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Impact of the Pre-Surgical Nurse Visit on the Well-Being of the Patient Before a Surgical Process

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Abstract

Objective: To know the satisfaction and experiences of the patient throughout the surgical process, in relation to the personalized attention performed in the Presurgical Nurse Visit (VPE).

Method: Mixed methodology, descriptive, prospective study and focus groups of a University Hospital with a reference population of 400,000 inhabitants, from January 2018 to May 2019. Elderly patients, without postoperative complications and signed informed consent were included. Variables: Sociodemographic data, patient satisfaction of the surgical process (Visual-Analog Scale (VAS)), anxiety (Anxiety-State-Trait Inventory (STAI))), quality of life (EQ-5D-5L) and possible postsurgical complications. The variables were collected in the EPV, by telephone survey at one month and three months and in focus groups at 4 months after surgery. Analysis: descriptive indices, for inferential analysis Chi square was used in qualitative variables and Student's t in quantitative variables. Transcription of the recording, analysis and triangulation of data of the focus groups ands.

Results: 359 patients were recruited: 59.9% (215) women, 66.72 years (25-95) mean age, the scheduled surgeries were: 81.3% (292) Orthopedic surgery, 12.9% (46) Digestive Surgery, 5.8% (21) Gynecologic Surgery. The mean 3-month patient satisfaction is 9.25 and it is confirmed that patients with greater anxiety, have lower quality of life (47.74 ($p<0.04$)) and perceive more pain (48.85 ($p<0.01$))).

Conclusion: The participants of the focus groups positively valued the high efficacy of EPV in clinical practice and satisfaction with the information and care received.

Keywords: Anxiety; Patient satisfaction; Surgical clearance

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Introduction

A surgical intervention supposes for the patient and his family a highly stressful situation, not only the hospitalization in an unknown environment, but also involves an anesthesia and an "aggression" to the own body, followed by the uncertainty of the result of the process. This is a biopsychosocial alteration of the person with ignorance of the entire surgical process from admission to discharge. With the aim of reducing the anxiety caused by the situation and providing information on the entire surgical process (pre, intra and postoperative care, possible post-surgical complications and resolution of doubts), the programs fast-track include a Presurgical visit to Nurse (PVN). All information about the surgical process can generate anxiety, insecurity and fear [1,2], so the patient needs a welcome and affective communication based on the person-to-person relationship.

The multimodal program (fast-track), has benefits for both the patient at a physical and psychological level and for the health system associated with the optimization of resources. The application of this type of program requires a multidisciplinary team properly trained and trained [3,4].

The ERAS protocols (Enhanced-Recovery-After-Surgery): Propose an accelerated recovery after surgery. To this end, verbal and written information is provided to the patient, describing the procedures that will take place during admission, giving answers to doubts and involving the patient (empowerment); with the aim of improving satisfaction, reducing anxiety and promoting postoperative pain control, impacting on the well-being of patients [5-7].

The multimodal program is safe and feasible [8,9], the patient is optimized to avoid surgical complications [10-12]. According to the numerous scientific evidence, most of the literature is related to orthopedic surgery.

All the bibliography consulted also indicates how decisive communication and information related to the patient and his disease is, to have an impact on his perception of satisfaction; the nurse must have strategies to be able to transmit the information in a calm and trustworthy climate, according to the needs of the person [13].

Preoperative education has beneficial results in the surgical patient, there is scientific evidence that shows that the greater the patient's participation, the greater their recovery and satisfaction in the care received [1].

The VPE is not equivalent in itself to the concept of preoperative education, the VPE is an opportunity to improve the quality of care for the benefit of patient [1], it is in the line of portfolio of services as a practice to advance in the provision of care and autonomy of the patient in the decisions about his health, and there is a direct relationship between the increase of perceived satisfaction and VPN [3].

In the PVN, in addition to providing information about the surgical process, a therapeutic climate of interpersonal relationships must be created for the purpose of caring and help, the patient must be allowed to express themselves and express their doubts, concerns and fears, attending to their expectations, which decreases the anxiety improving their well-being [2-14].

The PVN, which is specific according to the surgery to which he is going to be subjected, makes the patient and the family perceive a better quality of service, thanks to the information, the individualized treatment and the patient-centered care, achieving an improvement in the satisfaction and quality of care in clinical practice; the concept of satisfaction is based on the difference between the patient's expectations and the perception of the services he has received. Health care outcomes are measured in terms of effectiveness, efficiency, patient perception of pain or autonomy, sense of physical and mental well-being, and satisfaction with the outcome [4].

