Original Research

Audio Hypno-Analgesia Intervention Effect On Pain Levels During Wound Treatment At JR Care Nursing Practice

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ABSTRACT

Background: Efforts to minimize pain and discomfort include the provision of hypnoanalgesia complementary therapy interventions with additional hypnosis audio hypnoanalgesia methods that cause a feeling of relaxation in patients during wound care. This study analyzed the effect of audio hypnoanalgesia on pain levels in wound care.

Methods: Quasi-experimental research using a random control trial was conducted at the JR Care Independent Nursing Practice, Banjarbaru from January to December 2020. The population was 120 patients with total randomization of 60 subjects from the treatment group and 60 subjects from the control group receiving standard care. The independent variable is audio hypnoanalgesia, while the dependent variable is the level of pain. Hypnoanalgesia was performed using hypnosis recordings/audio while pain level was measured using a numerical pain scale of 0 to 10. Data analysis used an independent t-test. The effect of the treatment was seen from the difference in the level of pain before and after being given treatment.

Results: Subjects experienced a significant decrease in mean pain in the treatment group from a mean of 4.95, SD = 0.67 before treatment to a mean of 0.13, SD = 0.34 after treatment, effect size 0.97 using Cohen's formula and statistically significant (p = 0.000) which means the administration of audiohypnoanalgesia has a positive effect on reducing pain levels.

Conclusion: Hypnoanalgesia audio therapy can be used to minimize patient pain during wound care.

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INTRODUCTION

Getting wounded is not something we can't avoid sometimes. There must be several occasions in our lives as humans when physical trauma occurs. Wounds are tears or damage to the skin (Arisanty, 2013). Wounds are damage to the structure and

function of normal skin anatomy as a result of internal or external pathological processes that affect certain organs (Lazarus, et. Al, 1994).

Wound needs to be properly treated to ensure faster healing. The steps taken are starting to clean the wound to reduce the number of bacteria in the wound area. The pain sensation from a wound is caused by tissue damage of the skin. It can also be caused by wound treatment procedure such as wound cleaning, wound dressing change, and debridement. Treatment for a wound may cause an unbearable pain. The health practitioner who treats the wound cannot assess the intensity of the pain because pain is a subjective experience.

Based on the preliminary data that were collected in the past 6 months, Praktik Keperawatan (Nursing Practice) JR Care Banjarbaru tends 75 patients on average each month. Health practitioners of JR Care have treated various kinds of wound such as gangrene, post-surgery wounds, and accident wounds. Pain is an unpleasant sensory and emotional experience. Each individual has their own experience with sensations of pain, perception of pain, and emotional response to pain. The levels of pain reported by JR Care patients range from 2 to 7 in 0–10 pain rating scale, which means they experienced mild to moderate pains during their treatment. It is undeniable that safe and quick wound treatment with manageable pain is desirable for patients.

Fortunately, there have been favorable advances in wound care that are supported by rapid development in healthcare technology. Nowadays, various methods of preventing wound treatment from being painful are available. Hypnotherapy is one of them. This method is a kind of mind-body therapy that can guide the patient into a deep trance-like state, induce certain mental imagery and deliver therapeutic suggestions to his subconscious mind. Hypnotherapy is commonly employed to heal mental disorders and relieve physical trauma (Arter, 2014). Hypnosis can modify various sensations, perceptions, thoughts, feelings and behaviors through powerful suggestions.

The human brain that has been targeted by suggestions would immediately instruct the central nervous system to stimulate reticular activating system (RAS) so as to make it slow down its performance which is followed by the release of serotonin from specialized cells in the pons and the brainstem, which is the area of the brain that is called bulbar synchronizing region (BSR) (Lichtor, Terry, 2013). When a patient is in a relaxed state and his RAS's activity decreases, BSR will take over and he will fall asleep (Potter & Perry, 2005). Positive suggestions given to a patient that is in the state of hypnosis have the power to make him perceive or behave according to those suggestions.

Hypnotherapy for wound treatment focuses on the emotional aspect and the dynamics of the subconscious mind. Since pain is subjective, hypnotherapy for this purpose is basically aimed at pain relief. This specific use of hypnotherapy is often called hypno-analgesia. It is a non-pharmacological intervention for pain management that can be performed by a nurse. Based on its function, hypno-analgesia can be categorized as anodyne hypnosis (Prasetya, 2018). The essential part of hypno-analgesia is the power of suggestions or perceptions in inducing positivity as a form of mental conditioning that aims to give the positive energy that one needs to do a given activity.

