

# Critique: sample size and personal message assignment

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Research Critique 1 Running head: RESEARCH CRITIQUE Research Critique of “ The Influence of Personal Message with Music on Anxiety and Side Effects Associated with Chemotherapy” Jennifer Robey BSN Duke University N 307 Spring 2005 Research Critique 2 Research Critique of “ The Influence of Personal Message with Music on Anxiety and Side Effects Associated with Chemotherapy” Introduction The introduction of this article does give you a sense of the importance of the problem area. The area being talked about in this article is how fear and anxiety can negatively impact a patient receiving chemotherapy.

The authors then go on to say that relaxation techniques can be used to decrease a patient’s anxiety level, however the techniques being used in current practice are costly and take a lot of nursing care time. The introduction ends with the problem statement. While the authors do a good job of saying why the problem is important, it would have been helpful for them to list numbers of people who are affected by cancer and who are undergoing chemotherapy. The authors also do not state whether the problem is true for anybody with cancer who is getting chemotherapy or if it is only true for particular subsets of patients.

Statement of the Problem The purpose of this study “ was to evaluate the benefits of an intervention that did not require excessive time commitments from staff or patient or administration by a trained expert and was not accompanied by a significant increase in cost. ” (Sabo & Michael, 1996)

While the authors do list a purpose for the study they do not have a well-defined problem statement. They do say that a message from the physician would be beneficial, but they do not say how it would be beneficial. They <https://assignbuster.com/critique-sample-size-and-personal-message-assignment/>

make no mention of Research Critique 3 the other variable that they are testing which is the use of music.

The problem is significant and relevant because the researchers are looking at a time and cost effective way to decrease anxiety and stress in patients undergoing chemotherapy. The critical argument of this study was that having a personalized message from the physician would benefit the patient. Review of Literature The literature review that was done by the authors was concise and appears to not omit any important works that were done in the time period the article was written in. The authors explain why their research is important and how it can be used to expand the nursing knowledge base.

The authors state that their study will give validity to a nursing intervention that is cost effective and requires little training. The conceptual model for this study was Neuman's Systems Model, which conceptualizes the individual as a core, which is protected by three circles, which function at various levels to protect the core from stressors. (Sabo & Michael, 1996) In this study the stressor is chemotherapy and the interventions which are used to minimize the stressor is music and a personalized message from the physician.

There were several key concepts that were identified in the literature review, but they were never defined. The concepts included relaxation, guided imagery, music therapy, and side effects of chemotherapy. The authors described how previous Research Critique 4 research used these concepts to support their work; however these concepts are never fully explained. The authors critically reviewed the literature and point out the limitations of the

previous studies. There were several gaps that were identified that were used to justify the current research.

Most of the literature dealt with using relaxation techniques and guided imagery and not specifically with the use of a personalized message from the physician with music. Most of the previous research also dealt with small sample sizes, or case studies. Previous research was also unable to determine how effective each individual technique was. (Sabo & Michael, 1996) The references used were effective in presenting the case for this study. The reference list itself was small and some of the articles were dated. This particular study was published in 1996 and three of the references used were from the years 1981 through 1983.

Reference two on the list was not used in the literature search, even though the primary focus of this reference was in the critical care arena it would have been nice to see how those authors used the techniques. The dependent variables in this study are anxiety level and chemotherapy side effects. These variables are not explained in the literature search as to how they are defined. The independent variables are the use of music and a personalized message from the physician during chemotherapy. Like the dependent variables there is no explanation as to how these are defined.

Research Critique 5 There is no clear hypothesis stated in the literature review section of the paper, however there are two hypotheses listed after the methodology section. It would have been easier to read about the hypotheses before the methods were given, so that the reader could understand why the methods were being done the way they were. The first

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hypothesis is: " The intervention of music and a message from the physician will strengthen the flexible lines of defense of a patient receiving chemotherapy, as evidenced by a decrease in anxiety over time. (Sabo & Michael, 1996) The second hypothesis is: " The intervention of music and a message from the physician will lessen the impact of the stressor of chemotherapy, as evidenced by a decrease in the severity of side effects. " (Sabo & Michael, 1996) Methodology The study used a nonprobability convenience sample of 97 patients who presented to one of two oncology offices for chemotherapy. The sample was delegated into the control group or experimental group based on what office they went to. The researchers state that the two offices were picked because they were adjacent but not adjoining and had similar physical appearances and physician styles. The subjects were selected before they received their initial chemotherapy and were followed for the first four chemotherapy treatments. Subjects were not picked based on length of time to get the four treatments or type of cancer that they had. The method of sample selection was appropriate for this particular study. The study would have had more power if the Research Critique 6 sample could have been randomized to the control or experimental groups by random selection rather than by which physician the patient saw.

