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ORIGINAL ARTICLE

Factors affecting parents' satisfaction with pediatric wards

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Abstract

Aim: To explore the relationship of parental satisfaction with sociodemographic variables and to identify the possible determinants in pediatric and surgical wards of two public pediatric hospitals in Greece.

Methods: The validated Swedish Pyramid Questionnaire that measures parental satisfaction with the quality of care was used. A convenience sample of 352 parents (response rate: 88%) was collected from two major pediatric public hospitals in Athens, Greece, from February to April, 2016. The satisfaction questions focused on eight domains: information on illness, information on routines, accessibility, medical treatment, care processes, staff attitudes, parental participation, and the staff work environment.

Results: The parents of the hospitalized children were highly satisfied with the behavior of the healthcare providers and the medical and nursing care that was provided, but they were less satisfied with accessibility in the hospital. The marital status and child's length of stay in the hospital seemed to affect the most dimensions of parental satisfaction, with the married parents whose child's length of stay was short expressing higher levels of satisfaction.

Conclusion: Healthcare providers' approaches should be modified for parental satisfaction to be improved and parents' sociodemographics while providing health care. Nurses should enhance the quality of nursing care.

Key words: factors, parental satisfaction, pediatric care, quality care.

INTRODUCTION

The quality of care should be at the heart of modern healthcare services, focusing on patients' needs. Healthcare facilities are interested in maintaining and increasing the levels of patients' satisfaction in order to remain competitive in the healthcare market (Fry-Revere, 2007). Nowadays, patients' satisfaction has become an accepted indicator of quality of care (Garratt, Bjertnæs, & Barlinn, 2007; Matziou *et al.*, 2011). Methods that measure patients' satisfaction are not well applied in certain populations, such as children, who have difficulties expressing their views directly (Williams, Pattison, Mariathas, Lazar, & Rashied, 2011; Ygge & Arnetz, 2004). In contrast, a quality assessment of parental satisfaction with service provision is particularly challenging and rarely undertaken (Tsironi & Koulierakis, 2017; Hong, Murphy, & Connolly, 2008; Latour, Van Goudoever, & Hazelzet, 2008; Tsironi *et al.*, 2012; Williams *et al.*, 2011; Ygge & Arnetz, 2001). Parental satisfaction has been used successfully to measure quality for pediatric patients, as it is closely linked to the adequacy of children's treatment and staff performance in pediatric practice (Conner & Nelson, 1999; Matziou *et al.*).

A premise of a psychosocial theory strongly suggests that parents' differences influence their attitudes (Liu & Wang, 2007). The underlying premise is that persons differ in their orientation towards care because of their broader social and cultural orientations. Also, attitudes are moderated by demographic, situational, environmental, and psychosocial factors (Liu & Wang). Therefore, parents with diverse backgrounds could have

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different perceptions and expectations for care (Conner & Nelson, 1999).

A thorough review of the literature revealed a lack of studies that have examined a broader perspective of parents' views on the quality of pediatric health care. Previous studies of pediatric care have been focused on certain parameters, such as emergency care (Spahr, Flugstad, & Brousseau, 2006), intensive pediatric care (Latour *et al.*, 2009; Latour, Van Goudoever, & Hazelzet, 2008), neonatal intensive care (Mitchell- Dicenso *et al.*, 1996; Tsironi *et al.*, 2012), as well as pain management (Hong *et al.*, 2008) or parental involvement in the care of their child (Power & Franck, 2008).

The aim of this study was to explore parental satisfaction, as expressed through parents' perceptions regarding the quality of care that was provided in the two public pediatric hospitals in Greece, and to identify the possible factors affecting satisfaction. When instruments for measuring parental satisfaction are used, the dominant background factors should be includedbecause of the different characteristics in the samples being studied, as otherwise it could lead to discrepancies.

METHODS

Settings and participants

The current cross-sectional study took place in pediatric and surgical wards of the two major public pediatric hospitals in Athens, Greece. These wards were chosen as a recruitment field because, although essentially different, they both accept patients with a wide range of clinical conditions, without being so specialized like intensive care units or oncological wards. The hospitals in the study offer specialized primary, secondary, and tertiary care for children <14 years old. In 2015, the capacity of the pediatric and surgical wards in hospital A was 365 beds, with 18,046 admissions, 4322 surgical procedures, and 99,508 outpatient visits taking place. For hospital B, the capacity of the pediatric and surgical wards was 167 beds, with 6425 admissions, 2732 surgical procedures, and 79,947 outpatient visits taking place.

