ICASH-A052

# THE EFFECT OF HEALTH EDUCATION IN SURGERY PREPARATION TO ANXIETY LEVEL OF PATIENTS WITH PRE HERNIORRHAPHY IN RAA SOEWONDO HOSPITAL PATI

**Mohamat Iskandar**

*Postgraduate Applied Science Program in Nursing,*
*Poltekkes Kemenkes Semarang, Semarang, Indonesia,*

*Corresponding author's E-mail: mohamatiskandar@gmail.com

## ABSTRACT

**Background:** RAA Soewondo Hospital Pati treated herniorrhaphy patients around 454 patients every year. The results of the preliminary study a study of 10 patients undergoing surgery herniorrhaphy through interviews revealed that most patients do not understand the circumstances that will be experienced, still worried by the operation, and yet ready to undergo surgery.
**Aims**: The purpose of this study was to determine the effect of health education on surgery preparation to anxiety level of patient's with pre herniorrhaphy in RAA Soewondo hospital Pati.
**Method:** This study used quasi-experimental design, One Group with Pretest and Posttest. Thirty patients were selected by accidental sampling with variables health education and level of anxiety patient pre herniorrhaphy. HARS (Hamilton Rating Scale For Anxiety) was employed as instrument for data analysis.
**Result**: Twenty two respondents experienced moderate anxiety before health education. After health education, only 17 respondents experienced mild anxiety. Wilcoxon test obtained the mean difference of anxiety level before and after health education is 0.49 with a difference of standard deviation 0.077 and p-value 0.001 which mean there is a significant difference of anxiety level before and after health education.
**Conclusion**: There is the influence of health education on the preparation procedure of surgery on the patient's anxiety level pre herniorrhaphy in hospitals RAA SoewondoPati. To reduce anxiety in patients with pre herniorrhaphy, expected that the comprehensive health education in patients with pre herniorrhaphy.

**Keywords**: Health Education, Action Operating Procedures, Anxiety

## INTRODUCTION

Hernia is one of the health problems that may result from work. The habit of excessive lifting and excessive physical activity is the major cause of the hernia [1]. The prevalence of hernia in the world was discovered in one every 3,000 people (0.03%), and the number of incidence is rising over time. Hernia can occur in both men and women. Built on the gender of the lateral inguinal, hernia occurs 12 times more frequently in men [2]. The prevalence of hernia in Indonesia is 291 145 cases, while in Central Java province, an estimated 425 cases are recorded in 2007.

Hernia treatment can be done by two methods of treatment: conservative and operative treatment. Conservative treatment is limited to the act of repositioning and use of buffer (support) to retain the contents of the hernia that has been done by repositioning pre-operative preparation [1]. Before the

surgery, the patients need to be prepared physically and mentally, because otherwise most patients will feel anxious and afraid of the opearion [3].

Anxiety can result from lack of knowledge of the patient. The level of knowledge related to anxiety; the higher the patients' knowledge about the surgery would lower the level of patient anxiety pre hernioraphy [4]. Besides knowledge, other factors that play a role in anxiety is family support [5]. Provision of informed consent is also associated with patients' anxiety on hernia surgery [2, 6].

RAA Soewondo Medical Records Starch in 2013 recorded 454 hernioraphy patients with average monthly hernioraphy patients are 38 patients. In the first three months of 2014, the average hernioraphy patients are 32 patients. The results of the preliminary study of 10 patients before undergoing hernioraphy stated that 7 (70%) patients did not understood about the circumstances that they will experienced, were worried by the surgical procedures, and were not ready to undergo surgery. The physical examination found an increase in pulse, blood pressure, and respiration; the patients seem nervous, pale, and have tense facial expressions. Even after the surgery, 3 (30%) patients said they were still nervous, albeit no longer tense, about the preparation for hernioraphy.

Health education, through provision of information about the preparation of the operation, is one of the measures to reduce anxiety. It is considered as an approach of therapeutic communication, which is known to reduce patients' anxiety [7][8][9].

