



## RELATIONSHIP BETWEEN THE NURSE EDUCATORS ROLE AND NUTRITION INTAKE IN CHEMOTHERAPY PATIENTS WHO HAVE NAUSEA

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### ABSTRACT

#### KEYWORDS

*Role of Nurse Educator,  
Nutrition Intake,  
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Nausea is one of the effects of chemotherapy that can interfere with nutritional intake so that it interferes with the ongoing chemotherapy program. Lack of nutritional intake due to nausea can be prevented by educating chemotherapy patients in reducing nausea. Nurses carry out their role as educators in an effort to improve health through behavior that supports health, one of which is educators. This study aims to determine the relationship between the role of nurses and educators with nutritional intake in chemotherapy patients who experience nausea at IRNA II RSUD Dr. Saiful Anwar Malang. This type of research is an analytical survey using a cross sectional approach. The population of this study was chemo patients who were nauseous within 1 month with the number of patients per month  $\pm$  32 people. Data were taken on average for patients from January to May 2021 and carried out in September. The sampling technique in this study was non-probability sampling with purposive sampling technique. The research instrument was a nurse educator role questionnaire consisting of 30 questions and a nutrition intake questionnaire filled out 24 hours in the morning, afternoon and evening. The results of the Spearman correlation test showed a correlation value (r) of 0.463 (46.3%) and a p-value of 0.01. The value of  $p < \alpha$  (0.05), which means that there is a relationship between the role of nurses as educators with nutritional intake in chemotherapy patients who experience nausea in IRNA II RSUD Dr. Saiful Anwar Malang.

### INTRODUCTION

Nausea and vomiting are one of the effects of chemotherapy in the treatment of cancer. Nausea and vomiting if ignored can cause a decrease in nutritional intake and cause complications such as electrolyte imbalance, anorexia, weight loss, dehydration, worsening of the patient's general condition, decreased chemotherapy doses and patients may refuse or leave treatment (Ahmad et al., 2015).

The results of the study (Escobar et al., 2015) at 19 hospitals in Spain there were 42% of patients who complained of nausea and 20.8% complained of vomiting while receiving chemotherapy. The results of the study (Kottschade et al., 2016) in America there are 35% of patients complaining of nausea and 19% complaining of vomiting while receiving chemotherapy. Results research (Al Qadire, 2018) in Jordan shows that although the patient used antiemetic therapy, the overall incidence of nausea and vomiting was still high, namely 71.4% and 57.3%, respectively. A previous study found that there were 27% of patients who stopped chemotherapy treatment before time, 71% caused by nausea and vomiting that has not been resolved properly (Marvell, 1992).

According to Aditama (2003) in (Implementation et al., 2016) nursing is a form of professional service in hospitals that plays an important role in the implementation of

efforts to maintain the quality of health services in hospitals. Based on their role as nurse educators, nurses transfer knowledge, skills, and attitude formation during patient-focused learning. Changes in behavior in patients during the learning process in the form of changes in thought patterns, attitudes, and specific skills. In nursing, health education is a form of independent nursing intervention to help clients, both individuals, groups, and communities in overcoming their health problems through learning activities in which nurses act as nurse educators. According to research (Fahra et al., 2017) with the title the relationship between the role of nurses as educators and self-care in patients with diabetes mellitus. The research shows that the educational results obtained by the patient affect the patient's motivation. Of the several nurse roles that exist, the researcher will only take one nurse role, namely the role of educator.

From a preliminary study conducted by researchers taking 5 patients undergoing chemotherapy at Saiful Anwar Hospital Malang. Of the 5 patients, it was known that 60% of patients were not educated about how to meet nutritional intake due to nausea and 40% were educated about how to meet nutritional intake due to nausea. for 24 hours the patient was given food 3 times from the hospital nutrition and every meal it was found that 3 patients only spent half portion of food from the ration provided by nutrition, 1 people only a quarter portion of the ration and 1 people only eat a few spoonfuls because of nausea. Of these 5 patients, even 3 people experienced a decrease in Hb levels below 10 g/dl so that blood transfusions had to be given first up to more than 10gr/dl because the chemotherapy requirements for Hb had to be more than 10 g/dl. This matter This causes the length of hospitalization to be prolonged so that the costs incurred also increase. The role of nurses as educators if implemented properly and professionally may be used to overcome the lack of nutritional intake in chemotherapy patients who experience nausea by educating patients so that their nutritional intake is adequate. nutritional intake in chemotherapy patients who experience nausea at IRNA II RSUD Dr. Saiful Anwar Malang.

## METHOD RESEARCH

The design of this research is observational. This type of research is an analytic survey using a cross sectional approach. In this study, the researchers correlated the role of the nurse educator with the nutritional intake of chemotherapy patients who experienced nausea at IRNA II RSUD Dr. Saiful Anwar Malang.

