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Variables related to reduced satisfaction among users of emergency units

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Abstract

Information received by patients about the severity of their condition, the types of tests to be performed, and average waiting times at services are factors that influence their degree of satisfaction and, therefore, possible anger and/or aggressiveness. The main objective here is to explore the relationships between waiting time, patients' perceived satisfaction with the service, and other variables under study. We used a cross-sectional design to evaluate 320 hospital patients in the Region of Murcia (Spain). The results indicate that receiving information about their process, waiting time before seeing a doctor, the degree of satisfaction with the medical professional, and the resolution of the doubts are predictors of the degree of overall patient satisfaction with the clinical experience.

Keywords

User satisfaction, emergency unit, violence towards health workers, clinical experience.

Variables relacionadas con la reducción de la satisfacción de los usuarios de emergencias

Resumen

La información recibida por los pacientes sobre la gravedad de su condición, el tipo de pruebas a realizar o el tiempo promedio de espera en el servicio son factores que influyen en el grado de satisfacción. La incomodidad de los usuarios a veces puede conducir a la violencia hacia los trabajadores de salud, y esto, a su vez, a las consecuencias físicas y psicológicas comúnmente asociadas. Nuestro objetivo es explorar la relación entre el tiempo de espera, la satisfacción del paciente con el servicio y otras variables de interés. Se utilizó un diseño transversal para evaluar a 320 pacientes hospitalarios en la Región de Murcia (España). Los resultados indican que recibir información sobre su proceso, el tiempo de espera hasta la consulta, el grado de satisfacción con el profesional y la resolución de dudas son predictores del grado de satisfacción general del paciente con la experiencia clínica.

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Palabras clave

Satisfacción del usuario, unidad de emergencias, violencia hacia los trabajadores de la salud, experiencia clínica.

Variables relacionades amb la reducció de la satisfacció dels usuaris d'emergències

Resum

La informació rebuda pels pacients sobre la gravetat de la seva condició, el tipus de proves que cal realitzar o el temps mitjà d'espera en el servei són factors que tenen influència en el grau de satisfacció. De vegades, la incomoditat dels usuaris pot conduir a expressions de violència adreçades als treballadors de la salut, i això, al seu torn, pot comportar les conseqüències físiques i psicològiques que comunament hi estan associades. El nostre objectiu és explorar la relació entre el temps d'espera, la satisfacció del pacient amb el servei i altres variables d'interès. Així, es va utilitzar un disseny transversal per avaluar 320 pacients hospitalaris a la regió de Múrcia (Espanya). Els resultats indiquen que rebre informació sobre el procés, el temps d'espera fins a la consulta, el grau de satisfacció amb el professional i la resolució de dubtes són predictors del grau de satisfacció general del pacient amb l'experiència clínica.

Paraules clau

Satisfacció de l'usuari, unitat d'emergències, violència dirigida als treballadors de la salut, experiència clínica

INTRODUCTION

The World Health Organization (WHO, 2004) defines the concept of health urgency as: "the fortuitous appearance (unforeseen and unexpected), in any place or activity, of a health problem of varying cause and variable severity, which raises awareness of an imminent need for care on the part of the subject who suffers it or in his or her family". This definition shows that urgency is subjective, related to the patient's degree of suffering and need for health care, and, therefore, it is different from the concept of severity (Jiménez, 2006). Based on the severity level (Lamata, 1998), urgency is classified as: situations that do not require immediate healthcare and may be referred to primary care; non-vital or non-serious urgency, where urgent healthcare is needed but does not pose a life risk to the patient, and which may be resolved in primary care, and vital urgency, emergency, serious urgency or true urgency, where the patient's life is at risk if he or she does not receive immediate health care.

Misconceptions in the urgency assessment of the general public can lead to the misuse of emergency services caused by 'banal' consultations, overcrowding and, as a consequence, providing inappropriate care for the ill. To solve this problem, classification systems (triage) have been created, which prevent waiting times from becoming a risk and allow staff to prioritize by urgency at times of saturation (Garcés-Molina, 2017).

A number of triage systems have been proposed, including the Australian Triage Scale (ATS), the Canadian Emergency Department Triage and Acuity Scale (CTAS), the Manchester Triage System (MTS), and the Emergency Severity Index (ESI).