A pre-analysis power calculation gave the study >84% power, $\alpha = 0.05$, with a sample size of 352. Thus, a convenience sample of 352 parents, whose children were hospitalized in those two hospitals, were included in the study. Initially, 400 questionnaires were delivered, resulting in an adequate response rate of 88% (Maltby, Williams, McGarry, & Day, 2015). For a parent to participate in the study, the following inclusion criteria were applied: the parents should be the child's major companion; the children's age should be >30 days; hospitalization of the child should have lasted at least 3 days; the chosen wards should be the pediatric or the surgical ones; and the parents should be familiar with the Greek language, at least at a basic level.

Data collection lasted from February to April, 2016. The questionnaires were delivered to the parents during their stay at the hospital (at least 3 days after their child's admission). The parents of the children who met the inclusion criteria and accepted to participate in the study were informed by the major researcher (T.S.) about the purpose and the importance of their participation. Then, they signed the informed consent form, received the questionnaires with a blank envelope, filled them out, put them in the envelope, and sealed it. The time to complete the questionnaires was ~20–25 min. During filling out the questionnaire, the researcher was available for clarifications, if required. Finally, the researcher collected the sealed envelopes with the completed questionnaires. Both the questionnaire and the envelope did not have a question or a distinctive sign leading to the identification of the participants. In any case, the anonymity of the participants was ensured.

Instrument

The Greek version (Matziou *et al.*, 2011) of the Swedish Pyramid Questionnaire (Quality of Patient Care Questionnaire – Parents Version) (Ygge & Arnetz, 2001) was used, after permission was granted by the authors. This particular questionnaire is considered to be the most extensively validated tool and suited the purpose of the study, as it measures the quality of care from the parents' perspective. The tool consists of 63 questions of forced choice replies, including demographic information, parental judgment of the child's illness severity, anxiety regarding the child's condition, and a Visual Analog Scale score to quantify overall satisfaction, counting from 1 ("very negative") to 10 ("very positive"). The remaining questions focus on eight quality domains: *information on illness and routines* refers to whether the parents have received sufficient information on their child's illness, examinations to be done, results of the tests, ward routines, whom they should direct their questions to and who – the physician or the nurse – is responsible for their child's care. The *accessibility* questions refer to the experienced difficulties in getting through to the hospital's telephone switchboard or contacting the child's physician or nurse by phone. The

medical treatment domain contains questions on whether the parents think that their child has received satisfactory pain treatment within a reasonable period of time and whether they feel confident of the staff members' skills. The *caring processes* questions are related to the amount of time that staff members spend with the parents and child, the communication between the staff members and the parents or child, and the staff members' support for the parental and child's needs. The *staff attitudes* domain refers to whether parents or the child were treated kindly or respectfully by the staff members or if they were welcome in the ward. The *participation* domain contains questions on the parents' opportunity to ask questions about their child's illness or to participate in discussions concerning the child's medical exams and treatment goals. Finally, the *staff work environment* domain includes questions on the working climate among the staff members, stress at work, workload, engagement and collaboration, care efficiency, and staff members' attitudes towards their job. The parents were asked to rate the items on a 4-point Likert-type scale, ranging from "yes, to a great degree" to "no, not at all." Mean values were calculated for each domain, as well as for the overall level of satisfaction, and then they were converted to a percentage, representing the maximal achievable domain score, according to the instructions of Ygge & Arnetz. The values for each domain and the total satisfaction range from 0% to 100%.

The instrument that was used in the current study showed a satisfactory internal consistency, with the Cronbach's alphas for the domains ranging from 0.67 to 0.85 (overall scale: 0.93). These figures are similar to those that were reported by Ygge and Arnetz (2001) for the original Swedish Pyramid Questionnaire (0.62–0.86) and Matziou *et al.* (2011) for the translated Greek version (0.75–0.96).

