

The Effect of Hypnotherapy Suggestions on Anxiety and Pain in Patients with Intravenous Line Installation

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ABSTRACT

Background: Intra Vena Line (IVL) installation is very beneficial for patients who have difficulty getting oral drug therapy because they have certain symptoms. The importance of IVL installation was not always accepted by patients, due to excessive fear of the installation procedure. This study aimed to analyze the effect of hipnotherapy suggestion method on anxiety and pain in intravenous installation.

Methods: The type of research method used in this research is pre-experimental. The design used in this study was one group pre-test and post-test. This research will differentiate the level of anxiety and pain response before and after hypnotherapy. This research uses observation sheets as instruments. Results of statistical analysis using Wilcoxon test.

Results: According to the results of this study, there was a significant effect of hypnotherapy suggestions on the anxiety and pain of Intravenous Line installation patients in the Emergency Room of Lirboyo General Hospital, Kediri.

Conclusion: This research is very useful for nursing science because it can add to IVL installation techniques in a way that is minimal pain.

I. Introduction

Installation of Intra Vena Line (IVL) is a medical procedure that aims to provide therapy in the form of fluids or drugs. IVL installation is carried out at the Hospital Emergency Room, IVL installation is carried out after an examination that indicates the patient's need for intravenous therapy in the form of infusion fluids or injection drugs (Hastomo, 2018). IVL installation is very beneficial for patients who have difficulty receiving oral drug therapy because they have symptoms of nausea, vomiting every time they eat or drink, difficulty swallowing and others (Afiatantri, 2021).

The National Comorbidity Study reports that one in four people meet criteria for at least one anxiety disorder and there is a 12-month prevalence rate of 17.7%. In Indonesia, a survey has been conducted to determine the prevalence of anxiety disorders. The prevalence of emotional mental disorders in Indonesia such as anxiety disorders and depression is 11.6% of those aged > 15 years.

Another survey was also conducted in the DKI Jakarta area in 2006. The result was that psychosomatic disorders in urban communities were quite high. The number of residents who experience anxiety symptoms is 39.8% and 28.4% depressive symptoms. These two complaints are more common in women than men with an age range of 16 - 40 years.

The results of research conducted by Annisa (2014) showed that most patients in the Emergency Room experienced severe anxiety (41.2%), and the rest experienced moderate anxiety (29.4%), mild anxiety (20.6%), severe anxiety once (2.9%) and not anxious (5.9%). This study illustrates that most patients in the emergency room experience severe anxiety which is influenced by several things, namely the type of disease, severity and medical procedures.

The results of observations and observations at the Emergency Room at the Lirboyo General Hospital, for example, are that there are still many patients who refuse the procedure of inserting an intravenous line requested by the patient or the patient's family. Some patients who refused the IVL insertion procedure said they felt intense pain before the IVL needle was inserted. This shows that the patient's fear raises the perception of various levels of pain. The average number of patient visits to the Lirboyo General Hospital emergency room is 1200 patients per month. Approximately 20% of the total number of patient visits to the emergency room, these patients receive an IVL procedure. Of the total number of patients in August 2018 who received IVL, we randomly selected 20 patients to gather information about pain during IVL insertion, 2 patients said severe pain with a pain scale above 7 (Numeric Rating Scale), 8 patients said moderate pain and 12 patients said mild pain during the installation of an intravenous line. If this is not immediately handled properly, then there is concern that the number of patients who take refusal to install an intravenous line will increase. From some of the information provided by colleagues, in other hospitals there are still many similar cases, namely refusal to insert an IVL due to intense pain during needle insertion.

Some research results show that hypnotherapy can reduce the pain experienced by patients. Research conducted on 27 respondents by Astari & Maliya showed that before being given hypnotherapy, there were no respondents who had no pain, mild pain or respondents who felt very severe pain as much (0%), while respondents who felt moderate pain were as many as 23 respondents (85.2%) and severe pain by 4 respondents (14.8%). After being given hypnotherapy there was a change in the level of pain felt by the respondents, namely mild pain as many as 24 respondents (88.9%) and moderate pain as many as 3 respondents (11.1%) (Astari et al, 2017).

