



THE SURVEY OF THE RELATIONSHIP BETWEEN PRE-SURGICAL WAIT TIME AND POST-CHOLECYSTECTOMY OPERATION ANXIETY

Mahshid Nazemzadeh Shoaee, Sadegh Zare^{*2}, Ali Reza Ganjali³ and Hamed Kiani²

¹Community Nursing Research Center, Pregnancy Health Research Center, Zahedan University of Medical Sciences, Zahedan, Iran.

²Student Scientific Research Center, Zahedan University of Medical Sciences, Zahedan, Iran.

³Health Promotion Research Center, Zahedan University of Medical Sciences, Zahedan, Iran.

***Author for Correspondence: Sadegh Zare**

Student Scientific Research Center, Zahedan University of Medical Sciences, Zahedan, Iran.

Article Received on 22/03/2016

Article Revised on 11/04/2016

Article Accepted on 01/05/2016

ABSTRACT

Introduction: in the today's modern and advanced world in which the technology has made it easy and fast to access any needs in a glimpse of an eye waiting is still an integral part of the human life. Definitely, anyone referring to the health care and treatment services systems experiences some sort of waiting. Patients who are awaiting to be taken to the surgery rooms have been found to have anxiety despite undergoing the best pre-surgical medications, and in spite of being fully informed and assured and it is in this anxiety and stressful period that the failure rates intensify. The present study aims at the survey of the relationship between pre-surgical awaiting time and post-Cholecystectomy operation anxiety. **Implementation method:** the present study is an analytical-descriptive research which has been conducted on 50 patients who had been referred to the surgery room in a training hospital associated to Zahedan medical sciences university in 2016 to undergo Cholecystectomy. To gather the data required for the present study a two-part questionnaire was used the first part of which incorporated demographic characteristics and the second part was related to the Spielberger state-trait anxiety (explicit and implicit anxiety) inventory. The data collected from the questionnaires were analyzed by taking advantage of SPSS 19 software and descriptive-statistical tests, independent t-test and Pierson correlation test. **Findings:** the patients' average age was 38.30 ± 10.32 . Also, 34 individuals were male and 25 people had a previous history of surgical operations. The participants' state anxiety mean score was calculated as 46.82 ± 4.11 and the individuals' trait anxiety mean score was 42.88 ± 6.13 . The relationship between pre-surgical awaiting time and trait anxiety ($P < 0.001$) and state anxiety ($P = 0.003$) was found to be statistically significant. **Conclusion:** the results of the present study indicated that the pre-surgical waiting time is in a direct relationship with patients' anxiety. And this is in a manner that the longer the individuals' awaiting time the higher the rate of the individual's anxiety would be. Therefore, it is suggested that the officials and authorities should pragmatically and essentially plan the pre-surgical awaiting time in a scheduled manner.

KEYWORDS: awaiting time, Cholecystectomy, anxiety.

INTRODUCTION

Cholecystectomy is the gall bladder removal surgical operation which is commonly applied in curing the gall bladder diseases such as bladder stones. Post-surgical anxiety which is observed in about 17% to 41% of the patients is one of the most common problem consequent to such an operation^[1] which is accompanied with symptoms such as increasing pain, pleading for more painkillers, delay in recovery and dismissal, extravagant costs and the lengthening of the hospital stays.^[2]

Anxiety is an annoying status of the mind or the feeling of prostration pertaining to a threatening situation or the prediction of an unknown threat regarding oneself and

the others^[5] and its expression and manifestation in the patients before surgery is not only a natural phenomenon rather it is also very common and prevalent.^[6, 7] In the study performed by Ghane'ee et al which was carried out in 2003 with the objective of the survey of the relationship between pre-surgical anxiety and the post-caesarian operation pain, the relationship was confirmed.^[5] Also, in a study conducted by Ja'afar et al in 2009 and Allen in 2002 a statistically significant relationship was found between these two variables.^[8, 9] Among the outcomes resulting from the pre-operation anxiety one can refer to the increasing pain, delay in the dismissal and delirious talks and sleep disorders^[10], the increase in protein break-down, increase in the infection

risk, immunity response variations^[11] and it was also indicated that it is effective on the post-operation feeling of nausea and vomiting.^[12] Also, it has been known that the high level of anxiety triples the mortality risk.^[13]