The sample is representative of the population of interest, which is adult cancer patients who are undergoing chemotherapy treatment. A weakness of the study is that the researchers used only patients who were receiving chemotherapy for the first time; they excluded people who had already received prior chemotherapy treatments, which is a huge segment of the

population of interest. The sample size of 97 seems small to generalize the results to the population of interest, which is people with cancer. The authors do not list anywhere in the article any numbers to demonstrate how many people there are in the United States with cancer who are receiving chemotherapy. That makes it difficult to determine if the 97 is appropriate. The authors also do not state if a power analysis was done before the beginning of the trial to make sure that the appropriate sample size was chosen. The researchers used two data collection instruments to complete this study. The first is the Spielberger State Anxiety Inventory. This tool is a self-administered survey that asks 20 likert-type scale questions related to how the individual feels at the time it is completed.

This tool is being used by the researchers to measure a patient's anxiety level before the first chemotherapy treatment and after the fourth treatment. The authors do not include the tool in the publication so it is difficult to determine if it is appropriate to use in this Research Critique 7 study. The tool does have validity because according to the authors the current version has been used in over 2000 research studies since 1980. The second data collection instrument is The Cancer Chemotherapy and Side-Effects Inventory, which was developed by the researchers.

This too, used likert-type scale questions that the patient answered before their first round of chemotherapy and again after the fourth round to rate the severity of certain symptoms and side effects. This tool is appropriate for the study because one of the hypotheses was that the use of a personal message with music would decrease the side effects of chemotherapy. The

tool also asked if the music was beneficial to people in the experimental group. The researchers established reliability and validity for this instrument by having three oncologists and six oncology nurses review and revise the form prior to its initial use.

The main threat to external validity in this study is the lack of random selection of subjects. Threats to internal validity included not recording additional treatments that the patient may have received which could have effected their symptoms, the type of cancer the patient had, type of chemotherapy the patient received, and if the patient enjoyed the type of music being offered. The researchers do not list any extraneous variable that they controlled for. The researchers do describe the methodology that they used to complete the study, however before this study could be replicated more details would need to be known.

The researchers Research Critique 8 do not say how long the tape lasted. You are told that harp music was used, but you do not know which particular songs were included on the tape. The researchers say that the message from the physician was scripted, but the physician could change it as they see fit, the script was not included in the article. The institutional review board at the university where the study was conducted approved the study protocol. Informed consent was obtained from the participants prior to being enrolled in the study. Subjects had the right to refuse to participate in the study. Data Analysis The article included a total of four different tables. The first two tables had demographic information for both the control and experimental groups. These two particular tables are easy to read and appear to be

accurate. The last two tables list the statistical test results. These two tables also appear to be accurate and are easy to read. Discussion The authors' state that their research contributes to the growing body of knowledge in regards to simple interventions that can reduce a patient's anxiety level while they are receiving unpleasant treatments.

The authors also state that chemotherapy counts as an unpleasant treatment. They do not say if the work supports previous research on just chemotherapy patients. The authors listed five weaknesses that they found with their study. These included using one tape with the music, Research Critique 9 message, and guided imagery on it, small sample size, use of non-randomization for the sample, and quality of the audiotapes. The researchers' state that these weaknesses will be addressed in future studies. The conclusions that the authors draw are appropriate for the study that was conducted.

The authors state that the use of the tape is a cost and time effective way to decrease a patient's anxiety level while they are receiving chemotherapy. The authors also state that this will save nursing time because the patients will not be so anxious and nurses can then spend their time with patients who are having complications. The conclusions partly supported the research question which was would the use of a personal message from a physician and music decrease a patient's anxiety level and experienced side-effects from chemotherapy. The authors say that the intervention had no effect on the experienced side-effects.



The researchers do list recommendations for future research. They recommend using a larger sample size as well as controlling for types of cancer and treatments. They also recommend using professionally produced tapes. The researchers discussed clinical implications from this study. They said that this study showed that a nursing intervention was beneficial to patients and that the intervention did not use a lot of time or money. General A literature review of the researchers showed that this was the first article on cancer and music therapy that they both did.

Carolyn E. Sabo's previous research was primarily focused Research Critique 10 on diabetes and HIV. Susan Rush Michael's previous research was primarily focused on diabetes and chronic illnesses. The article was published in Cancer Nursing which is a refereed journal. The article was originally published in 1996 and revised in 2004. There is no documentation to say if the article was accepted or rejected on the first submission. As a nurse who is primarily focused on emergency medicine the article does not have any direct implications into the care I provide.

That being said I do take care of cancer patients and when I am taking a history I can use the results of this study to recommend the use of music during their next chemotherapy treatment if they are experiencing anxiety. Occasionally cancer patients and other patients are subjected to painful procedures and using music therapy to decrease the anxiety level associated with the procedure could be considered. Research Critique 11 References Sabo, C. E. , & Michael, S. R. (1996). The Influence of Personal Message with

Music on Anxiety and Side Effects Associated with Chemotherapy. *Cancer Nursing*, 19(4), 283-289.