Research conducted by Nurdin et al (2013) showed that 11 people (55.0%) with controlled severe pain intensity reduced to 10 people with moderate pain intensity and 1 person with no pain intensity. The same thing happened to 8 people (40.0%) with moderate pain intensity reduced to mild pain intensity. The intensity of mild pain in 1 person (5.0%) was reduced to no pain. And there is the effect of relaxation techniques on pain intensity in postoperative fracture patients with a value of $P = 0.000$. (Nurdin et al, 2013)

The fear of pain experienced by the patient and the response elicited by the patient will cause other patients, the patient's family, and the people who live around the patient (neighbors) to be very influential on their psychological response to pain during an intravenous line installation. This can also affect the wishes and interests of other patients who should receive intravenous fluid therapy (Rahayu, 2019). Refusal to install an intravenous line will be given replacement therapy in the form of oral medication, the use of this method (oral medication) can cause an increase in the number of healing days that the patient will experience and the costs incurred will also increase. Some conditions that require patients to require intravenous fluid therapy such as dehydration will have difficulty in returning their body fluids if there is symptomatic nausea and vomiting (Diana, 2021).

This study aimed to analyze the effect of hipnotherapy suggestion method on anxiety and pain in intravenous installation.

II. METHODS

The type of research method used in this research is pre-experimental. The design used in this study was one group pre-test and post-test. This study will distinguish the level of anxiety before hypnotherapy and patient anxiety after hypnotherapy, besides that researchers will also conduct an assessment of patient pain after infusion, to determine the effectiveness of hypnotherapy on anxiety and pain in IVL patients. All samples were randomly selected between the ages of 15 and 55 years. Assessment of patient anxiety in this study used the HARS scale (Hamilton Anxiety Rating Scale). and to assess the scale/level of pain using the Numeric Rating Scale (NRS). This study was only conducted on patients who were cooperative and still able to communicate fluently. In emergency patients who need immediate help, a significant decrease in GCS/level of consciousness is not included in this study. For see results effectiveness hypnotherapy to anxiety and level painful moment installation infusion with using the Wilcoxon test with significance $p < 0.05$ then H_0 is Rejected, that means There is The Effect of Hypnotherapy Suggestions Against Anxiety and Pain in Patients with Intravenous Line Installation. As the ethical consideration, the researcher use the informed consent, anonymity principle and confidentiality principle.

III. RESULTS

Anxiety Level

| No | Anxiety Level | Frequency | Percentage |
|--------|---------------------|-----------|------------|
| 1 | Not Worried | 0 | 0 % |
| 2 | Mild Anxiety | 0 | 0 % |
| 3 | Moderate Anxiety | 13 | 68% |
| 4 | Severe Anxiety | 6 | 32 % |
| 5 | Very Severe Anxiety | 0 | 0% |
| Amount | | 19 | 100% |

Table 1. Frequency Distribution of Anxiety Levels in Patients Installing *Intravenous Lines* Before Receiving Hypnotherapy Suggestions at the Emergency Room of Lirboyo General Hospital, Kediri. Based on table 4.1 above showing that respondent installation *Intravenous Line* experience worry medium and heavy before get suggestion hypnotherapy, that is as many as 13 respondents (68%) experienced worry moderate and 6 respondents (32%) experienced worry heavy .

Table 2 Distribution Frequency of Anxiety Levels in Patients Installation *Intravenous Line* After Get Treatment Suggestion Hypnotherapy at the Lirboyo General Hospital Emergency Room, Kediri.

| No | Anxiety Level | Frequency | Percentage |
|--------|---------------------|-----------|------------|
| 1 | Not Worried | 11 | 58% |
| 2 | Mild Anxiety | 8 | 42% |
| 3 | Moderate Anxiety | 0 | 0% |
| 4 | Severe Anxiety | 0 | 0% |
| 5 | Very Severe Anxiety | 0 | 0% |
| Amount | | 19 | 100% |

Based on table 2 above, it shows that most of the respondents who installed *the Intravenous Line* became anxious mild 8 respondents (42%) and not anxious as many as 11 respondents (58%) after receiving hypnotherapy suggestion treatment.

Table 3 Frequency Distribution Pain Intensity in Patients Installation *Intravenous Line* Before Get Treatment Suggestion Hypnotherapy at the Lirboyo General Hospital Emergency Room, Kediri

| No | Pain Intensity | Frequency | Percentage |
|--------|----------------|-----------|------------|
| 1 | Mild Pain | 0 | 0 % |
| 2 | Moderate Pain | 17 | 89.5 % |
| 3 | Severe Pain | 2 | 10.5 % |
| Amount | | 19 | 100 % |

Based on table 4.3 above, it shows that almost all respondents with *Intravenous Line installation* experienced moderate pain intensity before receiving hypnotherapy suggestion treatment, namely 17 respondents (89.5%).

