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ORIGINAL ARTICLE

EFFECT OF THERAPEUTIC LISTENING ON PEOPLE'S ANXIETY IN THE IMMEDIATE PREOPERATIVE PERIOD

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ABSTRACT

Objective: to evaluate the effect of therapeutic listening on people's anxiety in the immediate preoperative period. Method: a quasi-experimental and intervention research study carried out from July to October 2018 with 150 people in a Hospital from Minas Gerais/Brazil. Anxiety was assessed using the Hospital Anxiety and Depression Scale and the physiological measures. Descriptive and inferential statistical analysis and Chi-square, Spearman and Wilcoxon tests were performed. Results: of the 31 people with anxiety, 20 had a reduction in the anxiety levels and in the physiological measures mean values after the intervention. A significant relationship was found between the gender, monthly family income, previous surgical complications and significant life events variables and the anxiety measure. A weak positive correlation was found between anxiety and respiratory rate and a weak negative correlation between anxiety and age group. Conclusion: when identifying patients with anxiety, interventions such as therapeutic listening can be implemented to make the perioperative period healthier.

DESCRIPTORS: Anxiety; Elective Surgical Procedure; Preoperative Period; Health Communication; Nurse-Patient Relationships.

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INTRODUCTION

People who need surgical interventions and who are in the preoperative period experience a significant emotional burden, with the possibility of developing feelings of anguish and anxiety, interfering with the immune system, increasing the predisposition to postoperative complications and impairing recovery[1].

The prevalence of anxiety in people in the preoperative period has reached an index of 80% to 90%[2]. In this context, the importance of the Nursing team being present at all times during the perioperative period is highlighted, in order to identify fears and anxiety symptoms, intervening with actions that can reduce these feelings, thus improving preoperative care and the person's response in the postoperative period[3].

In order to reduce the anxiety symptoms, interventions such as therapeutic listening have been used as a tool that assists in the communication process, so that the professional can understand people's life and health needs while they are listened to and respected[4], promoting welcoming, assistance and comfort, relieving loneliness and anxiety, and benefiting the nurse-patient relationship[5].

It is noteworthy that, through speech, people express their emotions and share their feelings, establishing a relationship of trust with the professionals, thus managing to face their weaknesses and reduce their tensions[6].

Based on the above, this research aims at raising awareness of the importance of communication and of the nurse/patient interaction as a valuable care tool that, many times, has not been used by health professionals in work environments. And in particular, allow nurses to understand the importance of their role in the perioperative period. Finally, to contribute scientifically, by bringing up significant results to the production of knowledge, filling the existing gaps in relation to the topic addressed. The objective of this study was to evaluate the effect of therapeutic listening on people's anxiety in the immediate preoperative period.

METHOD

A quasi-experimental and intervention research study carried out from July to October 2018 at a General Hospital located in a municipality from southern Minas Gerais – Brazil.

The study population consisted of people who were in the immediate preoperative period, and who underwent elective medium-sized surgeries. Based on the number of surgeries performed during the week, the sample size was calculated using the GPower v.3.19 program and the McNemar test, for which an Odds Ratio effect of 2.8 was assumed, with 80% statistical power and 5% significance level, thus obtaining an estimated sample of 117 participants.

The study included people hospitalized in the surgical clinic, aged at least 18 years old, and subjected to elective medium-sized surgeries (cholecystectomy, herniorrhaphy and varicectomy, among others). Those who reported using psychotropic drugs to control anxiety were excluded.

The sample was randomly selected. On each collection day, it was decided to select the first individuals admitted to the different units, provided that they were allocated to separate rooms, in order to avoid interference from one participant to another and thus reduce the risk of bias. Therefore, 150 people, who met the established inclusion criteria, comprised the study sample.

Data collection was carried out from July to October 2018 by one of the researchers, through an interview, to facilitate filling out of the instruments and avoid possible errors, taking care not to infringe the methodological aspects related to the interview technique. This was performed in three stages in the immediate preoperative period, described below.

First stage: after admission to the inpatient unit, approximately 12 hours before the surgery, the participants were informed about the study objectives and their consent was requested by signing the Free and Informed Consent Form (FICF). The information regarding characterization was collected through a semi-structured questionnaire, authored by the researchers, which addressed the variables related to the socioeconomic data, life habits, chronic disease, surgical history and significant life events. It is noted that, in a previous study, this instrument was submitted to the content and face validation process by three judges working in the knowledge area of the topic researched, as well as to a pilot test.