In Spain, the ESI triage system based on an algorithm that classifies patients into five levels of urgency or severity is employed, using as criteria the assessment of the level of urgency and the estimation of resource consumption. The levels are classified as follows, with urgency levels assigned a color: Red=Resuscitation, immediate attention; Orange=Emergency, medical care delay of up to 15 minutes; Yellow=Urgency, more than one resource, a maximum delay of 60 minutes; Green=Less urgent, one resource, a maximum delay of 120 minutes, and Blue=Not urgent, no resource, delay of up to 240 minutes (Hernández-Ruipérez et al., 2015).

It is well known that waiting for care can lead to distress or dissatisfaction in patients (Topacoglu et al., 2004). In addition to this, Byczkowski et al. (2013) stated that the most important factors that family members need in order to feel satisfied with the care provided in an emergency service are: to know the approximate length of the waiting time, pain relief for the patient, and good communication with nurses and doctors. Likewise, the information received by patients about the severity of their condition and the types of tests to be performed are factors that directly influence their degree of satisfaction and, therefore, their possible anger and/or aggressiveness (See & Catterson, 2017)

Generally speaking, there does not appear to be any consensus about the influence of users' sociodemographic variables (sex, age, nationality, marital status, level of studies, and employment) on their level of satisfaction. A review by Woodward, Berry and Bucci (2017) showed high variability in the results in this regard and remained far from consensus on these variables. Another review showed the same pattern of variability, and also found an influence of the information received by the patient on their condition, satisfaction with the care received from the medical professionals and its quality, and the severity of the urgency (Boudreaux & O'Hea, 2004).

In view of all the above, and taking into account that emergency units have suffered a decrease in the users' annual evaluation score, according to the opinions of 12,000 users collected by the Murcia Health Service (www.murciasalud.es), this study aims to identify the variables that influence patients' satisfaction with the clinical experience during their time in a hospital emergency unit. The main objective is to explore the relationships between waiting time, patients' perceived satisfaction with the service, and with the different healthcare professionals. In addition, we will explore the distribution within the sample of the different sociodemographic variables, the information received by the patient, their subjective perception of the degree of urgency, how they came to arrive at the service, and the treatment proposals, and their relationships with and/or their prediction of satisfaction with the service.

METHOD

Design

The design of this study is cross-sectional, analytical-descriptive.

Participants

The sample consisted of 320 patients who went to the Virgen de la Arrixaca University Hospital in the Autonomous Community of Murcia (southwest Spain), requiring healthcare in the period from 20 November 2018 to 4 January 2019. This hospital has 919 beds and attended to a total of 72,533 emergencies undergoing ESI triage throughout 2017. It serves an estimated annual population of 258,234 people and is the main hospital in the Region of Murcia.

Of the 320 respondents, 56.3% were women, with a mean age of 48.31years (*SD* = 19.391), and 59.1% were over 40 years old, with a total range of 16 to 75 years. Regarding nationality, 91.6% were Spaniards. Although 4.7% spoke a mother tongue other than Spanish, in all cases, they had an average/high understanding of Spanish (See Table 1).

Table 1. Sociodemographic and socio-occupational variables

Variable	N	%
Sex		
Male	140	43.8
Female	180	56.3
Age		
15-30 years	66	20.6
31-40 years	65	20.3
41-50 years	54	16.9
51-65 years	56	17.5
> 65 years	79	24.7
Nationality		
Spanish	293	91.6
Other	27	8.4
Language other than Spanish		
Yes	15	4.7
No	305	95.3
Understanding of Spanish		
High	315	98.4
Medium	5	1.6
Marital status		
Single	82	25.6
Married	187	58.4
Separated or divorced	31	9.7
Widowed	20	6.3
Educational level		
No basic studies	59	18.4
Primary education	73	22.8
Secondary education	144	45.0
Higher education or University studies	44	13.8
Work situation		
Active/Permanent contract	105	32.8
Active/Temporary contract	67	20.9
Unemployed	37	11.6
Occupational disability	1	0.3
Retired/pensioner	90	28.1
Student	20	6.3

Instruments

Data collection was carried out using an ad hoc protocol consisting of 33 items. This protocol was previously tested with a pilot group of 40 cases requesting healthcare from the emergency unit. The internal consistency was measured with Cronbach's alpha, α = .91. The protocol consisted of: sociodemographic variables (age, sex, nationality, mother tongue, marital status, level of studies, and employment), variables that explore patients' subjec-

tive perception of the process (subjective urgency, referral to emergency unit, form of arrival at the service, time elapsed from arrival until receiving clinical care, knowledge of diagnosis, treatment proposals, informed consent, resolution of doubts), variables that explore the degree of patient satisfaction (global and specific), variables about the level of triage and the medical staff's perception of severity with two questions: urgency level presented by the patient, ranging from 0 (not urgent) to 5 (extreme life risk).