Objectives

Principal

Know the patient's satisfaction throughout the surgical process, in relation to information, health education and personalized care performed in the PVN.

Side

- Evaluate the patient's well-being throughout the surgical process.
- To know the postoperative anxiety at one month and 3 months in relation to pain and quality of life.
- To know the Presurgical and postoperative quality of life at one month and 3 months in relation to the training given in the PVN.
- To know the evolution of the symptoms and the satisfaction of the patient at one month and 3 months after the surgical intervention.

Hypothesis

In the surgical process, the Presurgical Nurse Visit has a positive impact on the patient's well-being.

Material and Method

Mixed methodology, descriptive, prospective study and focus groups in the Surgical Area of Parc Taulí University Hospital, with a reference population of 400,000 inhabitants, from January 2018 to May 2019.

The project was approved on December 14th, 2017 by the Ethics Committee of Investigation with medication with reference: 2017657.

We included patients of legal age, without postoperative complications and who signed the informed consent, with a sample size of 356 participants with a population of approximately 1,172 scheduled interventions performed in 1 year, with a confidence interval of 95%, accuracy of 3%, a proportion of 5% and with an expected proportion of losses of 15%.

Variables

Dependents: patient satisfaction of the surgical process (evaluated with Visual Analog Scale (VAS)), patient experiences of the surgical process.

Independent: socio-demographic data, anxiety (State-Trait Anxiety Inventory (short TAI)), quality of life (EQ-5D-5L) and possible post-surgical complications (pain (VAS), wound status and need for additional visits).

The variables were collected in the PVN, through a telephone survey at one month and three months after surgery, and in focus groups that were performed 4 months after the surgical intervention: the patients included in the study were chosen and invited to participate freely in a debate with a script of topics proposed by a moderator, all were informed in the inclusion and signed the informed consent. The interaction of the participants was intended as a method to generate information on the satisfaction of the surgical process related to the information received in the PVN. It was organized in groups of 6 participants, a moderator and two observers, with the technical support of a recorder. Three groups were performed: Patients undergoing Total Knee Arthroplasty (TKA), patients undergoing Total Hip Arthroplasty (THA) and patients undergoing Colon-Rectal Surgery (CRS).

Data analysis

Descriptive indices, for inferential analysis Chi square was used in the comparison of qualitative variables and Student's t in the comparison of quantitative variables, it is considered a level of statistical significance of p=0.05. Data tabulation and analysis with SPSS version 25.0.

Transcription of the recording, analysis of the observers' annotations and triangulation of the data of each focus group [15].

Results

359 participants were recruited, the mean age of study participants was 66.72 years SD 11.01 (25-95), 59.9% (215) were women. Of the total sample, 54% (194) were accompanied by the PVN of these, 35.1% came with their partners, the mean age of the companions was 61.48 SD 13.94 (20-84), 15.6% (56) lived alone, 5.6% (20) needed help for daily living and of these 2.2% (8) were contacted by the Department of Social Worker.

During the follow-up of the project there were 68 losses of

Table 1: Type of surgery.

Surgery Type	%	Frequency		
		Guy	Oncology	Ostomy
COT*	81.3	292	0	0
CIR**	12.8	46	56 (83.6%)	12 (26%)
GINE***	5.8	21		0

*Orthopedic surgery (primary total hip and knee arthroplasty)
**Digestive surgery (esophageal, colon and encompassing urological surgery)
***Gynecological surgery (hysterectomy and breast surgery)

participants due to non-location in the telephone call (38), voluntary abandonment of the study (5), due to complications of surgery (18), and others such as deprogramming (7). The type of surgery is shown in Table 1.

Satisfaction was assessed using 29 items and there were no differences in the assessment at one month and 3 months. The satisfaction of the participants with the information provided to them in the PVN, there are no statistically significant differences between the different evaluation groups; on a Visual Analogue scale (VAS) at one month 9.25 SD 0.94 (4-10) (n=289) and at 3 months 9.21 SD 1.1 (1-10) (n=286). In the analysis of subtypes in optimized and oncological patients, there are no differences with respect to the total sample. The range was similar to the overall sample.

Pre- and post-surgical pain (Table 2) is highly valued in total hip and knee arthroplasty surgery in relation to other surgeries, with statistically significant differences between the 3 groups: Baseline VAS, at one month and at 3 months.