Pre-operation anxiety is normally seen in all of the patients waiting to be taken to the surgery rooms^[14] and waiting in the surgery room environment is the main factor for anxiety moods expression.^[15] Patient waiting to be transferred to the surgery rooms are found with anxiety in spite of taking the best pre-surgical medications and being completely informed and assured of the operation outcomes and success and failure rates and it is in the same anxious period that the failure rates are intensified.^[15] In the study undertaken by Liktör and Panda a positive relationship was found between the pre-surgical waiting time duration and anxiety.^[16, 17] Also, there was found a statistically significant relationship in the studies conducted by Ghardashi et al on 100 patients in 2004 which was entitled as “the survey of the relationship between pre-surgical waiting time duration and anxiety”.^[18] In the today’s modern and advanced world in which accessing any needs has been made easy and accelerated by taking advantage of technology waiting time is still a part of human beings’ lives. This is for sure that anyone referring to the health and treatment services systems should experience a degree of waiting. The patients who have been diagnosed with a diseases and operation and surgery have been prescribed for them may experience this waiting time in two forms: 1. the time interval from getting informed of the patient’s need for a surgery till the hospitalization in a hospital and 2. Being listed in the surgery agenda that means from the time of reception till the time the patient is transferred to the surgery room. The pre-surgical anxiety rate can be effective on the post-surgery pain.^[3, 4]

According to the negative impacts anxiety exerts on the patients and also due to the limited number of the researches which have been carried out regarding the relationship between surgery waiting time duration and anxiety, the present study has been conducted with the objective of the investigation of the relationship between pre-surgical waiting time duration and post-Cholecystectomy operation.

Implementation method

The current study is an analytical-descriptive research which has been conducted on 50 patients who had been diagnosed with Cholecystectomy operation and referred to a surgery room in a training hospital associated with Zahedan medical sciences university. To gather the data required for the present study there was made use of a two-part questionnaire, the first part of which was related to demographic characteristics form and it consisted of information regarding age, gender, surgery history and the patient’s wait time and the second part was pertained to the Spielberger anxiety questionnaire which contained 20 items relevant to the state anxiety and 20 items pertaining to trait anxiety. The responses were scored

based on Likert’s 4-point scale (ranging from not at all, to some extent, intermediate to very much) and each of the choices on direct phrases were scored based on the order from 1 to 4 and in inverse phrases they were scored from 4 to 1 based on the order, in this way the scoring ranges from 20 to 80. The scores between 20 and 40 are in a weak level, scores from 41 to 60 are in an intermediate level and the scores from 61 to 80 are in a high level of anxiety intensity. Spielberger’s state-, trait-anxiety inventory has been shown to exhibit high scientific credibility and it has been recognized as a standard test. The instrument reliability has been obtained by Mahram in Mashhad, Iran through the calculation of Cronbach’s alpha for the trait-anxiety subscale which was obtained to be equal to 0.90 and it was obtained as equal to 0.91 for state-anxiety subscale.^[19]

To collect the data, firstly the related participants were debriefed about the study plan and after an oral consent was obtained from the individuals, the individuals’ pre-surgical wait time was measured (the wait time was measured from the time that the patient was completely ready to enter the surgery room till the time the patient actually entered the surgery room) and then according to the performed investigation contexts^[10] the questionnaires were administered two hours after the surgical operation to be completed by the individuals. To eliminate the interfering factors resulting from the various surgical methods, the surgeons were consulted regarding the homogenization of the surgical operation method and also it was agreed to expose the patients to the same anesthesia medication (GA anesthesia and identical medication) and the anesthesia method and anesthesia medications were homogenized. In the end, the data were analyzed by the use of SPSS 19 and descriptive-analytical tests, independent t-test and Pierson correlation test.

FINDINGS

The patients’ average age was 38.30 ± 10.32 . Also, 34 individuals (68.0%) were male and 25 individuals (50%) had prior surgical operation history. The individuals’ state-anxiety mean score was 46.82 ± 4.11 and their mean score in the trait-anxiety area was calculated to be 42.88 ± 6.13 . 48 patients (96.00%) were found to have an intermediate level of state-anxiety and 2 individuals (4.0%) had weak state-anxiety and none of the individuals were found to have intense or very high state-anxiety level. Also, 25 patients (50.00%) were indicated to have weak trait-anxiety and 24 patients (48.0%) showed intermediate trait-anxiety and 1 individual (2.0%) had intense trait-anxiety. The relationship between the wait time duration and trait-anxiety ($P < 0.001$) and state-anxiety ($P = 0.003$) was statistically significant.