Procedure

Patients were selected through simple random sampling of all the patients treated in the emergency unit during the above-mentioned time interval. Prior to the implementation of the protocol, the patients' consent was obtained after they had been informed of the nature and objectives of the investigation. The items were completed in all cases after the assignment of the triage color and having received the specialist doctor's care. The protocol could be completed in one of the following situations: after the medical consultation held in the box area, after leaving the box consultation, when returning to the waiting room, or when the patient is taken to the observation bed area. The surveys were conducted in the presence of an interviewer trained to resolve any patient's doubts that could arise during the process. The pre-established exclusion criteria were: pediatric patients (up to age 14), obstetrics and gynecology patients, patients with triage level 5 (not urgent), and patients with a language barrier. In addition, patients with severe impairment of their mental faculties or with suicidal behavior were excluded, given their possible cognitive impairment (Teismann et al., 2018; von Brachel, Teismann, Feider & Margraf, 2019). After the patient's questionnaire was completed, additional information was requested from the medical staff who attended to the patient, asking about the degree of urgency presented by the user, according to the professional. This variable is intended to 'objectify' this urgency and serve as a comparator with the user's subjective or perceived urgency.

The ethical considerations proposed by the American Psychological Association (APA, 2002, 2010) were taken into account when performing this study.

Data Analysis

Means and standard deviations were computed for each one of the variables included. We also analyzed all the outcomes seeking possible gender differences using the two-sample *t*-test ($p \leq .05$). To achieve the goal of this research, we first calculated a bivariate (Pearson) correlation to determine whether the independent variables correlated with each other. Subsequently, with the variables that had a statistically significant correlation ($p < .05$), we performed multistep linear regression analysis, adjusted for gender and age. To control for the effect of multicollinearity, we calculated the tolerance coefficients and the variance-inflation factor. Finally, an analysis of ROC curves was performed, selecting the Q1 and Q4 (low and high satisfaction) of the sample to calculate the cut-off points between waiting time and satisfaction.

RESULTS

Regarding the reason for the urgency perceived by the patient, the most common (40.3%) was pain, as the only symptom, followed by pain which affected the patient's general condition (38.1%). Regarding the degree of subjective urgency in relation to the reason for care, 95% perceived it as somewhat urgent or very urgent. Most patients came to the emergency unit by their own decision or as advised by their near social circle (81.6%). Regarding how they arrived, 64.1% came in a vehicle driven by relatives or by themselves (23.8%). The triage allocated to these patients was 9.1% not urgent, 52.2% less urgent, 35% urgent, and 3.8% emergency or life risk, whereas the assessment of urgency by medical staff was 8.8% not urgent, 28.1% less urgent, 32.8% urgent, 30.04% emergency or life risk.

When asked whether they had been informed about the diagnosis, 43.1% of the patients responded "Yes". Regarding treatment, only 2.2% claimed to have received various treatment proposals and to have been able to choose between them. Additional tests were applied to 89.7% of the patients, of whom 5.9% received "special" complementary tests (CT with/without contrast, MRI, etc.). Within these "special" complementary tests, 70.6% claimed to have given informed consent. Regarding this consent, 33.3% claimed to have asked questions about it, although no patient read the informed consent before signing it, and 33.3% read it only after signing (See Table 2).

Regarding the variables associated with the information received, 14.4% of the interviewees said they remembered the doctor's name versus 37.5% who did not remember it, and 48.1% reported that the doctor did not tell them. With regard to the information provided about their situation, understood as the severity of their urgency or the estimated waiting time to be attended to, either in triage, in the consultation room, or at any other time, 83.1% of patients said they were satisfied. Concerning their doubts, 46.6% stated that the doubts they raised were resolved compared to 5.9% who claimed that they were not resolved, and 47.5% who did not raise any doubts in the consultation. Of the patients who raised doubts, 81.5% expressed a good or very good level of satisfaction in reference to their resolution.

