ISSN: 1676-4285

OBJN Online Brazilian Journal of Nursing
ENGLISH
Federal Fluminense University
AURORA DE AFONSO COSTA NURSING SCHOOL
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Preview Notes

Effects of telemonitoring of the post-operative period of cataract surgery on the part of elderly patients: a randomized clinical trial

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ABSTRACT

Problem: Cataract extraction surgery has become increasingly frequent and, therefore, there is a need for strategies to assist surgical recovery and the post-operative follow-up of patients. **Aims**: To test the effect of phonecall follow-up intervention compared with conventional treatment of elderly patients in the post-operative period of cataract surgery; to analyze the impact of nursing diagnosis on delayed surgical recovery over four weeks in a group monitored by phone and in a control group. **Method**: a blind randomized clinical trial that is currently being conducted in a university hospital in the city of Niterói/RJ. The sample, obtained by sample calculation using the statistical analysis suggested by Pocock (1983), will be 48 individuals, equally and randomly divided into experimental and control groups.

Descriptors: Elderly; Cataract Extraction, Telenursing, Postoperative Care.

THE SITUATION AND ITS SIGNIFICANCE

As we age, the vulnerability to common diseases such as cataracts[1] - as well as their prevalence – increases on the part of the elderly. This condition can be reversed by cataract extraction surgery which enables the restoration of vision[1].

Certain strategies have been used to carry out the follow-up of such patients and the early and efficient detection of any problems. The use of telephone monitoring, which is related to the continuity of care in the post-operative period, involving the offer of relevant education and guidance as needed, is included in these strategies[2].

Given the above, the study is justified by the continuing increase in the elderly population and, consequently, the increase in surgical procedures such as cataract extraction, supported by the advancement of information technology in health, including telephony.

RESEARCH QUESTION

What is the effect of nursing follow-up telephone call intervention on the surgical recovery of cataract extraction elderly patients?

AIMS

To test the effect of phonecall follow-up intervention compared with conventional treatment on the part of elderly patients in the post-operative period of cataract surgery;

To analyze the frequency of the delayed surgical recovery nursing diagnostic, according to the NANDA-I classification (2015-2017)[3], over a 4 week period in the group monitored by phone and in the control group.

METHOD

This is a randomized, blinded clinical trial to evaluate the use of follow-up by phone as an intervention in the surgical post-operative recovery of cataract surgery elderly patients, monitored in the ophthalmology clinic of a university hospital in the city of Niterói/RJ. For randomization, we used the software BioEstat 5.3.

The blind group will consist of two examiners expert in the diagnostic evaluation of delayed surgical recovery who had previously passed diagnostic training. Data collection will be undertaken between January and July 2015.

The sample will consist of 48 elderly patients hospitalized in order to undergo cataract extraction surgery (24 patients in the experimental group and 24 in the control group) determined by sample size calculation according to the Pocock's statistical analysis (1983) (Figure 1), in which P1 = % of events in the experimental group, P2 = % of events in the control group and f = frequency of alpha and beta errors.

Figure 1 - The formula for sample size calculation, according to Pocock's statistical analysis (1983)1*

$$n = \frac{P_1^* (100-P_1) + P_2^*(100-P_2)}{(P_2-P_1)^2} \times f(\alpha,\beta)$$

The parameters used to calculate the sample were: level of significance of 5% (α); power of the statistical test of 80% (1-β) and the expected difference in delta incidence (end - start) between the groups of 30%, obtained by a pilot study involving 16 patients (8 in each group) carried out from October to December 2014.

Inclusion criteria: elderly patients treated by the hospital ophthalmology service and undergoing pre-operative cataract surgery, who have a cell phone or a landline available.

1* Pocock, S. Clinical Trials. A Practical Approach Chichester: John Wiley & Sons, 1983.