## METHODS

Determination of the sample in this study was through proportion estimation formula. The proportion of this study is taken from the proportion of hernia occurrence in RAA Soewondo Hospital in 2013 that is 8.4%, so the number of samples are 33 respondents. The research design used in this study is the one group pre-test – post-test design with accidental sampling technique [10, 11]. Independent variable of health education about operational procedure preparation, with operational being defined as giving information to hernia patient about preparation that must be done before hernioraphy. Dependent variable of this research is the anxiety level, which is unpleasant subjective response in patients who will undergo hernioraphy surgery at RAA Soewondo Hospital Pati.

Instrument used to measure the anxiety level is HARS (Hamilton Anxiety Rating Scale). This study used Wilcoxon Test method to examine the hypothesis. Wilcoxon test is one of the statistical tests used in normal distributed data (numerical data) and to test whether there is a significant influence between pre-test and post-test in one group of samples.

## RESULTS

Table 1. Characteristics of respondents

| Characteristics | Amount (person) | Percent (%) |
|---|---|---|
| Age | | |
| Mean | 23.27 | |
| Median | 22.00 | |
| SD | 9.231 | |
| Gender | | |
| Male | 21 | 63.6 |
| Female | 12 | 36.4 |
| Education | | |
| Elementary School (SD) | 10 | 30.3 |
| Junior High school (SMP) | 8 | 24.3 |
| High school (SMA) | 14 | 42.5 |
| College | 1 | 3.00 |

| Characteristics | Amount (person) | Percent (%) |
|---|---|---|
| Employment | | |
| Student | 12 | 36.4 |
| Work | 4 | 12.1 |
| Labor | 7 | 21.1 |
| Farmers | 5 | 15.2 |
| Enterprenuer | 5 | 15.2 |

Table 2 Level Anxiety Pre- and Post- Health Education

| Variable | Pre Health Education | | Post Health Education | |
|---|---|---|---|---|
| | F | % | F | % |
| Mild Anxiety | 6 | 18.2 | 17 | 51.5 |
| Moderate Anxiety | 22 | 66.6 | 16 | 48.5 |
| Severe Anxiety | 5 | 15.2 | 0 | 0 |

Table 3 Health Education Effect on Operating Procedure Preparation of Action on the Level of Anxiety Patients Pre Hernioraphy in RAA Soewondo Hospital Pati

| Anxiety | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pre Health Education | | | Post Health Education | | | Z | P Value |
| Mean | SD | Interpretation | Mean | SD | Interpretation | | |
| 2.97 | 0.585 | Moderate Anxiety | 2.48 | 0.508 | Moderate Anxiety | -4.000[a] | 0.001 |

## DISCUSSION

*Anxiety Pre-Health Education*

According to research done, out of 33 respondents, 22 respondents (66.6%) were experiencing moderate anxiety before attending health education course. This is followed by six (18.2%) with mild anxiety and five (15.2%) with severe anxiety.

The anxiety was caused by fear and the patients' lack of experience and knowledge on the operating procedures. Patients also revealed that they perceived the operation to be dangerous and high risk of mortality. This is indicated by the patients' loud, rough and squeaky voice, pale appearance, strained face, and often looked uneasy in conversation [6, 12].

The above statements are in accordance with Stuart & Sundeen theory; that individuals with anxiety experience strong palpitations, blood pressure rises or falls suddenly, faint taste even unconscious and pulse sometimes decreased [8]. Behavioral response is characterized by easily distracted, impatient, tense, fear, nervousness and restlessness, while cognitive response is characterized by distracted attention, decreased concentration, forgetfulness, decreased fields of perception, confused, very alert, creativity downhill, obstacles thinking, self-awareness increases, loss of objectivity, fear of losing control, fear of the visual image, and fear of injury or dead [13]. On the other hand, affective response is characterized by restless individual, physical tension, tremors, nervousness and stuttering, lack of coordination, withdrawal from interpersonal relationships, get away from the problem, dodge and hyperventilation [14].

According to Gunarsa (2008), the physiological responses of anxiety is shown by an increase in pulse rate, blood pressure, appetite, trembling, nausea, vomiting, frequent urination, diarrhea, insomnia, fatigue and weakness, reddish or pale in the face, dry mouth, pain (chest, back and neck), anxiety, fainting and dizziness [5].

A similar research in anxiety levels in pre-hernia surgery conducted by Ibrahim (2009) stated that from 30 pre-surgical patients, one (3.3%) had mild anxiety, two had (6.7%) moderate anxiety, 19 (63.3%) had severe anxiety and 8 had (26.7%) panic attack [4].

