Groups 1 and 2. Second, we determined MSMINC [values were transformed into a ratio scale (0–100)] for global and subscales. Third, we compared means and variances of MSMINC (global and areas) for Groups 1 and 2, using the Student *t* and Levene tests. And fourth, in order to explore the maternal satisfaction relationship (global and areas) with four

independent variables (wait time and length of visit as perceived by the mother, maternal age, and maternal education), we performed multiple linear regression analysis for Groups 1 and 2. A *p* value of <0.05 was considered significant.

RESULTS

Most mothers in Group 1 were married (85.70%) and were homemakers (61.90%). The average age of their children was 8.94 ± 22.35 months. The majority of Group 2 mothers were also married (91.50%) and homemakers (65.90%), while the average age of their children was 24.04 ± 9.63 months.

Table 1 presents the descriptive statistics of independent variables. In Group 1 mothers, maximum wait time was 90 min and 5 min was the minimum length of the visit; in Group 2 mothers, maximum wait time was 35 min and minimum length of the visit was 5 min.

Table 2 shows the descriptive statistics of MSMINC global and areas. For Group 1, average maternal global satisfaction was 76.26 and for Group

2, average maternal satisfaction was 79.21. When Groups 1 and 2 were compared by means of the Student *t* test, a significant difference among averages was found in the areas of technical-professional, trusting relationship and global satisfaction. On the other hand, when the two groups were compared with the Levene test, no significant differences among variances were found.

Table 1 - Descriptive statistics of independent variables in both groups of mothers

Mothers	Independent variables	Mean	SD	Value	
				Minimum	Maximum
Group 1	Wait time (min)	20.51	18.05	3	90
	Length of visit (min)	14.43	6.55	5	45
	Maternal age (years)	27.11	4.81	19	44
	Maternal education (years)	10.26	3.21	3	17
Group 2	Wait time (min)	12.52	5.43	5	35
	Length of visit (min)	13.81	5.43	5	35
	Maternal age (years)	28.52	4.02	17	39
	Maternal education (years)	9.86	2.60	5	35

SD, Standard deviation.

Table 2 - Comparison of maternal satisfaction with Maternal-infant nursing care (MSMINS) between the two groups of mothers

Maternal satisfaction	Group 1 Mean ± SD	Group 2 Mean ± SD	Student <i>t</i> test	<i>P</i> value	Levene test	<i>P</i> value
Technical-professional	80.74 ± 9.34	83.80 ± 8.67	-2.445	0.015	0.257	0.613
Educational relationship	75.99 ± 10.93	80.07 ± 10.53	-2.721	0.007	0.335	0.564
Trusting relationship	73.57 ± 9.41	75.83 ± 9.30	-1.727	0.086	0.123	0.726
Global satisfaction	76.26 ± 7.86	79.21 ± 7.75	-2.700	0.008	0.021	0.885

Group 1: Mothers of children <1 year of age; Group 2: mothers of children 1–4 years of age.
 SD, Standard deviation.

Table 3 illustrates the relationship of MSMINC with four independent variables. In Group 1, none of the four variables was associated with maternal satisfaction. On the other hand, in Group 2, only the model (technical-professional area)

exhibited a significant relationship ($r^2=0.063$; $p = 0.017$) with the four independent variables. The variable contributing to this model was wait time to be seen at their consultation ($\beta = -0.164$; $p = 0.021$).

Table 3 - Relationship of maternal satisfaction with the four co-variables by group

Mothers	Maternal satisfaction	df	<i>R</i> ²	<i>p</i> value
Group 1	Technical-professional	83	0.023	0.756
	Educational relationship	83	0.025	0.731
	Trusting relationship	83	0.045	0.454
	Global satisfaction	83	0.035	0.576
Group 2	Technical-professional*	128	0.092	0.017
	Educational relationship	128	0.033	0.373
	Trusting relationship	128	0.039	0.285
	Global satisfaction	83	0.035	0.576

* Technical-professional = 79.247 - 0.164X₁ - 0.029X₂ + 0.050X₃ + 0.566X₄.

Co-variables: X₁ = wait time in min, X₂ = length of visit in min, X₃ = maternal age, X₄ = maternal educational level.

DISCUSSION

The aims of this study were as follows: 1) To evaluate and compare the MSMINC (global and areas) in two Mexican maternal groups (mothers of children <1 year of age and mothers of children 1–4 years of age) at an IMSS Family Medicine Unit in the Mexican state of Campeche, and 2) to explore the relationship of MSMINC with wait time, length of visit, and maternal age and education.