The population in this study were chemotherapy patients who experienced nausea at IRNA II RSUD Dr Saiful Anwar Malang. The number of chemotherapy patients in the last 1 month with an average number of patients per month was approximately 32 people. The data was taken from the average patient from January to May 2021. The sample is part of the population that is used as a subject in the study through sampling. Determination of the size of the sample can be formulated with the formula solvin and obtained the number of 30 samples.

The sampling technique used in this study was non-probability sampling with purposive sampling technique. This purposive sampling technique is used because of how to choose a sample from the population according to what the researcher wants, so that the sample can represent the characteristics of the previously known population. The sample taken in this study must meet the inclusion and exclusion criteria. Inclusion criteria are criteria or characteristics that need to be met by each member of the population that can be taken as a sample, while exclusion criteria are characteristics of population members who are not taken as samples. so that the sample can represent the characteristics of the population that have been known previously. Inclusion criteria in this study Patients undergoing

chemotherapy, chemotherapy patients experiencing nausea, able to communicate well, patients willing to be respondents, patients undergoing chemotherapy treated at IRNA II RSSA Malang, patients at the time of the study for 1 month in 2021, exclusion criteria In this study, the patient's condition improved. The patient experienced physical discomfort such as severe pain. The patient was in poor condition.

Variables in this study the independent variable in this study was the role of nurse educator and the dependent variable in this study was nutritional intake in chemotherapy patients. The location of the research was carried out at IRNA II General Hospital Dr. Saiful Anwar Malang, which was on Jalan Attorney General Suprpto No. 2 Malang, East Java Province and this research was conducted in September 2021

Research Instruments, which is used in the study to determine the implementation of the nurse's role as an educator using a questionnaire prepared by. (Pratama, 2020) Consists of 30 question items with answer choices using a Likert scale, namely: 1 = never 2= sometimes 3= often 4= always . The role of nurses as educators consists of 6 indicators consisting of: 1. Knowledge of chemotherapy patients 2. The course of cancer so chemotherapy 3. Knowledge of chemotherapy effects 4. Monitoring of chemotherapy cycles 5. Provision of Health Education according to Schedule and Regularly 6. Self-Care for Chemotherapy patients (Pratama, 2020) . And in assessing nutritional intake using 24-hour Food Recall (Dairy Nutrition). This 24 -hour Food Recall (Dairy Nutrition) was adopted from the Indonesian Ministry of Health 2018. The amount of energy intake and types of food was measured using the 24 -hour food recall method. The researcher asked the menu that the respondent had eaten the day before so that the respondent was expected not to forget the menu. In addition, the researchers also asked the respondent's snacks and how to process the food consumed, such as steaming, frying, and boiling. Thus, the food menu that will be processed by the Nutrisurvey software is adjusted to the way the food is processed. The amount of food is expressed in Household Size (HS) in grams and compared with the recommended NAR (Nutrition Adequacy Ratio). The type of food consumed is known by calculating the proportion of carbohydrate, mineral, weak, protein consumption in the average amount of energy intake in one day (Elliyana, 2020) . The assessment is Sufficient if more than 80% or equal to 80% insufficient if less than 80%

Prior to data collection, the researcher took care of the initial data collection letter at the secretariat addressed to the training section of RSUD dr. Saiful Anwar Malang. After obtaining the approval of the research permit from the Director of the General Hospital, Dr. Saiful Anwar Malang data collection was done by selecting respondents based on the inclusion criteria set by researchers at IRNA II RSUD dr. Saiful Anwar Malang,

Data collection is a process of approaching the subject and the process of collecting the characteristics of the subject required in a study. (Nursalam, 2015) . The steps that will be taken when collecting data in this research are Research Preparation starting with the study of submitting a preliminary study permit to campus and home sick. The preliminary study was carried out at IRNA II RSUD Saiful Anwar Malang by asking for permission verbally from the head of IRNA II and the head of the room where the data was collected. Then the researcher prepares a research proposal. After that, the researcher conducts a research proposal exam after the supervisor approves the research proposal. After conducting the proposal exam, the researcher revised it and was then approved by the supervisor and examiner to continue the research. Then the researcher took care of the research permit to STIKES Maharani. After that, the researcher submitted a letter of appropriate research ethics to the RSSA ethics team and this research was declared ethically worthy. After obtaining ethical approval, the researcher submitted a research permit to the RSSA and then