The average waiting time after triage until receiving care from the doctor was 48.59 minutes (SD = 30.33), classified according to triage in 91.21 minutes (SD = 21.52) for the Blue code, 59.43 minutes (SD = 24.83) for Green, 25.89 minutes (SD = 15.86) for Yellow, and 6.67 minutes (SD = 3.26) for Orange.

Table 2. Variables related to attending the emergency unit and urgency

Variable	N	%
You consider that the process for which you were attended to was		
A painful syndrome	129	40.3
Urgent, because it affected my general condition	63	19.7
Urgent because of the painful symptoms and severe implication of the general condition	122	38.1
Extreme life urgency (feeling of life risk)	6	1.9
Degree of urgency that you think your process has		
Not urgent	28	8.8
Somewhat urgent	90	28.1
Urgent	105	32.8
Very urgent	85	26.6
Life risk	12	3.8
Who sent you to the emergency unit?		
Emergency phones 061 or 112	13	4.1
Family doctor	46	14.4
Yourself	181	56.6
Your family members and or relatives	80	25
How did you get to the emergency unit?		
Ambulance	21	6.6
Vehicle driven by family members	205	64.1
Taxi	1	0.3
Vehicle driven by you	76	23.8
Bus	5	1.6
Walking	12	3.8
Triage color		
Blue	29	9.1
Green	167	52.2
Yellow	112	35
Orange	12	3.8
Real urgency of the process according to the medical professional who treated you		
Not urgent	28	8.8
Somewhat urgent	90	28.1
Urgent	105	32.8
Very urgent	85	26.6
Life risk	12	3.8
Extreme life risk	0	0
Do you know the diagnosis for which you have been treated?		
Yes	138	43.1
No	182	56.9
Were you offered various treatment options and did you choose between them?		
Yes	7	2.2
No	313	97.8
Have you had any additional tests?		
Yes	287	89.7
No	33	10.3
Have you had special complementary tests? (TC with/without contrast, MRI, etc.).		
Yes	17	5.3
No	301	94.7
If yes: Have you signed the informed consent?		
Yes	12	70.6
No	5	29.4
If yes: Did you ask any questions before you signed it?		
Yes	4	33.3
No	8	66.7
Did you read it, either before or after you signed it?		
Before signing	0	0
After signing	4	33.3
Unread	8	66.7

Table 3. Information received

Variable	N	%
Do you remember the name of the doctor who attended to you?		
Yes	46	14.4
No	120	37.5
He/she didn't say it	154	48.1
Do you think you've been informed about your situation?		
Yes	266	83.1
No	54	16.9
Were your doubts resolved?		
Yes	149	46.6
No	19	5.9
I didn't have any doubts	152	47.5
If yes: What is your degree of satisfaction?		
Very little	4	2.4
A little	15	8.9
Medium	5	3
Adequate/sufficient	7	4.2
Good	69	35.7
Very good	77	45.8

Table 4. Average waiting time

Variable	Mean	*SD*
Waiting time	48.59	30.33
Triage waiting time		
Blue	91.21	21.53
Green	59.43	24.83
Yellow	25.89	15.86
Orange	6.67	3.26

Table 5. Patient satisfaction with the emergency unit

Variable	N	%
Generally speaking, how do you rate your satisfaction with the time you spent in the emergency unit?		
Very bad	15	4.7
Bad	25	7.8
Regular	14	4.4
Adequate	38	11.9
Good	124	38.8
Very good	104	32.5
And your satisfaction with the care of the medical staff?		
Very bad	1	0.3
Bad	2	0.6
Regular	21	6.6
Adequate	22	6.9
Good	70	21.9
Very good	204	63.7
What about the care of the nursing personnel?		
Bad	-	-
Very bad	-	-
Regular	14	4.4
Adequate	33	10.3
Good	67	20.9
Very good	206	64.4
What about the care of the nursing assistants?		
Bad	-	-
Very bad	-	-
Regular	3	0.9
Adequate	41	12.8
Good	69	21.6
Very good	207	64.7
And of the administrative staff/porters/security personnel?		
Bad	-	-
Very bad	-	-
Regular	40	12.5
Adequate	72	22.5
Very good	205	64.1
And with the accessibility of the healthcare professional?		
Very bad	2	0.6
Bad	12	3.8
Regular	22	6.9
Adequate	28	8.8
Good	69	21.6
Very good	187	58.4