Analysis

Descriptive statistical techniques were used to estimate the frequencies, percentages, means, and standard deviations (SDs) for the sociodemographic variables. The Student's *t*-test and the ANOVA were used to compare the means. For the comparison of the proportions, the chi-squared and Fisher's exact test were used. In the univariate analysis, the relationships between selected sociodemographic variables and the eight satisfaction dimensions were examined. Finally, a stepwise multiple regression analysis was conducted in order to identify the independent factors that were associated with parental satisfaction with care. In the multivariate analysis, the standardized regression coefficient and standard errors were calculated. Significance testing was bilateral at the <0.05 level. There were no missing value in the parent's questionnaire. The data analysis was carried out by using the statistical package, IBM SPSS v. 19 (IBM Corporation, Armonk, NY, USA).

Ethical considerations

This study was approved by the ethical review board at the second author's institution (No. 5054/16.04.2015). Subsequently, permission for conducting the study was granted by the scientific councils of both hospitals. All the parents were orally informed about the aims of the study and their right to withdraw from the study at any time. Those who accepted to participate signed a consent form.

RESULTS

The parents' mean age was 36.5 years (SD = 7.3). Most of the participants were women (66.8%) and were married (88.6%). Most of the parents (88.1%) were Greek, having completed a secondary education (39.2%) and were working in the private sector (32.1%).

Focusing on the demographic characteristics of the hospitalized children in both hospitals, 34.7% of them were aged 2–6 years and 53.4% were boys. Most of them (72.2%) were hospitalized in the pediatric wards for 3–7 days (67.9%) and almost half of them (44.6%) had been admitted to the particular hospital for the first time.

There was no statistically significant difference between the pediatric and surgical wards in any of the parents' or children's demographic characteristics, except the child's age. More specifically, there were significantly more children who were aged 1 month – 1 year who were hospitalized in the pediatric wards ($\chi^2 = 16.70$, $P = 0.001$).

Overall, almost half of the parents (49.1%) thought that their child was quite sick, while 41.2% worried quite a bit about their child's illness and its complications.

Overall parental satisfaction was high (76.8%, SD = 14.3%). The satisfaction scores for all eight dimensions ranged from 39.5% (SD = 26.5%) to 81.9% (SD = 17.4%). More specifically, the highest satisfaction was related to "staff attitudes" (81.9%, SD = 17.4%), "medical treatment" (78.2%, SD = 18.1%), and "overall satisfaction" (76.8%, SD = 14.3%).

"Information on illness" scored 71.9% (SD = 21.9%), "staff work environment" scored 67.2% (SD = 11.8%), "care processes" scored 61.4% (SD = 18.2%), "parental participation" scored 52.3% (SD = 17.6, and "information on routines" scored 50.3% (SD = 22.4%). The lowest level of satisfaction related to "accessibility" in the hospital (39.5%, SD = 26.5%).

The effect of the previously mentioned demographic variables on the satisfaction scores also was studied in a univariate (Table 1) and multivariate analysis. The descriptive statistics of the variables that were involved in the multivariate analysis, as well as the results of the analysis, are presented in Tables 2 and 3.

In the univariate analysis, marital status seemed to be related to a number of domains, such as "staff attitudes" ($P < 0.01$), "medical treatment" ($P = 0.002$), "overall satisfaction" ($P = 0.013$), "information on the child's illness" ($P = 0.001$), "parental participation" ($P < 0.001$), and "accessibility" ($P < 0.001$), with married couples being more satisfied. In the multivariate analysis, marital status appeared to be statistically related to the same domains as in the univariate model; that is, "staff attitudes" ($P = 0.012$), "medical treatment" ($P = 0.043$), "overall satisfaction" ($P = 0.013$), "information on the child's illness" ($P = 0.002$), "parental participation" ($P = 0.022$), and "accessibility" ($P < 0.001$).

In the univariate model, the length of the child's stay was correlated with certain domains, such as "accessibility" ($P = 0.012$), "medical treatment" ($P = 0.026$), and "staff attitudes" ($P = 0.002$). It was shown that for a hospital length of stay of <7 days, the parents seemed to be more satisfied. In the multivariate analysis, the length of stay was statistically correlated to the same domains, such as "staff attitudes" ($P = 0.015$), "care processes" ($P = 0.017$), and "accessibility" ($P = 0.007$), leaving apart the domain of "medical treatment."

In both the univariate and the multivariate analyses, it was noticed that the parent's sex was statistically correlated only with the domain "staff work environment" ($P = 0.01$ and $P = 0.008$, respectively). Men appeared to express higher satisfaction than did the women.

Only in the univariate model did the parents' educational level correlate with the domain "parental participation" ($P < 0.01$), with highly educated persons expressing higher levels of satisfaction.