The baseline health status of the participants and the quality of life after surgery (Table 3), there are statistically significant differences also in the 3 groups: Baseline, at one month and at 3 months. During the follow-up of the surgical process, their quality of life in relation to health improves; in the type of CIR surgery, dismally diminished in the optimized patient.

Anxiety is another item that was assessed in the project (Table 4), on a STAI scale short version: The mean per month was 3.48 SD (2.15) n=293 (66 participants were anxious), and at 3 months it was 3.31 SD (2.15) n=289 (67 patients were still anxious).

Patients with less anxiety have a better perception of pain presenting a statistically significant difference at one month and at 3 months.

The quality of life of less anxious patients presents a statistically significant difference with those who do have anxiety; It is confirmed that the more anxiety less quality of life both at one month and at 3 months.

Anxiety has a negative impact on both post-surgical pain levels and patients' quality of life.

Table 2: Pre- and post-surgical pain.

Pain	Basal	+ 1 mes	+ 3 months
	(SD)	(SD)	(SD)
COT	7.06 (1.76)	4.01 (2.48)	3.60 (2.39)
CIR	0.37 (1.22)	2.97 (2.85)	2.32 (3.01)
GINE	0.33 (1.15)	3.09 (1.70)	1.91 (2.07)
*H Kruskall Walls	Value Statistical Test* (significance)		
	161.04 (*p*: 0.001)	6.45 (*p*: 0.040)	12.71 (*p*: 0.002)

Focus groups, description and results

- Total Knee Arthroplasty Focus Group (08/10/2018):

All people value the consultation of VPE in a positive, very effective way and interpret that the objective of proximity and interaction between professionals and users is achieved, they use phrases such as (participant 3: "I came very calmly to operate for everything they had explained to me"), when we asked if the information of the surgical process of the person and the education given in the VPE was adequate, they answer yes, without further comment.

In relation to pain, everyone agrees that the day of immediate postoperative IQ and the first day of admission is painful, but it was reported in the VPE, and that gave them confidence (participant 5: "I already knew because I had been warned").

Three people agree at all times in the positive experience of admission, almost do not make criticisms, but highlight the anxiety experienced in the Post-Anesthesia Resuscitation Unit (URPA) for the long stay, suffered for their relatives everything and they know that they are informed.

They highlight the figure of the physiotherapist, both during hospice and at home. It is striking that they do not highlight the role of nursing in hospitalization, they use phrases such as "very well all, very kind".

In the VPE they had been told that they would be called the next day after discharge, and in some cases, it was not so, they value that they were not called as a negative fact. The one who received the call values it positively, participant 2: "when they called me, I felt accompanied, it was very comforting".

In conclusion, they value the PVN, the surgical process and the rapid recovery (physiotherapy) as a positive experience, cared for focused on the patient and value as very good the human treatment, the pain is controlled and they refer that the days of home rehabilitation should be increased. They criticize the stay at the URPA and the lack of explanations to the ta and not to give the information sheet. They consider the information received in the PVN to be adequate.

- Total Hip Arthroplasty Focus Group (13/03/2019):

All participants value the PVN positively, agree that what is explained to them about the surgical process of the person in the consultation is what has really happened participant 1: "what they told me was what happened: What happens on the floor, with the physiotherapist, in the operating room" and the others nodded.

They appreciate the explanations in the consultation. They highlight the satisfaction that the process is so fast, they value the few days of admission. In reference to the time of the consultation, everyone agrees that it is enough.

As for pain control, all agree on having been well cared for, in the immediate postoperative period the pain coincides in all participants that it is mild.

Regarding the information at discharge, when the question is asked, they focus on home physiotherapy, we noticed that it is what worried them most and satisfied them to feel accompanied. Everyone is satisfied with the speed and attention received.

Regarding the phone call after discharge, everyone claims to have received the call, except for one woman who says she does not remember.

Table 3: Health Status.

Health Status	Basal	+ 1 mes	+ 3 months
Quality of life	**□ (SD)**	**□ (SD)**	**□ (SD)**
COT	5.72 (2.04)	7.08 (1.63)	7.24 (1.79)
CIR	7.61 (1.72)	7.6 (2.30)	7.47 (2.19)
GINE	7 (1.92)	8.18 (0.98)	8.64 (1.12)
*H Kruskall Walls	Value Statistical Test* (significance)		
	37.78 (*p*: 0.001)	10.28 (*p*: 0.006)	9.70 (*p*: 0.008)

Table 4: Anxiety.

