

*Full Length Research Paper*

# Helping patients in cataract peri- and post-surgery: A simple intervention addressing anxiety

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**The aim of this study is to propose patients a psycho educational intervention before, during and after a stay in a hospital to undergo a cataract surgery, in order to meet their doubts and fears. The objective is to find if by lowering the anxiety state, the suffering would be reduced and the quality in the rehabilitation process would be fostered (Hesbeen, 1996). The design chosen was a RCT (Randomised Control Trial). A group of 160 individuals was assigned randomly to one of the 2 conditions: 80 to the experimental/intervention condition following a specific care program aiming at lowering anxiety, and 80 to an “attention/routine care” condition. The sample consisted of individuals who had a mean age of 72, SD 10.33, ranging from 24 to 95 years old, and 63.1% were females. Anxiety state decreased significantly after surgery in both intervention and attention groups but more intensively in the intervention group. A regression model explained 80% of the anxiety state score after surgery. The most significant predictor of anxiety state score after surgery was “belonging to the intervention/experimental group” (B = 0.712). These results confirm the claims that a simple, costless and almost timeless psycho educational procedure can decrease anxiety and improve patients’ experience of cataract surgery and recovery.**

**Key words:** Psycho educational interventions, hospital, cataract surgery, peri- and post-surgery anxiety.

## INTRODUCTION

Life expectation is rising and diseases related to aging become more and more common, namely the decline of functions such as vision (Pascoal, 1996). In general low vision or the shortening of the visual field have immediate effects on the elderly daily life, as they can not e.g. see a friend on the other side of the street or read a book. A substantial number of vision related pathologies are not diagnosed as the elderly tend to minimise the effects of a low vision problem, avoiding mentioning it (Wormald et al., 1992). Depending of personal characteristics and prior experiences, hospitalisation might be for the elderly a stressful big challenge either increasing anxiety related to hospital procedures and routines and surgery routines, either increasing anxiety related to separation from families and being among strangers (Cabete, 1999).

Cataracts become the most common vision related problem, as the cycle of life is extended (Pizzarello, 1987). As Sarson (1993) referred, the hospital is for a few a strange place where one suffers; for others a place where there are procedures available to cure. Some elderly exposed to a stay in the hospital can become confused, disoriented, apathetic, incontinent, with low mobility and low collaboration (Cabete, 1999). Low vision, older age, lack of information, no questions answered, separation from families and difficulties related to the communication with the clinical team are some of the anxiety sources for elderly (Berger, 1995). Arriving to a hospital, especially to undergo a surgery procedure, involves suspicion and lack of ease. Fears tend to be minimised so they are never mentioned (Weinman, 2000). Anxiety is frequently unattended and patients soon discover that a somatised anxiety will be more frequently addressed by the clinical team, more eager to care and address small somatic symptoms that to deal with an

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expressed anxiety (Bagros and Le Breton, 1990). The main objective regarding an elderly undergoing a cataract surgery is to facilitate the recovery, assure the maintenance of the independence, including a functional level for daily life duties. Psycho-educational methods to follow the patient since the arrival to the hospital, peri- and post-surgery period and recovering at home until one month after the surgery are very important (Faria, 1999).

Spielberger (1972) proposed a model of anxiety considering a temporary anxiety “state” and more easily changeable in one’s life, that usually increases in more difficult or fearful situations, and features a typical characteristic of how someone acts: including a fearful/worried/avoidable way. Other recent authors developed the concept of anticipatory anxiety (being anxious because of the thought of having to cope with certain situations) and anxiety due to over evaluating the potential threatening of a situation (Heimberg and Barlow, 1991), especially when one wants to produce a favourable image to others (Clark and Wells, 1995). A mild peri-surgery level of anxiety can actually protect the patient making him/her e.g. more cautious and compliant (Ramos, 2006), but too much anxiety may produce too much suffering and rejection of the treatment.

The aim of this study is to propose to patients (mostly elderly, aged 60 to 80 years old) a psycho educational intervention before, during and after a stay in a hospital to undergo a cataract surgery, in order to meet their doubts and fears. The objective is to find if by lowering the anxiety state the suffering would be reduced and the quality in the rehabilitation process would be fostered (Hesbeen, 1996).

This study obtained a positive evaluation from the hospital ethical committee and followed all the Helsinki norms for research. Informed consent was obtained from all participants and a voluntary based participation was required.

## METHODS

### Instrument

Interview – demographic data, number of prior surgeries, how long ago. STAI- State Trait Anxiety Inventory [Spielberger, 1972, translated and adapted to Portuguese by Serra et al. (1982)]. Form A – Anxiety state – 20 items rated in a four point scale (max. 80/min. 20) and a Form B – Trait Anxiety 20 items rated in a four point scale (max. 80/min. 20).