The type of ward that the child was hospitalized in was correlated to the domain "staff work environment" ($P = 0.011$). Those parents whose child was hospitalized in a surgical ward appeared to be more satisfied.

The univariate analysis revealed that the frequency of admissions to the same hospital appeared to be related to the domain, "medical treatment" ($P = 0.011$). The parents of those children who were admitted to the same hospital occasionally in the past appeared to be more satisfied. The same results occurred as well in the multivariate analysis for the domain "medical treatment," with $P = 0.028$.

The univariate analysis revealed that the child's age was correlated with the domains, "information on the child's illness" ($P = 0.015$) and "information on routines" ($P = 0.009$). More specifically, the parents of the children who were aged from 7 to 14 years old expressed higher levels of satisfaction. Nevertheless, in the multivariate analysis, the child's age was only correlated with the domain "information on the child's illness" ($P = 0.015$).

In conducting the univariate analysis, it was found that the parents who were feeling worried about their child's illness and its complications seemed to be correlated statistically to the domains of "medical treatment" ($P = 0.004$) and "overall satisfaction" ($P < 0.001$). Those parents who felt less worried about their child's state of health and its complications appeared to be more satisfied. However, in the multivariate model, no statistical correlation appeared.

DISCUSSION

This study revealed that married couples whose child was admitted to hospital appeared to be more satisfied in most of the domains. This finding runs contrary to Quintana's (2006) study but seems to agree with the study by Phi *et al.* (2002). A possible explanation of this finding could be the fact that the single parents of hospitalized children could be treated with prejudice by the health staff or they themselves probably feel strange regarding their own marital status, thus expressing lower levels of satisfaction.

Moreover, it was revealed that the parents were more satisfied if the length of stay in hospital was <7 days. This finding seems to be in line with the findings of other studies, which expressed that a shorter length of stay in hospital leads to higher parental satisfaction (Kuosmanen *et al.*, 2006; Phi *et al.*, 2002; Quintana *et al.*,2006). This finding might be indicative of lower demands and thus the expression of higher levels of satisfaction.

Additionally, men appeared to express higher satisfaction levels than did women. This is in line with other