Subsequently, the Hospital Anxiety and Depression Scale (HADS) was applied, translated and validated in Brazil(7), chosen because it is widely used to measure anxiety and is presented in a simple and short form, with good psychometric properties and available in the public domain. It consists of an instrument with 14 questions, seven for the assessment of anxiety and the other seven for depression. In the current study, only the questions correlated to the evaluation of anxiety were used, which include am answer scale that varies from zero to three, with the maximum score set at 21 points. The cutoff points adopted indicate that a score greater than or equal to nine in HADS indicates the presence of anxiety or depression(8). Subsequently, the blood pressure (BP), heart rate (HR), respiratory rate (RR) and body temperature (T) physiological measures were assessed using specific benchmarks for the measurements(9-10).

Second stage: the therapeutic listening intervention was carried out, in which the participants' complaints and doubts were heard, and then discussed. Such listening was based on the Person-Centered Model developed by Carl Rogers, which focused the researcher's actions on the person and not on their problem, allowing the therapeutic process to occur based on their experiences(11). The intervention was carried out in the hospitalization room, for approximately 30 minutes so that the person could express their fears, anxieties, doubts and whatever else they desired. To direct the interaction between the researcher and the participant, the following guiding question was triggered: "Describe your experience regarding hospitalization for the surgical procedure?".

Third stage: 40 minutes after the intervention, the researcher returned to the hospitalization room to apply HADS (anxiety subscale) again, as well as to assess the physiological measures. A study that used therapeutic listening as an intervention raises the need to wait certain period of time to repeat the assessments, assuming that the patient needs time to recover emotionally(12). Therefore, it was decided to define a 40-minute interval after the intervention to repeat the assessments.

The data were grouped into a database using a double-entry electronic spreadsheet. For the descriptive and inferential statistical analysis, the Statistical Package for the Social Science (SPSS) program was used, version 24.0.

Some independent variables were regrouped and dichotomized, according to the following analyses: Pearson's chi-square test to verify the association between the anxiety measure and the socioeconomic variables; Spearman's correlation to verify the association between the anxiety measure and the physiological measures; and Wilcoxon test to compare the anxiety and physiological measures before and after the intervention. A 5% significance level was adopted in this study.

After these analyses, the odds ratio of the independent variables with the anxiety measure was estimated with the respective 95% confidence interval. Finally, the multiple logistic regression model of the independent variables was used with the anxiety measure and the multiple linear regression model for the independent variables and the physiological measures.

The research was approved by the Research Ethics Committee under opinion No. 2,773,729.

RESULTS

The sample consisted of 150 participants subjected to elective surgeries, 100 (66.7%) of whom were female. The most frequent age group was between 18 and 45 years old, with 77 (51.3%). There was predominance of participants who had up to complete elementary school, with 68 (45.3%); married, 108 (72%); Catholics, 109 (72.7%); monthly family income up to one minimum wage, 78 (52%); and 34 (22.7%) had no salary. Most of the participants did not consume tobacco, 126 (84.0%), or alcohol, 93 (62%); did not practice physical activity, 110 (73.3%); did not have chronic diseases, 92 (61.3%); and did not use any daily medication, 78 (52%).

Table 1 refers to the distribution of people with and without anxiety at the moments before and after the intervention. A statistically significant difference ($p<0.001$) is observed with percentages of 20.7% of people with anxiety before the intervention and of 6.7% after the intervention.

Table 1 - Distribution of people with and without anxiety and comparison of this measure before and after the intervention (n=150). Alfenas, MG, Brazil, 2018

Variables	Before the intervention n (%)	After the intervention n (%)	p-value
People without anxiety	119 (79,3)	140 (93,3)	<0,0001†
People with anxiety	31 (20,7)	10 (6,7)	
Total	150 (100)	150 (100)	

†p-value obtained by the Wilcoxon test.
Source: The authors (2018)

Table 2 shows the factors associated with anxiety according to the gender, monthly family income, previous surgical complications and significant life events variables, with a significant association between the variables ($p<0.05$). By analyzing the odds ratio, it was verified that females are six times more likely to present anxiety than males. With regard to monthly family income, it was verified that the participants with an income of up to one minimum wage were twice as likely to develop anxiety when compared to those who earned more than one minimum wage. People with previous surgical complications were almost four times more likely to present anxiety when compared to those without complications. And the participants who reported significant life events were approximately three times more likely to develop anxiety than those who did not report such events.