Overall patient satisfaction with the time spent in the emergency unit was good or very good (38.8% and 32.5%, respectively). Specifically, 63.7% were very satisfied with the doctors, 64.4% with the nursing staff, 64.7% with the nursing assistants, and 64.01% with other service staff. The degree of satisfaction regarding accessibility or ease of access to health workers was rated as very good by 58.4%.

Study of correlations showed that waiting time correlated negatively and significantly with general satisfaction and specifically with the different professionals (from r = -.404, p < .0001 to r = -.448, p < .0001), as well as with objective urgency (r = -.738, p < .0001). General satisfaction was positively and significantly related to the degree of satisfaction with the medical staff (r = .858, p < .0001), nursing personnel (r = .847, p < .0001), auxiliary nurses (r = .825, p < .0001), the rest of the emergency department personnel (r = .796, p < .0001), the accessibility or ease of access to emergency personnel (r = .849, p < .0001), and with the urgency assessment carried out by the medical staff (r = .436, p < .0001). On the other hand, there was a negative and significant relationship with the time elapsed until receiving medical care (r = -.586, p < .0001) and the information received by the patients regarding their process (r = -.858, p < .0001).

When analyzing the average waiting time as of which global satisfaction begins to decline and the sum of satisfaction with the other aspects (doctor, nurse, etc.), the results indicate that satisfaction drops as of 42-47 minutes waiting time (See Table 7).

Lastly, to explore which of these variables best explains the degree of overall patient satisfaction with the care received, a multiple linear regression analysis was performed. The extracted model ensures that the degree of satisfaction with the medical staff (0β = .32, p < .0001), receiving information about their process 0(β = -.51, p < .0001), waiting time until seeing a doctor (0β = -.26, p < .0001, and the resolution of doubts (0β = .05, p < .0001) are the variables that best predict satisfaction (0R^2 = .876), explaining up to 87.6% of the overall degree of patient satisfaction, F(319) = 555.43, p = .0001.

Table 6. Correlations between waiting time, satisfaction, and urgency

	WT	OG	SM	SN	SNA	SSP	A	SU	OS	I
WT										
OG	-.586**									
SM	-.429**	.858**								
SN	-.442**	.847**	.945**							
SNA	-.461**	.825**	.904**	.948**						
SSP	-.448**	.796**	.885**	.940**	.958**					
A	-.404**	.849**	.902**	.894**	.871**	.851**				
SU	-.015	-.041	-.115*	-.100	-.078	.074	-.090			
OS	-.738**	.436**	.367**	.355**	.379	.360**	.354**	.418**		
I	-.324**	.858**	.822**	.803**	.779**	.748**	.809**	-.230**	.236**	

* = p < .05, ** = p < .001, WT = Waiting Time, OG = Overall Satisfaction, SM = Satisfaction with Medical Staff, SN = Satisfaction with Nursing Personnel, SNA = Satisfaction with Nursing Assistants, SSP = Satisfaction with Service Personnel, A = Satisfaction with Accessibility, SU = Subjective Urgency, OS = Objective Urgency, I = Information.

Table 7. ROC curve for waiting time and satisfaction

Criterion	Cut-off point (minutes)	Area	Sensitivity	Specificity
Sum of criteria	47.50	.842	.806	.731
Global	42.50	.825	.870	.923

Table 8. Results of stepwise linear regression analysis

Predictors	$0R^2$	$\Delta 0R^2$	$F(\Delta R^2)$	$0B$	0SEB	0β	p
Model 4	0.876	0.874	6.56*				
Satisfaction with clinical staff				0.48	0.05	0.32	<.001
Information				-1.9	0.13	-0.51	<.001
Waiting time				-0.01	-0.00	-0.26	<.001
Doubt resolution				0.07	0.03	0.05	.011

Note: $0R^2$ = proportion of explained variance; ΔR^2 = *difference in proportion of explained variance;* $F(\Delta R^2)$ = *F*-value associated with ΔR^2; *B* = unstandardized regression coefficient; SEB = standardized regression coefficient, β = standardized regression coefficient.
* $p < .05$. ** $p < .01$.