Table 1 Univariate analysis by the relevant variables

	Parental satisfaction questionnaire domains								
Variable	Information on illness Mean (SD)	Information on routines Mean (SD)	Accessibility Mean (SD)	Medical treatment Mean (SD)	Care processes Mean (SD)	Staff attitudes Mean (SD)	Parental participation Mean (SD)	Staff work environment Mean (SD)	Overall satisfaction Mean (SD)
Parent's sex									
Female	71.9 (22.5)	50.6 (22.0)	60.0 (26.3)	77.4 (18.3)	62.2 (1(7.5)	82.5 (1(7.0)	52.2 (1(7.7)	66.1 (1(2.0)	76.08 (14.3)
Male	71.9 (20.9)	49.6 (23.3)	61.6 (27.0)	79.8 (17.5)	59.8 (1(9.6)	80.7 (1(8.2)	52.7 (1(8.1)	69.5 (1(1.0)	76.8 (1(4.2)
P-value	0.992	0.685	0.575	0.241	0.2404	0.3605	0.7808	**0.010**	0.9903
Married									
No	61.1 (25.7)	43.8 (22.8)	44.7 (28.0)	70.0 (19.8)	54.6 (21.5)	72.4 (19.6)	41.5 (20.1)	66.3 (8.7)	71.5 (16.6)
Yes	73.3 (21.1)	51.1 (22.2)	62.5 (25.6)	79.3 (17.6)	62.3 (17.6)	83.1 (16.7)	53.7 (17.1)	67.3 (12.1)	77.4 (13.8)
P-value	**0.001**	**0.050**	**<0.001**	**0.002**	**0.011**	**<0.001**	**<0.001**	0.613	**0.013**
Educational level									
Basic education/ primary studies	71.3 (24.0)	48.8 (21.6)	63.0 (24.9)	77.5 (17.2)	58.5 (17.8)	80.6 (17.4)	44.2 (19.2)	67.3 (12.1)	78.6 (16.2)
Higher/secondary education	72.1 (23.2)	52.5 (24.1)	60.5 (27.9)	78.0 (19.6)	63.5 (18.1)	82.6 (17.9)	51.3 (16.7)	68.3 (12.0)	77.2 (15.4)
University/MSc/PhD	146.8 (20.7)	98.8 (20. 5)	120.9 (26.5)	159.7 (31.8)	119.9 (18.2)	165.1 (16.5)	114.4 (17.3)	133.5 (11.4)	150.4 (12.3)
P-value	0.468†	0.422	0.733†	0.501	0.213†	0.581†	**<0.001**†	0.269†	0.447†
Ward									
Pediatric	70.8 (21.8)	50.9 (22.8)	60.8 (27.2)	78.0 (18.3)	61.8 (17.9)	82.6 (17.3)	51.5 (17.7)	66.2 (12.0)	76.9 (15.0)
Surgical	74.7 (22.1)	48.6 (21.3)	59.8 (24.7)	78.9 (17.6)	60.4 (19.0)	80.1 (17.5)	54.4 (18.1)	69.7 (10.6)	76.4 (12.3)
P-value	0.136	0.399	0.738	0.667	0.515	0.220	0.175	**0.011**	0.786
LOS (days)									
3–7	72.8 (20.8)	51.5 (21.8)	62.9 (26.7)	80.0 (17.6)	63.9 (17.1)	84.1 (15.9)	52.6 (16.7)	67.2 (11.1)	77.9 (13.6)
8–14	72.7 (20.2)	48.9 (21.0)	59.1 (24.2)	75.4 (15.4)	55.8 (18.2)	77.1 (18.8)	55.2 (19.7)	67.8 (10.9)	74.3 (12.8)
>14	66.7 (28.2)	45.8 (26.4)	50.9 (26.3)	73.5 (22.0)	56.9 (21.3)	77.3 (20.2)	47.5 (20.1)	66.1 (15.5)	74.2 (18.1)
P-value	0.190†	0.229†	**0.012**†	**0.026**†	0.056†	**0.002**†	0.070†	0.724†	0.075†
Child's age									
1 month – 1 year	70.2 (21.6)	49.7 (22.5)	63.2 (25.8)	77.0 (18.8)	58.7 (17.8)	84.1 (15.9)	53.3 (18.1)	66.2 (12.7)	76.9 (14.3)
2–6 years	68.9 (22.4)	46.2 (23.1)	58.5 (25.0)	77.5 (16.6)	61.1 (18.6)	81.1 (16.9)	50.2 (18.6)	66.3 (10.7)	75.9 (13.3)
7–16 years	76.7 (21.3)	55.1 (20.8)	60.0 (28.5)	80.3 (18.8)	64.5 (17.9)	84.3 (16.9)	53.6 (16.7)	69.1 (11.7)	77.6 (15.1)
P-value	**0.015**†	**0.009**†	0.379†	0.329†	0.056†	0.176†	0.260†	0.092†	0.666†
Times visited at this hospital									
The first time	70.4 (21.4)	49.3 (21.8)	60.7 (27.8)	78.6 (18.0)	62.1 (17.9)	82.1 (17.4)	52.5 (18.7)	67.5 (11.8)	77.2 (14.0)
Occasionally in the past	72.2 (23.2)	49.3 (23.4)	60.5 (24.1)	80.5 (16.3)	614.0 (17.1)	82.8 (16.4)	53.0 (16.9)	67.3 (11.5)	76.9 (13.2)
Many times in the past	75.0 (20.5)	54.9 (21.2)	59.9 (28.3)	72.3 (20.5)	59.8 (21.3)	79.2 (19.3)	50.4 (17.7)	66.1 (12.4)	75.2 (17.0)

Table 1 Continued

Variable	Parental satisfaction questionnaire domains								Overall satisfaction Mean (SD)
	Information on illness Mean (SD)	Information on routines Mean (SD)	Accessibility Mean (SD)	Medical treatment Mean (SD)	Care processes Mean (SD)	Staff attitudes Mean (SD)	Parental participation Mean (SD)	Staff work environment Mean (SD)	
P-value	0.369†	0.203†	0.980†	**0.011**†	0.704†	0.382†	0.635†	0.730†	0.653
Worry about the child's illness and its complications									
Not at all/not especially	73.5 (25.9)	51.4 (23.8)	62.2 (26.3)	84.2 (15.9)	64.7 (15.7)	85.3 (15.8)	52.9 (19.3)	69.1 (12.7)	83.1 (11.8)
Somewhat	71.7 (19.9)	51.3 (21.1)	61.2 (25.7)	78.4 (17.5)	62.0 (18.1)	82.0 (16.7)	53.0 (16.0)	67.1 (11.5)	76.3 (13.8)
To a great degree	71.4 (22.2)	48.7 (23.0)	59.0 (27.4)	75.3 (18.9)	59.4 (19.2)	80.2 (18.5)	51.4 (19.0)	66.4 (11.6)	74.3 (14.9)
P-value	0.803	0.541†	0.658†	**0.004**†	0.132†	0.139†	0.722†	0.314†	**<0.001**†