Table 4. Distribution Frequency Pain Intensity in Patients Installation *Intra Vena Line* Which Gain Treatment Suggestion Hypnotherapy at the Lirboyo General Hospital Emergency Room, Kediri.

| No | Pain Intensity | Frequency | Percentage |
|--------|----------------|-----------|------------|
| 1 | Mild Pain | 15 | 79% |
| 2 | Moderate Pain | 4 | 21% |
| 3 | Severe Pain | 0 | 0% |
| Amount | | 19 | 100% |

Based on table 4. above showing that almost whole respondent installation *Intravenous Line* experience intensity painful light after get treatment suggestion hypnotherapy, that is as many as 15 respondents (79%).

Table 5. Statistical Test Results Suggestion Hypnotherapy to Patient Anxiety and Pain Installation of an Intravenous Line at the Lirboyo General Hospital Emergency Room, Kediri

| Test Statistics ^a | |
|----------------------------------|-----------|
| Pain_scale_post - Pain_scale_pre | |
| Z | -4.123b - |
| asymp. Sig. (2-tailed) | .000 |

Based on Table 4.6, it shows that the results of statistical tests using the *Wilcoxon test* obtained a significance value (p) = 0.000 < 0.05, then H_0 was rejected and H_1 was accepted, so it can be concluded that after Hypnotherapy Suggestions were performed on patients with *Intravenous Line installation*, the level of anxiety and pain intensity decreased, which means there is an influence of hypnotherapy suggestions on anxiety and pain intensity of patients with the installation of an *Intravenous Line*.

Table 6. Statistical Test Results of Hypnotherapy Suggestions for Patient Pain for Intravenous Line Installation at the Lirboyo General Hospital Emergency Room, Kediri.

| Test Statistics ^a | |
|--|-----------|
| Scales_anxiety_post - Scales_anxiety_pre | |
| Z | -3,500b - |
| asymp. Sig. (2-tailed) | .000 |

Based on Table 6. it shows that the results of statistical tests using the *Wilcoxon test* obtained a significance value (p) = 0.000 < 0.05, then H_0 is rejected and H_1 is accepted, so it can be concluded that after Hypnotherapy Suggestions were carried out to patients with *Intravenous Line installation*, then the intensity of anxiety decreases, which means there is an influence of hypnotherapy suggestions to decrease the intensity patient anxiety with installation *Intravenous Line*.

IV. DISCUSSION

Based on the research results, hypnotherapy suggestions are believed to be able to reduce the patient's anxiety and pain levels. The results of the analysis obtained a significance value (p) = 0.000 < 0.05 and 0.000 < 0.05, then H_0 was rejected and H_1 was accepted, so it can be concluded that after Hypnotherapy Suggestions were carried out to patients with *Intravenous Line installation*, the level of anxiety and Pain Intensity decreased, which means that there is an effect of hypnotherapy suggestions on the patient's anxiety and pain intensity with the installation of an *Intravenous Line*.

Hypnosis is a semi-conscious state which, when viewed in appearance, is similar to sleep, caused by a suggestion of relaxation and concentrated attention on a single object (Saputro, 2021). The individual becomes suggestive and responsive to the influence of the hypnotist and can recall events that have been forgotten and can relieve psychological symptoms (Septeria, 2023).

Based on the research results, hypnotherapy suggestions can reduce the anxiety level of patients with *Intravenous Line installation*. Patients who had a moderate level of anxiety before receiving hypnotherapy suggestions turned into mild anxiety and not even anxiety after receiving hypnotherapy suggestions. Hypnotherapy suggestions are also able to reduce pain intensity in patients with *Intravenous Line installation* (Astari et al, 2017). In accordance with the results of the study, after being given hypnotherapy suggestions, the patient's pain intensity became mild pain.

Several factors influence the suggestion of hypnotherapy on the level of anxiety and pain of patients with *Intravenous Line installation*, among others, the first is age. Respondents aged 15-45 years before receiving the hypnotherapy suggestion had moderate anxiety levels and after receiving the hypnotherapy suggestion treatment their anxiety level became mild anxiety as well as the patient's pain intensity changed to mild pain after the hypnotherapy suggestion was carried out. While respondents aged 15-35 years and 46-55 years before the hypnotherapy suggestion was carried out, the level of anxiety was being changed to mild anxiety, but there were some who still felt moderate anxiety after being treated with hypnotherapy suggestions, as well as the intensity of the patient's pain turned into mild pain and there were some still feeling moderate pain (Sakiyan, 2015).