DISCUSSION

The results indicate that receiving information about their process, the waiting time until seeing a doctor, the degree of satisfaction with the medical professional, and the resolution of doubts raised are predictors of the overall degree of patient satisfaction with the clinical experience.

Our study shows the influence on patients of the direct treatment received from healthcare staff, as well as the need for user information and the importance of streamlining waiting times as much as possible, as all this impacts patients' satisfaction with the emergency unit. As for the waiting time variable, a direct relationship with the triage color was found, with Level 5: Blue (no urgency) being the highest level, and Level 2: Orange (emergency) the lowest. With this in mind, the ROC curve analysis shows that, as of 42-47 minutes of waiting, patient satisfaction begins to be significantly affected. In addition, there is an inverse relationship between waiting time and satisfaction in all the measured variables.

These results are consistent with what was previously observed in other investigations. Bleustein et al. (2014) reported a correlation between waiting time and patients' positive clinical experience, such that the longer it took to be attended to, the worse the satisfaction, perception of quality, and confidence in the service. These authors indicate that not only are these variables related to clinical experience, but also they affected the perception of the degree of relevance of the treatment provided by professionals. Xie and Or (2017) indicated that patients who experienced a longer waiting time considered their health service to be less accessible. McMullen and Netland (2013) obtained a negative correlation between the waiting time and patients' overall satisfaction with the service, and Boudreaux, Ary, Mandry, and McCabe (2000) demonstrated the importance of the perception of the service received in patients' satisfaction, especially the degree of satisfaction with the staff who treated them.

As reducing the waiting time involves many difficulties for the vast majority of hospital services, finding alternative means to mitigate patients' negative feelings about

waiting is of particular interest. In this regard, Pérez-Cárceles, Gironda, Osuna, Falcón, and Luna (2010), See and Catterson (2017), and Xie and Or (2017) found evidence that the information provided to the patient is a factor that directly influences satisfaction with the emergency department. Our results support this hypothesis and we consider that for patients to be properly informed at all stages of their medical process is important to relieve the possible distress resulting from waiting times.

Finally, as indicated by Pérez-Cárceles et al. (2010), work on communication skills, empathy, and other variables associated with the personal treatment between professional and patient, as well as the service's provision of information about triage and the associated waiting times, could significantly improve users' experiences. Regarding information on waiting times, Pitrou et al. (2009) found evidence that patients' perception of waiting time played an important role in satisfaction. Patients who felt they had suffered less delay than expected claimed to be more satisfied with the service and treatment received. Taking this into account, we consider that, in addition to providing information about the average waiting time and its perception, it is important to orient patients to manage their expectations of the process (objective urgency, resolving doubts, staff accessibility, etc.). The development of these simple strategies could improve user satisfaction.

At the same time, in a review of the literature, Welch (2009) concludes that some variables, among them sex, can influence users' perceived satisfaction. Their influence is higher when the professional and the user are of the same sex, and also when they dress similarly, the professional carries some identification, or they use a similar type of communication. This same study states that the technical quality of the professional as perceived by the user, as well as the information received during the process, and the alternatives, can influence users' perceived satisfaction with the service. The literature does not address the relationship between subjective or user-perceived urgency and satisfaction with the service. A qualitative study by García-Alfranca et al. (2018) conducted a systematic review and interviews with both users and professionals, concluding that, generally, studies have focused on the treatment received, diagnostic information, waiting time or service resolution capacity as variables related to user satisfaction. These same authors state that these variables are fundamental for a positive user experience, in line with our results, but they also add the perceived professionalism of the healthcare staff and that the staff also attends to emotional aspects of the patient as relevant variables related to user satisfaction. Other authors have reported that the cleanliness of the service was related to high perceived user satisfaction while low scores were related to the comfort of the facilities (Fontova-Almató, Suñer-Soler, & Juvinyà-Canal, 2019).

This study explores multiple aspects of user satisfaction with emergency services, including multiple variables that predict satisfaction in general terms. These variables have not often been studied conjointly. Conjoint study of them allows, for example, observing differences between professionals, and providing more detailed information. In addition to this, and resulting from the emergence of COVID-19, the emergency services have undergone multiple changes in their structure and organization, which could create greater uncertainty in users and, consequently, affect their satisfaction. This study explores the aspects that should be enhanced in this new stage of service provision, and can serve as a guide both in the context where it was applied and at national and international levels.