Another study by Setiawan (2005) showed no effect of therapeutic communication on patients' pre-operative anxiety levels [4].

*Anxiety Post-Health Education*

Our research discovered that out of 33 respondents, 17 (51.5%) were experiencing mild anxiety and no severe anxiety remain after health education. The results of this study showed that health education is quite effective in reducing anxiety in pre-surgical patients.

Meanwhile, according to Sunaryo (2004), the material factors are a considerable influence on the success of counseling; such material would attract the audiences' interest and attention to the counselling process [15].

Related research conducted by Marista in Tugurejo Hospital Semarang showed no decrease in patient anxiety levels after relaxation massage [11]. This is consistent with research conducted by Sulistiyawan where there is informed consent impact on anxiety and knowledge in preoperative hernia patients [2].

Table 3 shows the descriptive statistics of mean and standard deviation of anxiety before and after health education. The mean anxiety level before health education was 2.97 (moderate anxiety) with a standard deviation of 0.585 while afterwards the average anxiety level drops to 2.48 (moderate anxiety) with standard deviation 0.508. Table 3 shows the mean difference between anxiety levels before and after health education is 0.49 with a standard deviation difference of 0.077. This difference is tested with Wilcoxon test, which resulted in p value = 0.001. Then, it can be concluded there is a significant difference of anxiety level before and after health education.

This above is evidenced by the post-health education decrease in anxiety level, where there were five patients (15.2%) with severe anxiety before health education and none remain after. Whereas, mild anxiety before health education increased from six patients (18.2%) to 17 patients (51.5%) post-health education. The responses indicate that the patients are more relaxed, are not pale, have decreased blood pressure and pulse, can communicate clearly, not nervous and not tense. That is because many respondents are driven to follow the health education, and the method that the researchers used was an effective two-way communications. Researchers also used leaflets as a medium so that the respondents are interested to read and refresh their knowledge again after the course.

This is consistent with the theory Effendi, the methods used in health education should be a method that can develop two-way communication between the providing information to the goal, so expect the level of understanding the target of the message delivered will be clearer and easier to understand [16].

It is also consistent with the theory by Notoatmodjo which aims that leaflet or props should generate the audiences' interest to help overcoming numerous obstacles in understanding and stimulate the audience to spread the message to others. Simple delivery of educational materials promote the audiences' desire to learn, explore and ultimately gain a better understanding [10].

On account of the age of the respondents, the average age of the respondents is 23 years old. In the opinion of Stuart and Sundeen, anxiety can occur at any age. Anxiety also depends on a person's perception in addressing a problem, so that children may face difficulty to overcome anxiety as they are not able to cope and handle it better than adult [9].

According to sex, the majority of respondents, as many as 21 respondents (63.6%) are male and 12 respondents (36.4%) are female. In this study, women generally experience higher level of anxiety than men. This is consistent with a theory by Mustikasari, who mentioned that anxiety is the consequence of one's perception of problems that can be faced by both men and women. Women are most likely to

experience more severe anxiety than men because of the tendency of men to be more logical while women tend to be more sentimental [13].

Research conducted by Tanuwijaya stated that there is significant relationship between informed consent to anxiety and knowledge of patients of hernia surgery in Sragen hospitals [14]

Another study carried out by Miftakhiyah showed that there is a correlation between the levels of knowledge about the procedure of surgery patients with the coping mechanisms to deal with anxiety in patients with pre-hernioraphy [4].

Research carried out by Arifah and Trise showed that there is an effect in providing information about the preparation of the operation with therapeutic communication approach to persistent pre-operative anxiety levels [7].

In this study the possibility of bias can occur due to:
Events that occurred in the past which can sometimes affect the output variable (dependent variable).
Preparation of data before and after health education among different respondents so that different intervention will produce different results between patients.

In this research, researchers face some limitations as follow:
The health education courses were attended by only 1-2 patients per day, so that the measurement of the anxiety level could not be done at the same time for all respondents.

This study did not include the control group as a comparison of pre-operative anxiety Hernioraphy. This is an independent research, as such it took a long time to deliver the health education courses.

## CONCLUSIONS

The results can be summarized as follows:
The results showed the majority of the patients before pre-hernioraphy education suffered from moderate anxiety, followed by mild anxiety and severe. Meanwhile, the patients only suffered from mild and moderate anxiety post-hernioraphy education.