The second factor is gender, female respondents have a higher anxiety level than male respondents. Likewise, the intensity of pain after being treated with hypnotherapy suggestions. Some female respondents still experienced moderate pain even though they had been given hypnotherapy suggestions (Parakh et al, 2023).

The third factor is recent education, respondents whose last education was high school and undergraduate had a moderate level of anxiety before being given hypnotherapy suggestions and then

changed to mild anxiety and not anxiety after being given hypnotherapy suggestions. Likewise with pain intensity, these respondents had mild pain intensity after being given treatment hypnotherapy suggestions, while for respondents whose last education was junior high school there were still some who experienced moderate anxiety and moderate pain even after being given hypnotherapy suggestions.

The fourth factor is the history of inserting an Intravenous Line . Respondents who had had an Intravenous Line installed had a mild level of anxiety and pain intensity compared to respondents who had never had an Intravenous Line installed ([Santosa et al, 2019](#)).

V. CONCLUSIONS

Based on statistical test results using the Wilcoxon test with a significance of $\alpha < 0.05$ was obtained results that p value is 0.0000 so There is The Effect of Hypnotherapy Suggestions Against Anxiety and Pain in Patients with Intravenous Line Installation.

Officer Medical at least able, make hypnotherapy suggestions to patients before carrying out the installation of the Inta Vena Line and suggest being able to suggest themselves to reduce anxiety and pain according to the instructions given.

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REFERENCES

- Afiatantri, A. N. I., & Solikah, S. N. (2021). Description of the Anxiety Level of Infusion in Children at the Karanganyar Hospital Emergency Room. *Intan Husada: Scientific Journal of Nursing*, 9(2), 24-34.
- Annisa, K. N. (2014). Description of the Anxiety Level of the Patient's Family in the Emergency Room (IGD) Panembahan Senopati Hospital, Bantul (*Doctoral dissertation*, University of Muhammadiyah Yogyakarta).
- Astari, R., & Maliya, A. (2017). The Effect Of Hypnotherapy On Pain Reduction In Post Operating Patients With Femur Fractures In The Surgery Inpatient Ward, Surakarta Orthopedic Hospital. *Journal of Nursing Science News*, 3(1), 35-42
- Diana, M., Kemalasari, K., Puspita, E., & Jati, A. S. (2021). Control System and Monitoring of Infusion Liquids in the IoT-Based Dehydration Management Process. *Journal of Electrical Engineering*, 17(3).
- Hastomo, M. T., & Suryadi, B. (2018). Deep breathing relaxation technique on pain scale at the time of infusion in the Emergency Room. *Indonesian Scientific Journal of Nursing*, 8(02), 436-442.
- Nurdin, S., Kiling, M., & Rottie, J. (2013). The effect of relaxation techniques on pain intensity in postoperative fracture patients in the Irina A BLU room at Prof. Dr. Hospital. RD Kandou Manado. *Journal of Nursing*, 1(1).
- Parakh, H., & Thosar, N. (2023). Evaluation and comparison of anxiety levels after using Guided Imagery technique for relaxation and modified Guided Imagery-Hypnotherapy technique in 6 to 14 year-old children undergoing local anesthesia administration. *F1000Research*, 12, 1000.
- Rahayu, M. K., Waluyanti, F. T., & Hayati, H. (2019). Factors Associated with Reactions to Pain Due to Invasive Actions in Children Being Treated. *Scientific Journal of Altruistic Nursing*, 2(2), 13_21-13_21.
- Sakiyan, S. (2015). Action Research: Hypnotherapy to Overcome Pain and Anxiety in Colon Cancer Patients. *IJNP (Indonesian Journal of Nursing Practices)*, 2(1), 61-78.
- Santosa, T. B., Sutanto, Y. S., & Septiawan, D. (2019). Hypnotherapy Effectiveness in Bronchoscopy to Control Anxiety, Breathlessness and Cough. *Indonesian Journal of Respiriology*, 39(1), 21-30.
- Saputro, H., & Efendy, M. A. A. (2021). Differences in the effectiveness of hypnosis with free needle anesthesia on the child's pain level during the circumcision process. Kediri; *Brahmanda Lantern Chakra Institute*
- Septeria, I. P., Najmah, N., & Syakurah, R. A. (2023). Hypnosis Therapy for Anxiety in Pregnancy. *Silampari Nursing Journal*, 6(2), 1937-1950.