$P < 0.05$
† ANOVA. The *P*-values are marked in bold only in cases where the *P*-value is statistically significant and shows how each variable affects the specific domains. LOS, length of stay; SD, standard deviation.

Table 2 Descriptive statistics of the variables that were involved in the multivariate analysis

Variable	N	%
Parents' sex		
Female	235	66.8
Male	117	33.2
Family status		
Widowed	2	0.6
Unwed	5	1.4
Cohabiting	11	3.1
Divorced	22	6.3
Married	312	88.6
Child's age		
1 month – 1 year	115	32.7
2–6 years	122	34.7
7–11 years	72	20.5
12–16 years	43	12.2
Ward		
Pediatric	254	72.2
Surgical	98	27.8
LOS (days)		
3–7	239	67.9
8–14	63	17.9
15–22	19	5.4
>23	31	8.8
Admission frequency		
First time	157	44.6
Occasionally in the past	134	38.1
Many times in the past	61	17.3

LOS, length of stay.

studies, where men have less expectations from healthcare provision and are more easily satisfied, compared to women, who seem to be more demanding and less satisfied with the care that is provided to their child (Ahmad & Alasad, 2004; Phi *et al*., 2002; Quintana *et al*., 2006).

Another finding of this study was that those parents whose child was hospitalized in a surgical ward appeared to be more satisfied. In specialized wards like surgical ones, a limited number of sick children is admitted and therefore the health staff members work without having so much stress and with a lower workload. Therefore, more time could be available for the child's and parents' needs, leading to higher levels of satisfaction. This seems to correspond with a similar finding of Ahmad and Alasad's (2004) study: the parents scored relatively high on their experiences of nursing care. Ahmad and Alasad's study showed that most of the participants had positive experiences regarding the time that the nurses spent with them, as well as the respect that the nurses showed to the patients' relatives and friends.

Table 3 Multivariate analysis by the relevant variables

	Parental satisfaction questionnaire domains															
	Information on illness		Medical treatment		Parental participation		Accessibility		Staff attitudes		Staff work environment		Care processes		Overall satisfaction	
Variable	$\beta^{\ddagger}$	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
Married																
No	0.000	–	0.000	–	0.000	–	0.000	–	0.000	–	–	–	–	–	0.000	–
Yes	0.171***	3.73	0.108*	3.02	0.119*	2.830	0.207†	4.330	0.130*	2.830	–	–	–	–	0.132*	2.38
Child's age																
1 month – 1 year	0.000	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2–6 years	–0.042	2.77	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7–16 years	0.147*	2.81	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Frequency of admissions																
Many times in the past	–	–	0.000	–	–	–	–	–	–	–	–	–	–	–	–	–
First time	–	–	0.116*	2.67	–	–	–	–	–	–	–	–	–	–	–	–
Occasionally in the past	–	–	0.162	2.74	–	–	–	–	–	–	–	–	–	–	–	–
Ward																
Pediatric	–	–	–	–	–	–	–	–	0.000	–	–	–	–	–	–	–
Surgical	–	–	–	–	–	–	–	–	0.138**	1.38	–	–	–	–	–	–
Parent's sex																
Female	–	–	–	–	–	–	–	–	0.000	–	–	–	–	–	–	–
Male	–	–	–	–	–	–	–	–	0.139**	1.31	–	–	–	–	–	–
LOS (days)																
3–7	–	–	–	–	0.000	–	0.000	–	–	–	–	–	0.000	–	–	–
8–14	–	–	–	–	–0.068	3.640	–0.125*	2.330	–	–	–	–	–0.123*	2.42	–	–
>14	–	–	–	–	–0.143**	4.000	–0.067	2.580	–	–	–	–	–0.058	2.70	–	–
	R^2 = 6.4%		R^2 = 7.1%		R^2 = 12%		R^2 = 5.9%		R^2 = 13.1%		R^2 = 3.2%		R^2 = 13.5%		R^2 = 1.5%	

*$P < 0.05$, **$P < 0.01$, and ***$P < 0.005$. †$P < 0.001$; ‡β, standardized regression coefficient (Beta) from the linear general model, after adjustment by all relevant variables. LOS, length of stay; SE, standard error.