### Design

The design chosen was a randomised control trial (RCT). A group of 160 individuals was assigned randomly to one of the 2 experimental conditions: 80 patients entered the experimental conditions, following an “information and care program”, and 80 patients entered the “attention/ routine care” condition. Randomization was carried out by order of inscription in the respective consultation. One patient would be assigned to the experimental condition and the next patient to the “attention/routine

care” during the period of the study. In this procedure all patients that volunteer were included (90 patients preferred not to be included, or refused to fill questionnaires).

The individuals randomly assigned to the “attention/routine care condition” underwent a pre-evaluation before the surgery (the day of the surgery) and post-evaluation one month after the surgery, and followed the common routine hospital assistance to these surgery patients.

The individuals assigned to the intervention/experimental group also underwent a pre-evaluation before the surgery (the day of the surgery) and a post-evaluation one month after the surgery, but cumulatively also received:

- 1) In a first session a “guidance brochure” where they could read the hospital service norms. The patients were then informed about the procedure that they would undergo, and got another brochure about what involved a cataract surgery. Patients also got a flyer including other useful contacts, in case they had any question.
- 2) After surgery, patients in the intervention/experimental group received another guide with all the care needs, as well as a telephone contact from the surgery team.

The interview and counselling took 15 minutes, and a few minor problems were reported such as difficulties to read the brochures that demanded extra care from the nurse. Due to the demands and restrictions of the hospital the same nurse did all the evaluations and supervised all the interventions, with exception of the surgery itself.

### Sample

The sample consisted of 160 low vision patients drawn from a population of 250 individuals from the peri-consultation to undergo a cataract surgery (61.2%). All the patients who volunteered to participate and accepted to fill the anxiety questionnaire were included (90 patients did not accept to be included).

The sample consisted of individuals with a mean age of 72, SD 10.33, ranging from 24 to 95 years old; 63.1% females; 88.1% were not working.

For 19.4% (31) of the patients this was the first surgery; 63.1% (101) had up to 2 surgeries before and 17.5% (28) underwent 3 to 5 prior surgical interventions.

The majority of those surgeries before, 42.6% (55) was submitted in a period of one year or less before, 37.2% (48) were operated one to 10 years before and finally 20.2% (26) underwent a surgery more than 10 years before. For 102 (63.8%) patients this was the first cataract surgery.

As said before, individuals were randomly assigned to one of the two experimental conditions: intervention and attention. Therefore was assumed that demographic and clinical variables would be similar in both groups. This situation was indeed statistically confirmed elsewhere (Ramos, 2006).

## RESULTS

Anxiety scores (trait and state) were compared between intervention/experimental and attention/routine care groups, using a T-test for independent samples, and considering a significance criteria of  $p < 0.001$  and in all cases estimating effect sizes (Field, 2005). Before the intervention there was no significant difference between anxiety trait and anxiety state when comparing the intervention group with the attention group (Table 1). However, after the intervention there was a significant difference between both groups ( $t = -12, 418 (158) p < 0.001$ ,

**Table 1.** Descriptive Statistics for all the considered variables in the two groups (intervention and attention): Anxiety state (before and after the surgery) and anxiety trait.

Anxiety score	Group	N	Mean	p
Anxiety state – Before surgery	Intervention	80	42.01	0.755
	Attention	80	42.66	
Anxiety state – After surgery	Intervention	80	23.28	0.000*(ES 0.70)
	Attention	80	37.39	
Anxiety trait	Intervention	80	43.95	0.124
	Attention	80	40.67	

\*Significant for  $p < 0.001$ .

effect size = 0.70) with the intervention/experimental group presenting a significant lower anxiety state score (scored 23.3 in the intervention group and 37.4 in the attention group). In a second step, pre-/pos-evaluation results regarding anxiety state were compared independently in the intervention and in the attention groups. As seen in Table 2, both the intervention group and the attention group lowered significantly their anxiety state scores from pre- to post-evaluation. However individuals in the intervention group had a greater lowering effect (the effect in the attention group was 0.69 while the effect in the intervention group was 0.86).

A multiple regression model was obtained (Table 3) in order to predict the score of the anxiety state after surgery, from a group of other related variables: 1) belonging to the attention or to the intervention group; 2) age, 3) gender, 4) number of previous surgeries, 5) first cataract (or not), 6) score of the anxiety state in the pre-evaluation; and 7) score of the anxiety trait. This group of independent variables explained 80% of the total variance of the independent variable "anxiety state after surgery".