This study should be interpreted according to this limitation. The professionals' dependent variables were not taken into account. Previous studies have shown that these variables (low satisfaction, burnout, etc.) can influence job performance and therefore the care received by users (Pérez-Fuentes, Molero-Jurado, Gázquez-Linares, & Simón-Márquez, 2019). The authors acknowledge that another limitation of the study is the absence of validated tools to assess satisfaction. This is because we intended to briefly assess specific satisfaction with the various aspects, and no questionnaire was found to meet these needs. The analysis did not take into account the place of application of the protocol, the patient's quantification of the information about their procedure, or other similar variables that may be a source of bias of the results. Nonetheless, this work was intended to evaluate users during their stay in the emergency department, a context in which there are severe temporal limitations. The instruments validated for this purpose require a long administration time, so their implementation would have been complex or even unfeasible for the proposed objectives. We think that although the use of an ad-hoc instrument is a limitation, its suitability for this situation can be considered a strength. The results are subject to the classical limitations of cross-sectional studies, so no cause-and-effect associations should be made. In this sense, it would be interesting to explore these relationships with designs that allow such associations, to explore whether the improvement of the variables studied herein has a significant effect on the average increase in satisfaction or the reduction of violence. Finally, the sample is limited to a very specific context, so future studies should be considered to explore the results obtained in different contexts as well as taking into account the distribution of the sample based on the assigned triage.

References

American Psychological Association (2002*). Ethical Principles of Psychologists and Code of Conduct*. Washington DC: Author.

American Psychological Association (2010). *Ethical Principles for Psychologists and Code of Conduct*. Washington DC: Author.

Bleustein, C., Rothschild, D. B., Valen, A., Valatis, E., Schweitzer, L. & Jones, R. (2014). Wait times, patient satisfaction

scores, and the perception of care. *American Journal of Managed Care, 20*(5), 393-400. https://doi.org/10.1371/journal.pone.0187849.g004

Boudreaux, E. D. & O'Hea, E. L. (2004). Patient satisfaction in the Emergency Department: a review of the literature and implications for practice. *The Journal of Emergency Medicine, 26*(1), 13-26. doi:10.1016/j.jemermed.2003.04.003

Boudreaux, E. D., Ary, R. D., Mandry, C. V. & McCabe, B. (2000). Determinants of patient satisfaction in a large, municipal ED: The role of demographic variables, visit characteristics, and patient perceptions. *The American Journal of Emergency Medicine*, *18*(4), 394-400. https://doi.org/10.1053/ajem.2000.7316

Byczkowski, T., Fitzgerald, M., Kennebeck, S., Vaughn, L., Myers, K., Kachelmayer, A. & Timm, N. (2013). A comprehensive view of parental satisfaction with pediatric emergency department visits. *Annals of Emergency Medicine, 62*(4), 340-350. http://doi.org/10.1016/j.annemergmed.2013.04.025

Fontova-Almató, A., Suñer-Soler, R. & Juvinyà-Canal, D. (2019). Factors associated with patients' and companions' satisfaction with a hospital emergency department: A descriptive, cross-sectional study. *Nursing Open, 6*(3), 834-841. http://doi.org/10.1002/nop2.261

Garcés Molina, F. J. (2017). *Organización de un servicio de urgencias. Análisis de la actividad y de las medidas adoptadas para mejorar la calidad* [Organization of an emergency unit. Analysis of the activity and measures taken to improve quality] (Doctoral thesis). Universidad Complutense de Madrid, Madrid, Spain.

García-Alfranca, F., Puig, A., Galup, C., Aguado, H., Cerdá, I., Guilabert, M. … Mira, J. (2018). Patient Satisfaction with Pre-Hospital Emergency Services. A Qualitative Study Comparing Professionals' and Patients' Views. *International Journal of Environmental Research and Public Health, 15*(2), 233. doi:10.3390/ijerph15020233

Hernández-Ruipérez, T., Leal-Costa, C., Adánez-Martínez, M. G., García-Pérez, B., Nova-López, D. & Díaz-Agea, J. L. (2015). Evidencias de validez del sistema de triaje Emergency Severity Index en un servicio de urgencias de un hospital general [Evidence of the validity of Emergency Severity Index the triage system in a general hospital emergency unit]. *Emergencias, 27*(5), 301-306.