EVA	Anxiety + 1 month		Anxiety + 3 months	
	YES	NO	YES	NO
Pain □ (SD)	5.38 (2.26)	3.41 (2.42)	5.43 (2.45)	2.77 (2.42)
*H Kruskall Walls	Value Statistical Test* (significance)			
	32.29 (*p*<0.01)		48.85 (*p*<0.01)	
Quality of life □ (SD)	6.17 (1.58)	7.48 (1.65)	5.93 (1.8)	7.74 (1.77)
*H Kruskall Walls	Value Statistical Test* (significance)			
	33.16 (*p*<0.01)		47.74 (*p*<0.04)	

When asking the question of the information received at discharge, the answers are direct that they are discharged, but without clarifying whether the information is sufficient.

The treatment with nursing has been correct, they do not explain any incidence, they emphasize the infirmary of the awakening room, who were attentive to the anguish they felt in reference to the long time they are in the post-surgical resuscitation unit, they value that the family could enter, all agree in recognizing that they suffered in case the families were informed.

In conclusion, they value the whole process rewardingly, in relation to the speed of the actions, punctuality and the information provided.

- Colorectal Surgery Focus Group (10/10/2019)

The information of the surgical process of the person and the treatment received in external consultation, has been valued in a very positive way by all the participants.

Participant 2 expresses that the one who worried him most was the possibility of wearing the ostomy, the other members agree.

Participant 1 reports that all the information they received was detailed and fast, that the waiting time is long, and he had anxiety, but that in the consultation he could explain himself and once he knew the prognosis, he was calmer. He expresses that there were moments when he went through "fear", because (participant 1: "the word cancer is scary") and misses a specialized psychological support prior to surgery.

As for pain, none of them report having had pain.

The treatment with the patient during hospital admission has been well valued.

They do not express prominent episodes of anxiety during admission.

In relation to the question of how it was to return home, they feel safe with the explanations received.

Participant 4 explains "we need accompaniment from dieticians".

Participant 3 who has an ileostomy at home was very lost before going to the first visit with the stoma therapist, "I think I should have stayed a few more days in the hospital because I still did not know how to heal, you are very afraid"). To the question about the visit with the stoma therapist, he responds "well but late, it would have to be sooner and more follow-up the first days".

About the URPA, participant 2 refers to "the family had a hard time, lack of information".

In conclusion, they value the whole process positively, in relation to the information provided. As criticism the lack of psychological support "fears". In general, we are struck by the issue of diets and the time of the stoma therapist consultation. A negative point remains the postsurgical resuscitation unit.

Discussion

The results of our study cannot be compared with others carried out in other centers, since, in these, all the PVN is performed on the same day or the day before the surgical intervention by surgical nursing. In our case, PVN is performed one week before surgical intervention in outpatient consultations by specialist nurses. They conduct a comprehensive, personalized and person-centered visit, providing verbal and written information with a description of the entire process and empowering the patient. The fact of making this visit a week before surgery gives the possibility that the patient can ask questions by telephone to these professionals before surgery.

When care is focused on the patient and his family, they feel accompanied throughout the surgical process, which is satisfactorily valued. If the patient knows the obligations and expectations at all stages of the surgical process, the results are streamlined and improved qualitatively [16].

Our study is in line with research aimed at evaluating the economic impact of multimodal surgery. PVN has a positive impact on the costs associated with the surgical process, has the ability to reduce the average stay, favor hospital discharge at home and reduce the number of patient readmissions [17].

By analyzing the results and opinions of the participants in the focus groups, we can observe several points that need to be improved, both structural and ways of doing of the professionals to maintain a quality model. This improvement can be linked, among others, to reinforce the information to those patients with anxious traits, facilitating the internalization of concepts; unknown events that generate fears that negatively impact the understanding and satisfaction of the person.

This study is not without limitations; we can highlight the advanced age of many participants that can make it difficult to understand some concepts. Being a descriptive study, not having a control group and with a convenience sample has a limitation in terms of the generalization of the results.

Conclusion

Participants rated EPV positively. The benefit of empowering patients in the management of their recovery throughout the surgical process was observed, as well as in the tranquility and confidence before returning home. The high efficacy of EPV in clinical practice and the satisfaction of patients with the information and information received were evidenced.

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