Table 2 - Univariate analysis of the factors associated with anxiety according to the gender, monthly family income, previous surgical complications and significant life events variables (n=150). Alfenas, MG, Brazil, 2018

Variables	Without anxiety n (%)	With anxiety n (%)	p-value	OR†	95% CI‡
Gender					
Male	47 (39,5)	3 (9,7)	0,001§	6,093	1,752-21,182
Female	72 (60,5)	28 (90,3)			
Monthly Family Income					
Up to R$ 954.00	62 (52,1)	10 (32,3)	0,049††	2,284	0,992-5,262
More than R$ 954.00	57 (47,9)	21 (67,7)			
Previous surgical complications					
No	112 (94,1)	25 (80,6)	0,018††	3,84	1,188-12,415
Yes	7 (5,9)	6 (19,4)			
Significant life events					
No	66 (55,5)	10 (32,3)	0,021††	2,615	1,134-6,029
Yes	53 (44,5)	21 (67,7)			

†OR: Odds Ratio ‡CI: Confidence interval. §Fisher's exact test. ††Pearson's Chi-square test.
Source: The authors (2018)

Table 3 presents the correlation between the anxiety measures and the systolic blood pressure (SBP), diastolic blood pressure (DBP), HR, RR and T variables, indicating a weak positive correlation between the anxiety measures and RR (r=0.195; p=0.017): when this rate increased, the anxiety levels increased. When correlating the anxiety measures with age group, a weak negative correlation was observed (r=-0.184; p=0.024): the lower the age group, the higher the anxiety level.

Table 3 - Spearman's correlation coefficient (r) values and p-values for the association/correlation of the anxiety measures and the SBP†, DBP‡, HR§, RR†† and T‡‡ variables (n=150). Alfenas, MG, Brazil, 2018

Variables		SBP† (mmHg)	DBP‡ (mmHg)	HR§ (bat/min)	RR†† (mov/min)	T‡‡ (°C)
Anxiety measures	r	0,067	0,041	0,1	0,195	0,135
	p	0,417	0,62	0,224	0,017§§	0,1

†SBP: Systolic Blood Pressure; ‡DBP: Diastolic Blood Pressure; §HR: Heart Rate; ††RR: Respiratory Rate; ‡‡T: Temperature. §§Significant statistical difference for p≤0.05. Source: The authors (2018)

Table 4 shows the means of the physiological measures (SBP, DBP, HR, RR, T) variables at the moments before and after the intervention. There is a reduction in all the mean values after the intervention, even if discrete, with a significant association between the DBP (p=0.022) and T (p=0.000) variables.

Table 4 - Values of the mean values of the physiological measures (SBP†, DBP‡, HR§, RR†† and T‡‡) variables, before and after the intervention (n=150). Alfenas, MG, Brazil, 2018

Variables	Before the intervention	After the intervention	p-value§§
SBP†	128,52	128,47	0,643
DBP‡	80,75	79,63	0,022
HR§	73,67	73,11	0,097
RR††	17,52	17,36	0,082
T‡‡	35,9	35,7	0

†SBP: Systolic Blood Pressure; ‡DBP: Diastolic Blood Pressure; §HR: Heart Rate; ††RR: Respiratory Rate; ‡‡T: Temperature. §§Wilcoxon test. Source: The authors (2018)

The multiple logistic regression model of the independent variables with the anxiety measures is presented in Table 5. When analyzing the parameters of all independent variables with anxiety, it was verified that gender, religious belief, daily medication use, respiratory rate and monthly family income remained in the regression model, resulting in a final model adjusted based on the statistical method.

Table 5 - Assessment of the parameters of the multiple logistic regression model of the independent variables with the anxiety measures (n=150). Alfenas, MG, Brazil, 2018

Variables	Parameter	Standard Error	OR†	p-value
Gender	1,891	0,777	6,627	0,015
Religious belief	-1,165	0,563	0,312	0,039
Daily medication use	1,255	0,564	3,509	0,026
Respiratory rate	0,267	0,124	1,306	0,032
Monthly family income	1,524	0,626	4,598	0,015

†OR: Odds Ratio. Source: The authors (2018)

In the final model, it was evidenced that the female participants were approximately seven times more likely to present anxiety. Those who professed the Catholic religious belief had a protective factor against the development of anxiety. Those who used daily medications were approximately three times more likely to present anxiety. Those who had a high respiratory rate were more likely to develop anxiety. And those with a monthly family income of up to one minimum wage were approximately five times more likely to present anxiety.

DISCUSSION

In view of the results, it was observed that some participants presented anxiety in the

immediate preoperative period. Assessing the anxiety and depression symptoms should be a routine in the preoperative Nursing evaluation, as it can affect the patient's recovery, increasing hospitalization time and pain and hindering healing, among other aspects. Therefore, it is indispensable that the professionals understand the anxiety disorders so that they are able to implement measures to reduce them, favoring a better evolution in the postoperative period[13-15].