This method of hypnosis is expected to result in the lessening or alleviation of pain that has been caused by physical trauma (Amarta, 2012). Audio hypno-analgesia is administered to ensure the patient's comfort during wound treatment and the nurse can focus on his/her task. Despite its benefit, according to Prasetya (2018), hypno-analgesia for pain management in wound treatment is still a rare option, particularly in Indonesia.

Many people in the country still think that hypnosis is a paranormal activity and is associated with crime, while in fact it is based on science and has been recognized as a safe method of therapy by WHO.

MATERIAL AND METHOD

The present research was designed as a quasi-experimental research and was supported by a random control trial method. It was conducted at Praktik Keperawatan Mandiri (Independent Nursing Practice) JR Care, Banjarbaru. The population of the research included all of the patients who had been admitted for wound treatment at JR Care from January to December 2020. The population was 120 patients with total randomization of 60 subjects from the treatment group and 60 subjects from the control group receiving standard care.

The patients that were invited to participate in this research are those who fit the following inclusion criteria: able to communicate in Indonesia language, having normal hearing ability, and willing to receive audio hypno-analgesia while having a wound care. In that case, the exclusion criteria were: having a hearing impairment and not willing to receive audio hypno-analgesia while having a wound care. Pain levels were measured by numerical pain rating scale of 0 to 10. Pain level was the dependent variable, and audio hypno-analgesia was the independent variable.

Audio hypno-analgesia in this research is a complementary therapeutic intervention that uses pre-recorded audio for patients undergoing wound treatment. The intervention process begins with the patient's consent then is given audio hypnoanalgesia which has been recorded using an audio player and sound system from the start of the wound care process to completion with an average time of administration of 30-45 minutes.

Hypno-analgesia for the patients of JR care was performed by playing the audio recording from which the patient can listen to suggestions that guide him/her into relaxation. The audio was pre-recorded on MP3. Pain level indicates the intensity of an uncomfortable feeling or condition caused by wound treatment. Different levels of pain among the patients of JR Care undergoing wound care were measured before and after treatment.

The measurement data were then analysed by running a t test on them in SPSS. Subjects that meet all the inclusion criteria were informed about the purpose and the benefits of hypno-analgesia. They were also assured about their anonymity and briefed about how to give answers to the questions on the questionnaire. All of the subjects have given signed consent on their participation in the research. Clearen's ethical letter number LB.02.02/1.1//2398/2021

RESULTS

The subjects were diverse in educational background, socioeconomic status, religious belief, environmental settings, and types of wound or injury. The period of data collection was the time span during which the patients were treated at JR Care. The result of the observation of 60 subjects from the control group and 60 subjects from the treatment group is presented in Table 1. Univariate analysis on their data describes the general characteristics of the sample for each variable that include age, education, and occupation. It is also laid out in Table 1.

Table 1. General Characteristics of the Subjects

Variable	Control		Treatment	
Education	N	%	N	%
Middle school (SMP)	11		8	
High school (SMA)	41		43	
University/college	8		9	
Total	**60**	**100**	**60**	**100**
Occupation				
Housewife	12		8	
Farm laborer/ farmer	6		12	
Entrepreneur	7		13	
Private sector employee	24		31	
Students	2		0	
Government employee	7		5	
Member of the Indonesian National Armed Forces (TNI)/ Indonesian National Police	2		1	
Total	**60**	**100**	**60**	**100**

Bivariate analysis was performed to examine the mean difference between the independent and dependent variables for which independent t test is applied. The resulting data from the test of different pain levels for the treatment group whose members received audio hypo-analgesia intervention and for control group whose members received standard treatment are provided in Table 2.

Table 2 shows that there was no significant difference in pain level between the control group and the treatment group before audio hypno-analgesia intervention was performed. In other words, the difference is statistically insignificant ($p = 0.797$). The resulting values reflect the fact that the randomized grouping of the participants into audio hypno-analgesia and non-audio hypno-analgesia has made two comparable groups in terms of the pain level before hypno-analgesia intervention.

Table 2. The mean difference in pain level between audio hypno-analgesia group and non-audio hypno-analgesia group before intervention from the t test

Group	N	Mean	SD	p
Audio Hypno-analgesia	60	4.95	0.67	0.797
Non-audio hypno-analgesia	60	4.90	0.74	

Table 3 informs that the pain level of audio hypno-analgesia (treatment) group is lower (Mean = 0.13; SD = 0.34) than non-audio hypno-analgesia (control) group (Mean = 4.57; SD = 0.53). In conclusion, the difference is statistically significant ($p < 0.001$). This means that there is an effect of giving hypno-analgesia audio in minimizing the level of pain during wound care. This finding (from RCT) suggests that hypno-analgesia was effective in relieving pain experienced by the patients who were being treated for their wound at Praktik Keperawatan JR Care Banjarbaru.