Identifying the factors that enhance patients' experiences of nursing care is crucial as it assists nurses to provide better care.

In this study, the parents of the children who had been admitted occasionally to the same hospital in the past appeared to be more satisfied. This is contrary to previous reports of lower levels of satisfaction when a child is admitted occasionally or many times in the same hospital (Quintana *et al*., 2006; Ygge & Arnetz, 2001). Ygge and Arnetz's study showed that the parents whose child was admitted to the hospital occasionally or many times in the past expressed lower levels of satisfaction, as did Quintana *et al*. As this finding appears to run contrary to the current study, a possible explanation could be the fact that the parents who have visited the same hospital occasionally had previous experiences and were in a position to compare, having more realistic expectations and feeling more satisfied than the other parents who visited the hospital for the first time or many times in the past.

Finally, the parents of the children who were aged from 7 to 14 years old expressed higher levels of satisfaction. This is a novel finding, indicative of the fact that this group of parents seems to be in less stress as they have potentially visited the hospital in the past and they are familiar with the care processes being followed by the hospital. At the same time, they have less demands and more realistic expectations as they realize that their children, as they grow older, become more and more independent and can express their own needs.

This study indicated that the marital status, length of stay in the hospital, frequency of the child's admission, child's age, parent's sex, and the kind of ward that the child was hospitalized in affected the scores of certain domains in the satisfaction questionnaire. However, while interpreting the results, the following important limitations should be taken into consideration: the dimensions of the child's physical condition (diagnosis, severity, controllability) influence, to a great extent, parental satisfaction. In this study, the parents only were asked to estimate the physical condition of their child instead of collecting detailed information on the physical condition of their child. In the current study, a convenience sample of parents was used. Although the two hospitals from which the sample was drawn are the biggest in the country, the sample is not representative, either in terms of the parental characteristics or the children's conditions. Thus, the results should be interpreted with caution and no generalization should be made. It is unclear as to what extent these findings represent the parents' attitude and assessments in other public or private hospitals. Moreover, it should be mentioned that the questionnaire was asked to be filled in by the parents during their child's hospitalization. In that case, the parents' judgment could have been affected as a result of feelings of fear of receiving worse medical treatment if they expressed their real thoughts.

CONCLUSION

In summary, although sociodemographic variables previously have been studied individually, their study in the context of a multivariate model for the different domains of a validated satisfaction questionnaire using a large sample of parents is novel. These findings indicate that parents' sociodemographic characteristics, including marital status and the length of stay, are the most significant factors to affect parental satisfaction. Still, background factors always should be considered when evaluating parents' satisfaction.

In conclusion, it is of utmost importance to be able to define, measure, and evaluate the quality of health care that is provided in order to increase the levels of parent's satisfaction by enhancing the quality of pediatric care. Healthcare providers should take into consideration parents' sociodemographic characteristics while providing health care. Healthcare providers' approaches should be modified for parental satisfaction to be improved.

These findings provide an overall and generalized picture of the factors that affect parental satisfaction in pediatric wards. However, further studies, including larger datasets (national or international), are needed to verify them and improve the quality of pediatric healthcare provision.

Measuring healthcare quality can help healthcare managers to effectively set control mechanisms and initiate improvement programs. Healthcare providers can develop routine parental satisfaction surveys for motivating, shaping, and evaluating initiatives to provide better care and to monitor the impact of change in hospital improvement programs. Additionally, parents' perspectives can make valuable contributions to the interpersonal aspect of care, providing inputs into the implementation of training programs for the improvement of healthcare providers' knowledge and communication skills.

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DISCLOSURE

The author declares no conflict of interest.

AUTHOR CONTRIBUTIONS

S. T. was involved in the conception, design, data collection, and analysis of this study and critically reviewed the manuscript; G. K. was involved in the design of the study, revised the manuscript critically for important intellectual content, and supervised the whole study process. Both authors read and approved the final manuscript.

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