In this study, anxiety was present in 20.7% of the participants; however, there was a reduction after the intervention, decreasing to 6.7%. Interventions with approaches to people in the preoperative period have been considered extremely useful, as they promote identification of the risk factors, in addition to welcoming, assistance and guidance to the individuals, contributing mutual benefits in the nurse-patient relationship[5,16].

A number of research studies indicate that the existence of a relationship of trust between the nurse and the patient is fundamental, allowing the latter to express their feelings, in order to receive necessary information about the surgical process they are undergoing, thus reducing the occurrence of preoperative anxiety[17]. In this sense, when performed in a qualified manner and centered on the person[11], therapeutic listening allows those who are in mental distress to express their feelings and create their own reflections and conclusions, to feel trust, respect and the possibility of problem solving[18].

A study evidences that qualified listening provides a therapeutic relationship, as well as identification of risk and protection factors, favoring welcoming, assistance and guidance by the health professionals[5].

However, a study that assessed the effect of therapeutic listening on anxiety and fear of people subjected to surgeries did not evidence any reduction in the anxiety levels and surgical fears, either through the physiological or psychological indicators. According to the aforementioned paper, such findings can be correlated to the interaction time with the researcher to carry out the therapeutic listening intervention[12].

Regarding the association between anxiety and socioeconomic variables, there was a significant relationship with gender, age group, monthly family income, previous surgical complications and significant life events. It was found that females were more likely to present anxiety. As possible reasons for the higher frequency of these symptoms among women, the authors point to their greater ease in expressing their feelings, the influence exerted by the female sex hormones, and the overload of women's roles with the recent changes in society[13].

In relation to the age group, a study[19] points out that young people are more affected by anxiety symptoms. It is noted that no studies were found revealing the reason for this incidence in this population segment. As for the monthly family income variable, it was observed that the participants with incomes up to one minimum wage were more likely to develop anxiety. A study[20] highlights that socioeconomic status can exert a direct influence on the determinism of anxiety, indicating that employment and income currently represent important protective factors against anxiety.

With regard to previous surgical complications, the participants who reported them are more likely to present anxiety. A study corroborates such findings by highlighting that people who experience traumatic situations in previous surgeries can develop post-traumatic stress disorder[21]. In this context, it is fundamental that the Nursing team works to identify fears and anxiety, seeking to provide information that includes actions aimed at reducing the anxiety level[3].

The participants who reported the occurrence of significant life events were more likely to present anxiety. Among the events reported, loss/death of loved ones was the most mentioned. A study[22] that investigated the prevalence of anxiety symptoms in parents of childhood cancer survivors and bereaved parents identified elevated anxiety symptoms associated with stressful life events, with psychological distress up to five years after the

trauma (death).

As for the correlation of anxiety with the physiological measures, a reduction in all the mean values was observed after the intervention, especially for the DBP and T variables. It is noted that the vital signs can have their values increased through the sympathetic stimulation caused by anxiety, fear, pain and emotional stress[9]. A number of studies have used the physiological measures as indicators of anxiety, stress and mental disorders, with an increase in their values being observed[10,23].

A study that correlated the assessment of anxiety through physiological measures and observation of the behavior of patients with cerebral palsy performed in a dental consultation, points out that those considered anxious have higher SBP and HR values than those considered calm[24].

Through the logistic regression model, it was found that being a Catholic represents a protective factor against development of anxiety. Using daily medications and having a monthly family income of up to one minimum wage increase the chance of presenting anxiety. A study points to an effect of religious beliefs on coping with the surgical treatment and, consequently, on controlling mental disorders such as anxiety.

The importance of the professionals being aware of the religiousness issues is highlighted since, among the subjective aspects of the person, spirituality and religiousness are neglected dimensions, despite their significant relevance for coping with diseases[25]. Regarding the use of daily medications, it was found in the literature that anxiety is a strong predictor for the use of sedative drugs[26].

This study was limited by the heterogeneity of the sample, with predominance of Catholics in relation to other religious beliefs and of females over males, hindering greater inferences in the variables when associated/correlated with anxiety, despite some significance found. In view of with these limitations, it is suggested to carry out new research studies with experimental designs and in other populations.

CONCLUSION

It is concluded that therapeutic listening was considered an important intervention method to reduce the anxiety levels in the immediate preoperative period.

It is noteworthy that therapeutic listening as a Nursing intervention for people in the immediate preoperative period should serve as an instrument for care that establishes a relationship of help, welcoming and bonding and that provides quality assistance, with a view to achieving well-being and a reduction of anxiety and of the surgical risks.

The findings of the current study are relevant to the clinical Nursing practice because, when identifying patients with anxiety symptoms, the professionals have the duty to implement interventions that make the perioperative period healthier, with a view to postoperative recovery.

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