Jiménez, J. G. (2006). Urgencia, gravedad y complejidad: un constructo teórico de la urgencia basado en el triaje estructurado [Urgency, severity and complexity: a theoretical construct of urgency based on structured triage]. *Emergencias: Revista de la Sociedad Española de Medicina de Urgencias y Emergencias, 18*(3), 156-164.

Lamata, F. (1998). *La Asistencia Sanitaria de urgencias. Manual de Administración y Gestión Sanitaria* [Emergency Health Care. Manual of Health Administration and Management]. Madrid: Díaz de Santos.

McMullen, M. & Netland, P. A. (2013). Wait time as a driver of overall patient satisfaction in an ophthalmology clinic. *Clinical Ophthalmology, 7*, 1655-1660. https://doi.org/10.2147/OPTH.S49382

Perez-Cárceles, M. D., Gironda, J. L., Osuna, E., Falcón, M. & Luna, A. (2010). Is the right to information fulfilled in an emergency department? Patients' perceptions of the care provided. *Journal of Evaluation in Clinical Practice, 16*(3), 456-463. https://doi.org/10.1111/j.1365-2753.2009.01142.x

Perez-Fuentes, M. C., Molero-Jurado, M. M., Gázquez-Linares, J. J. & Simón-Márquez, M. M. (2019). Analysis of burnout predictors in nursing: Risk and protective psychological factors. *European Journal of Psychology Applied to Legal Context, 11*(1), 33-40. https://doi.org/10.5093/ejpalc2018a13

Pitrou, I., Lecourt, A. C., Bailly, L., Brousse, B., Dauchet, L. & Ladner, J. (2009). Waiting time and assessment of patient satisfaction in a large reference emergency department: A prospective cohort study, France. *European Journal of Emergency Medicine, 16*(4), 177-182. https://doi.org/10.1097/mej.0b013e32831016a6

See, J. A. & Catterson, P. (2017). Can improving information to patients about emergency department processes reduce aggressive behaviour towards staff? *Emergency Medicine Australasia, 29*(5), 597-598. https://doi.org/10.1111/1742-6723.12858

Teismann, T., Forkmann, T., Brailovskaia, J., Siegmann, P., Glaesmer, H. & Margraf, J. (2018). Positive mental health moderates the association between depression and suicide ideation: A longitudinal study. *International Journal of Clinical and Health Psychology, 18*(1), 1-7. https://doi.org/10.1016/j.ijchp.2017.08.001

Topacoglu, H., Karcioglu, O., Ozucelik, N., Ozsarac, M., Degerli, V., Sarikaya, S., Cimrin, A. H. & Soysal, S. (2004). Analysis of factors affecting satisfaction in the emergency department: A survey of 1019 patients. *Advances in Therapy, 24*(6), 380-388. https://doi.org/10.1007/BF02850102

von Brachel, R., Teismann, T., Feider, L. & Margraf, J. (2019). Suicide ideation as a predictor of treatment outcomes in cognitive-behavioral therapy for unipolar mood disorders. *International Journal of Clinical and Health Psychology, 19*(1), 80-84. doi:10.1016/j.ijchp.2018.09.002

Welch, S. J. (2009). Twenty Years of Patient Satisfaction Research Applied to the Emergency Department: A Qualitative Review. *American Journal of Medical Quality, 25*(1), 64-72. doi:10.1177/1062860609352536

Woodward, S., Berry, K. & Bucci, S. (2017). A systematic review of factors associated with service user satisfaction with psychiatric inpatient services. *Journal of Psychiatric Research, 92*, 81-93. doi:10.1016/j.jpsychires.2017.03.020

World Health Organization. (2004). A glossary of terms for community health care and services for older persons. *WHO Centre for Health Development: Ageing and Health Technical Report 5.*

Xie, Z. & Or, C. (2017). Associations between waiting times, service times, and patient satisfaction in an endocrinology outpatient department: A time study and questionnaire survey. *Inquiry, 54*, 54:46958017739527. https://doi.org/10.1177/0046958017739527