From all the variables that were significant predictors of the (lower) anxiety state score after the surgery, the most strong predictor was belonging to the intervention/experimental group ( $B = 0.712$ ), followed by the (lower) anxiety state score previous to surgery ( $B = 0.499$ ), (higher) number of previous surgeries ( $B = -0.109$ ) and (lower) score of the anxiety trait ( $B = 0.086$ ). Age, gender and being or not the first cataract surgeries were not significant predictors in this model.

## DISCUSSION

These results confirm the claim that a simple, costless and almost timeless psycho educational procedure can decrease anxiety and improve patients' experience of cataract surgery.

Hospitalisation is usually a stressful situation for individuals either by increasing anxiety related to hospital

procedures and routines, surgery routines (Cabete, 1999) and these results confirm it. However this simple intervention procedure had a main significant effect on reducing post-surgery anxiety in a group of patients, mostly elderly, undergoing a cataract surgery, one of the most common vision related problem, as the cycle of life is extended (Pizzarello, 1987). As Sarson (1993) referred, the hospital can be a place where there are procedures available to cure. Providing patients with simple, quickly and costless measures to increase their information, and "empowerment" can lower the experience of fear, suspicion and a lack of ease, usually never mentioned (Weinman, 2000), that are a source of anxiety.

As said, low vision, age, lack of information, and difficult communication with the clinical team are some of the anxiety sources for the elderly (Berger, 1995). A simple procedure easy to implement (such as the one used for the present study) can facilitate a better phenomenological experience of patients' recovery, also providing a significant anxiety reduction.

The main objective regarding a patient that was submitted to a cataract surgery is to facilitate the recovery, assure the maintenance of the patients' independence, including a functional level for daily life duties, avoiding that a non identified anxiety can be translated into somatic symptoms, seen by patients as a more efficient way to get attention from the clinical team (Bagros and Le Breton, 1990).

Unfortunately extra data regarding the occurrence of pain during surgery were not included neither patients' post-surgery anxiety was controlled for post-surgery visual improvement. Those are important issues that are therefore suggested for future research.

However it was clinically interesting to observe that the number of prior surgeries, not the fact of being or not the first cataract, was a significant predictor of a post-surgery anxiety lower state. This fact must be addressed with caution because, as reported, other factors such as extra attention and information (belonging to the intervention group) and individual levels of anxiety (both trait anxiety and state anxiety prior to surgery) are responsible for the

**Table 2.** Descriptive Statistics: comparison between the anxiety state before and after surgery in the Attention group and in the Intervention group.

Attention group	Mean	N	p	Intervention group	Mean	N	P
Anxiety state total – Before surgery	42.66	80	0.000*(ES 0.69)	Anxiety state total –Before surgery	42.01	80	0.000* (ES 0 .86)
Anxiety state total – After surgery	37.39	80		Anxiety state total – After surgery	23.28	80	

\*Significant for  $p < 0.001$ .

**Table 3.** Multiple regression models for predicting the dependent variable anxiety state after the surgery.

Model	Dependent variable – Anxiety state after the surgery	Unstandardized coefficient		Standardized coefficient	P
		B	Std. error	Beta	
1	Constant	-9.617	3.857		0.014
	Group (Intervention or attention)	14.301	0.732	0.712	0.000***
	Age	0.029	0.035	0.030	0.411
	Gender	-0.390	0.771	-0.019	0.613
	Number of surgeries	-1.041	0.382	-0.109	0.007**
	First/more previous cataract	-0.406	0.833	-0.019	0.627
	Anxiety trait total	0.065	0.028	0.086	0.021*
	Anxiety state total – Before surgery	0.384	0.030	0.499	0.000***

R<sup>2</sup> Adj. = 0.802, Significant at \* $p < 0.05$ , \*\* $p < 0.01$  and \*\*\* $p < 0.001$ .

explanation of the variation of post-surgery anxiety state. Nevertheless this fact strongly suggests that if the surgery is a highly “unusual and strange situation”, as it is the case especially for patients undergoing their “first surgery”, the state anxiety level post-surgery is higher. This plausible explanation goes in line with the usefulness of a counselling procedure including extra information and attention so as to promote patients well-being and lowering their anxiety.

As Faria reported before (1999), the results confirmed that psycho-educational methods to follow the patient since the arrival at the hospital, peri- and post-surgery period and recovering at home until one month after the surgery are very important and effective.

Beck and Emery, in 1985, referred the impact of

being in a hospital to the well-being of people. Anxiety felt by the low vision patients during the stay at the hospital can affect not only their well-being but also compliance and collaboration in treatment and rehabilitation.

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