With respect to the first aim of this study, maternal satisfaction was lower than the result reported in other studies carried out in the U.S. that evaluated maternal satisfaction in terms of healthcare for young children⁽⁸⁾ and parental satisfaction with early pediatric care and immunization of young children, and application of other surveys found maternal satisfaction within the range of 83.4–87.7, or found healthcare classified as excellent by the majority of mothers⁽¹²⁾ and that maternal satisfaction was higher for both groups of mothers in the technical-professional area in comparison with other areas. With respect to the second aim, we obtained significant findings only in Group 2 mothers in the technical-professional area and the variable that demonstrated contribution was wait time.

Comparison is difficult in terms of our findings with other results due to variations in scales employed in other studies, different domains covered by the different instruments, cultural differences⁽⁹⁻¹¹⁾ and variation in data collection methods⁽¹²⁾. However, other studies conducted in the U.S. can be mentioned, which evaluated maternal satisfaction with healthcare for young children and parental satisfaction with early pediatric care and immunization of young children. Application of other surveys found maternal satisfaction within the range of 83.4–87.7, or found healthcare classified as excellent by the majority of mothers⁽¹³⁾.

When Groups 1 and 2 were compared by means of the Student *t* test, a significant difference among averages was found in the technical-professional area, trusting relationship and global satisfaction; mean satisfaction was higher in the technical-professional area, and this finding might indicate that MIN care is oriented towards performing technical procedures.

These results are in agreement with the findings of other authors, who have reported that health practices are focused on the accomplishment

of procedures⁽¹⁴⁻¹⁵⁾, and not on educative queries and/or the establishment of a trusting relationship, which probably persuades mothers to assess only technical pediatric care aspects. In addition, according to the observations of 87 well-child care visits to MIN, the authors identified that MIN care is reduced to performing technical procedures, such as child-weight verification, measurement of height, chest and abdominal circumference, comparison of weight and height measurements with referential parameters, updating the vaccination form, and providing a prescription for infant formula (for children <1 year of age)⁽¹⁴⁾.

To explore the relationship of MSMINC with wait time, length of visit, and maternal age and education, only wait time demonstrated a contribution in MSMINC in Group 2 mothers in the technical-professional area. This finding was consistent with other studies that identified that parents of children with delayed care have lower global satisfaction⁽⁸⁾.

Nevertheless, we were unable to determine factors associated with MSMINC in Group 1 mothers, despite identification of a maximum 90-min wait time. In this regard, one can mention the findings of a study entitled *The Nursing Work Process in Care for Healthy Children at a Social Security Institution in Mexico*. In this study, conducted by means of qualitative interviews of Mexican mothers at an IMSS Family Medicine Unit, the authors reported that mothers of children aged 1–4 years identified well-child care as their being ensured that their child was growing and developing adequately. This was different from mothers of children <1 year of age, who referred their particular interest in visiting the MIN as receiving commercial infant-formula donations⁽¹⁴⁾. During the first year of the child's life, the MIN provides the mother with infant formula at the rate of six cans per programmed visit; this situation probably provides motivation to attend the well-child care visit more than that of receiving preventive care.

Therefore, we considered that other factors could be causing this situation: first, we considered that the main motivation to attend well-child care appointments with MIN in this group lies in the provision of an infant-formula donation; consequently, mothers did not perceive MIN care. Second, institutional factors like length of visit (10 min at this institution) was the situation indicated by MIN staff as a factor that prevented the establishment of an educational and trusting relationship⁽¹⁴⁾.

CONCLUSIONS

Information published with respect to parental satisfaction with the preventive healthcare received by their children is scarce. The results of the present study contribute to knowledge of the MSMINC at a Family Medicine Unit in the Mexican state of Campeche and explore the relationship of certain factors identified in the literature with the MSMINC.

In Group 2 mothers, wait time was associated with MSMINC in the technical-professional area. This factor is an indicator of patient healthcare access at public or private institutions. Because we were unable to identify MSMINC-associated factors in Group 1, it

is necessary to identify maternal expectations or perceptions of well-child care that permit Group 1 mothers to distinguish important maternal satisfaction domains.

In terms of study limitations and implications for future research, there are several of the former in this study, including that measurements of wait time and length of visit were carried out according to maternal perceptions.

MSMINC was evaluated by PSS⁽³⁾. This instrument may be considered as outdated; moreover, the original PSS was designed to evaluate patient satisfaction with nursing care in outpatient settings.

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