DISCUSSION

The results of the present study indicated that there is a statistically significant relationship between pre-surgical

wait time duration and the individuals' anxiety. Pre-surgical operation wait time duration is a very stressful situation.^[20] In the study conducted by Panda et al and also by Ghardashi et al there has been found a statistically significant relationship between pre-surgical operation wait time duration and the anxiety rate in the patients.^[16, 18] Due to the same reason, it is suggested that the day before surgery due date the approximate surgery time should be definitely consulted with the patient and in cases that there is a possibility for the surgery to be postponed as a result of unexpected reasons the patient should be correctly and appropriately justified. Moreover, getting the patient acquainted with the surgery room environment and the surgery procedure can be effective on reducing the patients' anxiety and it is also better that during the wait time in lieu of leaving the patient on his or her own the surgery room personnel and the co-surgeon be introduced to the patient since this can also be helpful in reducing the patient's anxiety.

Generally speaking, there are two of medicinal and non-medicinal methods to reduce the patients' anxiety. All of the medication treatments for reducing anxiety should be prescribed by the physician and include the use of anti-anxiety drugs such as Benzodiazepine and sedatives. Non-medicinal methods or the so-called supplementary methods are mostly with little side effects and risks and they can be applied in a standalone manner or along with other methods. Many of the non-medicinal methods which are being practiced nowadays are ranked among the supplementary treatment methods. One of the most important problems patients subject to the surgical operation is the pre-operation anxiety due to the fear of the post-surgical operation pain and the more the individual is exposed to such conditions and the more s/he is left in his or her world of unknown and ambiguity the more the individual will be crawling with thoughts and this per se will result in an increasing fear which ends in anxiety. In most of the cases, controlling anxiety is through the use of sedatives for those individuals with a great deal of anxiety. This is while via preventing factors causing the increase in anxiety in the patients the symptoms can be reduced to a minimum. Therefore, it is suggested that the officials should take the pre-surgical operation wait time schedule into consideration in an applied and functional manner.

Various methods are being currently practiced in different countries for reducing the pre-surgery anxiety in the patients, for specimen psychological consultation sessions, educational films^[21], patients' visits of the other patients who had undergone surgery before^[22] and making the patients familiar with the staff and instruments of the surgery rooms are among the undertakings that can be applied and are studied for reducing the pre-surgical wait time anxiety.^[23] To precisely evaluate the effect of the pre-surgical operation wait time duration on the patients it is necessary to perform more widespread and extensive researches with

a higher number of study sample volume based on which one can be able to assess such methods.

CONCLUSION

The results of the present study indicated that pre-surgery wait time is in a direct relationship with the patients' anxiety. And this relationship is in a way that the longer the individuals' wait time the higher his or her anxiety will be. Therefore, it is suggested that the officials and authorities should be more working on the patients' pre-surgical operation wait time duration and provide the patients with an applied and essential schedule planning.

ACKNOWLEDGEMENT

This study was the result of a student research project approved at Zahedan University of Medical Sciences. Hereby, we express our deep gratitude to those people who participated and collaborated in this study and Research authorities of Zahedan University of Medical Sciences who helped us in the process of data collection and financial support.

REFERENCES

1. Saeed MH, Krikor AW, Yaquob ZA, Yihya MW, Khayat HS. Preoperative gabapentin in laparoscopic cholecystectomy. *Basrah Journal of Surgery.*, 2013; 19: 24–29.
2. Zamanzadeh V, Seyedrasooli E, Parvan K, Aghakeshizade M. The effect of music on anxiety and pain in patients undergoing cholecystectomy. *MEDICAL-SURGICAL NURSING JOURNAL.*, 2015; 203-209.
3. Kim W-S, Byeon G-J, Song B-J, Lee HJ. Availability of preoperative anxiety scale as a predictive factor for hemodynamic changes during induction of anesthesia. *Korean journal of anesthesiology.*, 2010; 58(4): 328–333.
4. Twiddy H, Lane N, Chawla R, Johnson S, Bradshaw A, Aleem S, et al. The development and delivery of a female chronic pelvic pain management programme: a specialised interdisciplinary approach. *British journal of pain.* SAGE Publications., 2015; 9(4): 233–240.
5. Ghanei R, Rezaei K, Mahmoodi R. The relationship between preoperative anxiety and post operative pain after cesarean section. *The Iranian Journal of Obstetrical, Gynecology and Infertility.*, 2013; 15(39): 16–22.
6. Lee J-S, Park Y-M, Ha K-Y, Cho S-W, Bak G-H, Kim K-W. Preoperative anxiety about spinal surgery under general anesthesia. *European Spine Journal.* Springer., 2015; 1–10.
7. Bassampour SH, Nikbakht Nasrabadi A, Mehran A, Poresmaeil Z, Valiee S. Effect of acupressure on patients' anxiety and vital sign before abdominal surgeries. *Hayat.* Hayat., 2009; 14(2): 23–34.
8. Allen S, Carr ECJ, Barrett R, Brockbank K, Cox C, North N. *Prevalence and patterns of anxiety in*