Delphino TM, Santana RF. Effects of telemonitoring of the post-operative period of cataract surgery on the part of elderly patients: a randomized clinical trial. Online braz j nurs [internet] 2015 Mar [cited year month day]; 14 (suppl.):355-8. Available from: http://www.objnursing.uff.br/index.php/nursing/article/view/5112

Exclusion criteria: diagnosis of dementia; hearing impairment without assistance to receive phone interventions; having undergone previous surgery for the treatment of pre-surgical complications; patients unaccompanied or without family members who can get the information if required.

Discontinuity criteria: receiving less than 75% of the phone calls; not having time to receive guidance on the phone.

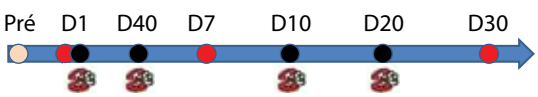
The experimental group will have access to the intervention in terms of phone monitoring and also to conventional follow-up, both involving four contacts in the four-week period (Figure 2), monitored for delayed surgical recovery by the measurement instrument used in the clinic.

Figure 2 - Description of the research progress on the part of the experimental group (n=24), Niterói, 2014.

Legend: = Pre-operative evaluation; = Post-operative evaluations with follow-up of delayed surgical recovery (RCR) by instrument.

The control group will be monitored on an outpatient basis for four weeks after surgery for the diagnosis of delayed surgical recovery, with conventional treatment only (Figure 3).

Figure 3 - Description of the research design on the control group (n=24), Niterói, 2014.



Legend: = Pre-operative evaluation; = Post-operative evaluations with follow-up of delayed surgical recovery (RCR) by instrument; = Telephone follow-up.

The analysis will be made through simple and inferential descriptive statistics processed using the SAS® System version 6.11 statistical software. Initially, the normality test using the Shapiro-Wilk test will be performed.

Data will be expressed by the frequency (n) and percentage (%) for categorical data, and the mean, standard deviation, median, minimum and maximum for numeric data. To check for significant differences in the social and demographic variables between the groups, chi-square test for categorical data and Student's t-test with independent samples of the numeric data will be used. The McNemar corrected test will serve to analyze the evolution of the defining characteristics and related factors of diagnosis throughout treatment within each group. Values of $p \leq 0.05$ will be considered to be statistically significant.

The project was approved on 09.19.2014 by the Ethics Committee of the University Hospital Research Antonio Pedro, under opinion number 791 556, as recommended by the National Health Council Resolution 466/12.

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3. Herdman TH, Kamitsuru S. NANDA International Nursing Diagnoses: Definitions & Classification 2015-2017. Oxford: Wiley Blackwell; 2014.

Project data

Examination board formed by prof. Dr. Rosimere Ferreira Santana (advisor), prof. Dr. Norma Valeria Souza Dantas de Oliveira (1st examiner) and prof. Dr. Rose Mary Costa Rosa Andrade Silva (2nd examiner).

Authors' Participation:

Tallita Mello Delphino - elaboration of the research project; data collection for the pilot-test and elaboration of the foreword.

Rosimere Ferreira Santana - orientation on the research project and elaboration of foreword.

All authors participated in the phases of this publication in one or more of the following steps, in According to the recommendations of the International Committee of Medical Journal Editors (ICMJE, 2013): (a) substantial involvement in the planning or preparation of the manuscript or in the collection, analysis or interpretation of data; (b) preparation of the manuscript or conducting critical revision of intellectual content; (c) approval of the versión submitted of this manuscript. All authors declare for the appropriate purposes that the responsibilities related to all aspects of the manuscript submitted to OBJN are yours. They ensure that issues related to the accuracy or integrity of any part of the article were properly investigated and resolved. Therefore, they exempt the OBJN of any participation whatsoever in any imbroglios concerning the content under consideration. All authors declare that they have no conflict of interest of financial or personal nature concerning this manuscript which may influence the writing and/or interpretation of the findings. This statement has been digitally signed by all authors as recommended by the ICMJE, whose model is available in http://www.objnursing.uff.br/normas/DUDE_eng_13-06-2013.pdf

Received: 01-12-2014
Revised: 01-13-2015
Approved: 01-23-2015