Table 4. The mean difference in pain level between audio hypno-analgesia group and non-audio hypno-analgesia group after intervention

Group	N	Mean	SD	P
Audio hypnoanalgesia	60	0.13	0.34	< 0.001
Non-audio hypno-analgesia	60	4.57	0.53	

The measurement of the effect of audio hypno-analgesia intervention on the pain levels of the patients who underwent wound treatment is 0.97. According to Cohen's effect size interpretation, any value between 0.8 and 2.0 indicates a strong effect. Thus, it can be inferred that audio hypno-analgesia intervention can contribute significantly to the decrease in pain intensity in patients undergoing wound treatment.

DISCUSSION

The present research relies on independent t test to examine the effects of audio hypno-analgesia on subjects in the control group and treatment group. The values in Table 4 implies that patients who received hypo-analgesia intervention show lower mean of pain level compared to those who received standard treatment. This means that there is an effect of giving hypno-analgesia audio in minimizing the level of pain during wound care.

This result supports the theory that mind programming that is performed by means of affirmations and suggestions during hypnotic trance can be a starting point for perception changes (Beneditis, 2015). Hypnosis begins when the hypnotist focuses the subject's attention and puts him/her into relaxation through induction and deepening techniques (Daitch, 2018). Placebo effect occurs when the subject responds to a medication or medical intervention that is driven by the expectation that the medication will actually work for him/her. This accepting response or the willingness to receive the medication is always a positive start.

The patient's optimistic attitude towards complementary therapy increases the efficacy of audio hypno-analgesia intervention. In many cases, the more the patient is informed about the intervention's effectiveness, the higher the effectiveness of the intervention will be. Patients who are told that a particular intervention would reduce their pain are highly likely to actually experience the reduction of pain compared to the patients who are told that the intervention would produce no significant effect on their pain. In addition, positive patient–nurse relationship also play important role in increasing the placebo effect (Smeltzer & Bare, 2002).

Audio hypno-analgesic therapy is effective in modulating pain perception because of its positive effect on the patient's cognitive processes during wound treatment. The subconscious mind is the part of human mind that stores all of our beliefs and values. It controls all of the body's functions. According to Kihlstorm and Prasetya (2018), hypnosis for analgesia is largely mediated by cognitive processes instead of physiological processes. The efficacy of hypnosis for analgesia is not associated with the increase in beta endorphine level (Spiegel & Albert, 1983 via Kihlstorm,1984).

Hypno-analgesia is presumed to have the ability of inhibiting conscious awareness by activating the limbic system inside the cerebral cortex. As a result, the transmission of pain impulse from the thalamus to the cortical areas is hindered. Another theory explains that audio hypno-analgesia reduces pain by delaying the activities in the anterior cingulate cortex instead of directly affecting the cortical activities. The

suggestions, delivered during the hypnotic trance, guide the patient to a deeper relaxation, change the nature of pain, and alter the patient's attitude towards pain so as to create a more positive experience during with wound treatment.

The research process was carried out with the patient's consent. Then the patient was listened to audio hypnoanalgesia at the wound care stage. The majority of patients said they were happy and more relaxed when they listened to hypnoanalgesia audio. According to Prasetya et. al (2018) and Iserson (2014), under hypnosis, the cerebral cortical function is inhibited, and consequently, the capabilities to identify, analyze, and decide on the new stimuli are greatly impaired. Therefore, during hypnosis, the brain cannot use previous experiences and so the hypnotist's suggestions become the dominant power.

Through active guidance, the hypnotized patient's condition and behavior can be controlled. In this way, the patient's psychological or physiological problems can be eliminated or treated. Nevertheless, it should be kept in mind that the hypnotherapist's capability of guiding hypnosis the session still plays a very important role in achieving the desirable response from the patient.

CONCLUSION

This research demonstrates that audio hypno-analgesia as a complementary therapeutic intervention is effective in modulating patients' pain perception during wound treatment. Patients who receive the treatment experience a reduction in pain level more than those that do not receive the treatment. Hypnoanalgesia audio therapy can be used to minimize patient pain during wound care.

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