- patients undergoing gynaecological surgery. Bournemouth University., 2002.
9. Jafar MF, Khan FA. Frequency of preoperative anxiety in Pakistani surgical patients. *Journal of the Pakistan Medical Association.*, 2009; 59(6): 359.
 10. Fortier MA, Kain ZN. Treating perioperative anxiety and pain in children: a tailored and innovative approach. *Pediatric Anesthesia.* Wiley Online Library., 2015; 25(1): 27–35.
 11. Phipps WJ. *Medical-surgical nursing: Health and illness perspectives.* Mosby., 2003.
 12. Karakhuen N. *Effects of health education program on preoperative anxiety among abdominal surgical patients.* Bangkok: College of Public Health., 2003.
 13. Mahmoudi H, Ebadi A, Salimi SH, Najafi Mehri S, Mokhtari Noori J, Shokrollahi F. Effect of nurse communication with patients on anxiety, depression and stress level of emergency ward patients. *Iranian Journal of Critical Care Nursing (IJCCN).*, 2010; 3(1): 3–4.
 14. Zakerimoghadam M, Aliasgharpoor M, Mehran A, Mohammadi S. Effect of Patient Education about Pain Control on Patients' Anxiety Prior to Abdominal Surgery. *Hayat.* Hayat., 2010; 15(4): 13–22.
 15. Yung PMB, Chui-Kam S, French P, Chan TMF. A controlled trial of music and pre-operative anxiety in chinese men undergoing transurethral resection of the prostate. *Journal of advanced nursing.* Wiley Online Library., 2002; 39(4): 352–359.
 16. Panda N, Bajaj A, Pershad D, Yaddanapudi LN, Chari P. Pre-operative anxiety. *Anaesthesia.* Wiley Online Library., 1996; 51(4): 344–346.
 17. Lichtor JL, Johanson CE, Mhoon D, Faure EAM, Hassan SZ, Roizen MF. Preoperative Anxiety Does Anxiety Level the Afternoon Before Surgery Predict Anxiety Level Just Before Surgery? *The Journal of the American Society of Anesthesiologists.* The American Society of Anesthesiologists., 1987; 67(4): 595–598.
 18. Ghardashi F, SALEH MAR, Hasanabadi H, Setayesh Y. Study of the Relationship Between Pre-operative waiting time and Anxiety in Patients. *JOURNAL OF SABZEVAR UNIVERSITY OF MEDICAL SCIENCES.*, 2004; 76–84.
 19. Mahram B. The guideline for state and trait spielberger anxiety inventory and the instruction for its explanation based on normality test research in Mashhad. *Mashhad: Ferdowsi University Mashhad, Faculty of Psychology and Humanity Sciences.*, 1993.
 20. Cobley M, Dunne JA, Sanders LD. Stressful pre-operative preparation procedures. *Anaesthesia.* Wiley Online Library., 1991; 46(12): 1019–1022.
 21. Ayral X, Gicquere C, Duhalde A, Boucheny D, Dougados M. Effects of video information on preoperative anxiety level and tolerability of joint lavage in knee osteoarthritis. *Arthritis Care & Research.* Wiley Online Library., 2002; 47(4): 380–382.
 22. Brumfield VC, Kee CC, Johnson JY. Preoperative patient teaching in ambulatory surgery settings. *AORN journal.* Elsevier., 1996; 64(6): 941–952.
 23. Mitchell M. Patients' perceptions of pre-operative preparation for day surgery. *Journal of Advanced Nursing.* Wiley Online Library., 1997; 26(2): 356–363.