The mean difference between anxiety level before and after health education is 0.49 with difference of standard deviation 0.077. This difference was then tested by Wilcoxon test, resulted in p value = 0.001. Therefore, it can be concluded that there is a significant difference of anxiety level before and after health education.

*Recommendations*

Nurses involved in handling pre-hernioraphy clients in the treatment room are expected to always pay attention, provide counseling, and monitor the physical and psychological conditions of the client during preoperative assessment in the treatment room.

To reduce the patients' pre-hernioraphy anxiety, the patient should be informed about the surgical procedures by asking the health workers or a more experienced person.

## REFERENCES

1. Sjamsuhidajat. Buku Ajar Ilmu Bedah. Jakarta: EGC; 2006.
2. Machfoedz IS, E (2006). Pendidikan Kesehatan Bagian dari Promosi Kesehatan. Fitramaya. Yogyakarta. Pendidikan Kesehatan Bagian dari Promosi Kesehatan. Yogyakarta
3. Carpenito LJ. Buku Saku Diagnosa Keperawatan. 8, editor. Jakarta: Buku Kedokteran EGC; 2004.
4. Miftakhiyah. Hubungan Tingkat Pengetahuan Pasien Tentang Prosedur Tindakan Operasi dengan Mekanisme Koping Menghadapi Kecemasan pada Pasien Pre Hernioraphy di Ruang Zaad Ibnu Abi Waqos Rumah Sakit Islam Sunan Kudus. Kudus: Stikes Cendekia Utama Kudus; 2008.
5. Muhajir. Hubungan Dukungan Keluarga dan Persepsi Nyeri Operasi dengan Tingkat Kecemasan Pasien Pre Herniorapy di RSUD Kabupaten Kudus. 2013.
6. Margono. Pengaruh informed consent terhadap kecemasan dan pengetahuan pada pasien pre operasi hernia di RSUD Kabupaten Sragen. uns. 2008.

7. Chuang M-F, Tung H-H, Clinciu DL, Huang J-S, Iqbal U, Chang C-J, et al. The effect of an integrated education model on anxiety and uncertainty in patients undergoing cervical disc herniation surgery. Computer methods and programs in biomedicine. 2016;133:17-23.
8. Arifah S, Trise IN. Pengaruh Pemberian Informasi Tentang Persiapan Operasi Dengan Pendekatan Komunikasi Terapeutik Terhadap Tingkat Kecemasan Pasien Pre Operasi di Ruang Bougenville RSUD Sleman. Jurnal Kebidanan. 2012;4(1).
9. Setiawan & Tanjung SM. Efek Komunikasi Terapeutik terhadap Tingkat Kecemasan Pasien Pre Operasi di Rumah Sakit Haji Adam Malik Medan. Jurnal Keperawatan Rufaidah Sumatra Utara. 2005;1:16-23.
10. Nursalam. Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan; Pedoman Skripsi, Tesis dan Instrumen Penelitian Keperawatan. Surabaya: Salemba Medika; 2010.
11. Azwar S. Reabilitas dan Validitas. Yogyakarta.: Pustaka Pelajar; 2004.
12. Hasan N, Aswad A. Pengaruh Layanan Konseling Terhadap Penurunan Tingkat Kecemasan Pada Pasien Pre Appendektomi Di Ruang Bedah Rsud Prof. Dr. H. Aloei Saboe Kota Gorontalo: Ung; 2015.
13. Eo Y-S, Lee N-Y, Lee J-W, Cha H-J. The Effects of Supportive Nursing Intervention Using Video-Program of Operating Room Nurses before Operation on Laparoscopic Hysterectomy Patients Anxiety. Journal of the Korea Academia-Industrial Cooperation Society. 2015;16(4):2639-46.
14. Stuart SJS. Buku Saku Keperawatan Jiwa. Jakarta: EGC; 2007.
15. Marista. Pengaruh Terapi Relaksasi Masase Punggung terhadap Penurunan Tingkat Kecemasan pada Pasien Pre Operasi hernia di RSUD Tugurejo Semarang. stikestelogorejo. 2009.
16. Effendy N. Dasar-Dasar Keperawatan Kesehatan Masyarakat. Jakarta: EGC; 2004.