it was approved. After obtaining a research permit from the RSSA, the researcher conducted a validity test at IRNA II RSSA. Then the implementation is carried out. After the validity test was carried out and the ethical letter was issued, the researcher conducted a research by asking the Head of IRNA II for permission. Data collection was carried out by the researcher himself and questionnaires were given to patients while in the middle of the chemotherapy process in phase 2 according to the protocol and questionnaires for measuring nutritional intake were given in the initial phase of chemotherapy until chemotherapy was completed according to the protocol. The researcher then gave an explanation of the research conducted and an informed consent sheet to the respondents. Data collection was carried out in August 2021. The researcher gave a questionnaire sheet to the respondent and explained how to fill in and assist in filling out and assist in filling out the questionnaire if the respondent did not understand it by asking questions to the respondent. Then the results of the respondents' answers are used to fill out the questionnaire. After 1 x 24 hours, the questionnaire was given back. The researcher rechecked the completeness of filling out the questionnaire, if any incomplete; it can be clarified back to the respondent to be completed. After the observation, data processing and data analysis were carried out. After processing and analyzing the data, the researcher made chapters 5 and 6 and then consulted the supervisor. After obtaining approval from the supervisor, the researcher conducts an examination of the results of the research

Data processing in this study is in the form of ordinal data for both variables. Ordinal data is data that shows the level (Nursalam, 2015). Editing is an attempt to re-check the correctness of the data obtained or collected. Editing can be done at the data collection stage or after the data has been collected. Editing is done on filling out the questionnaire sheet. In this study, the researcher edited after receiving the questionnaire that had been filled out by the respondent, checked for correctness and completeness. If there are respondents who are incomplete in filling out the questionnaire, the researcher asks the respondent to complete it. Coding is an activity of assigning numeric codes (numbers) to data consisting of several categories. Giving this code is very important when processing and analyzing data using a computer, usually in coding, a list of codes and their meanings is also made in one book to make it easier to see the location and meaning of a code from a variable (Nursalam, 2015).

Data analysis is an important part to achieve the objectives of the research in answering research questions based on the required data (Notoatmodjo, 2012). Univariate analysis or descriptive analysis is an explanation of the characteristics of the variables to be studied (Notoatmodjo, 2012). Categorical data such as gender, occupation, education and marital status were analyzed in percentage form. Numerical data are age, the role of nurses as educators and assessment of nutritional intake standard deviation, median, minimum and maximum values. Data on the role of nurses as educators are also presented into two categories, namely the good category with a score of 60-120 and the unfavorable category with a value of 30-60 and Sufficient intake data if more than 80% or equal to 80% Not sufficient if less than 80%. From the data above, the researcher used the Spearman statistical test. Bivariate analysis was carried out to determine the relationship or correlation between two variables. Bivariate analysis was used by researchers to determine the relationship between the independent variable of the nurse's role as an educator and the dependent variable of nutritional intake in chemotherapy patients using the Spearman rank statistical test, which is a statistical test that relates the two variables. The measurement scale of this study is the role of nurses as educators (interval) and nutritional intake (ordinal). Statistical test of correlation or relationship using the spearman rank test. The

basis for decision making if  $p < 0.05$  then  $H_a$  is accepted but if  $p > 0.05$  then  $H_a$  fails to be accepted.

## RESULT AND DISCUSSION

### Research result

The results of this study will describe research and data analysis on the relationship between the role of nurses as educators and nutritional intake in chemotherapy patients who experience nausea at IRNA II RSUD Dr. Saiful Anwar and through the research ethics exam at the Health Research Ethics Committee of the Regional General Hospital, dr. Saiful Anwar Malang, that has received information that he has passed the ethical review number 400/155/K.3/302/2021 on 2021.

### *Cross Tabulation of the Relationship between the Role of Nurses as Educators and Nutrition Intake in Chemotherapy Patients Experiencing Nausea at IRNA II RSUD Dr. Saiful Anwar*

**Table 1 Cross-tabulation of the Relationship of the Role of Nurses as Educators with Nutrition Intake in Chemotherapy Patients Experiencing Nausea in IRNA II Hospital Dr. Saiful Anwar**

Nurse's Role as Educator	Nutrition Intake		Total
	Not Enough	Enough	
Bad	9 (30%)	11 (36.7%)	20 (100%)
Good	0 (0%)	10 (33.3%)	10 (100%)
Total	9 (30%)	21 (70%)	30 (100%)

Source: Primary data

The results of the cross tabulation of the role of educator nurse and nutritional intake showed that of the 20 respondents who stated that nurses had a bad role, the majority of respondents had adequate nutritional intake as many as 11 people or 36.7 percent of the total respondents observed. Then from 10 respondents who stated that nurses had a good role, the majority of respondents had adequate nutritional intake as many as 10 people or 33.3 percent of the total respondents observed.

### *Relationship of the Role of Nurses as Educators with Nutrition Intake in Chemotherapy Patients Who Experienced Nausea at Irna II Hospital Dr. Saiful Anwar*

To test the relationship between the role of the nurse educator with the ordinal data scale and the patient's nutritional intake with the ordinal data scale, the Spearman correlation test was used with the following results



**Table 2 Correlation Test of the Relationship of the Role of Nurses as Educators with Nutrition Intake in Chemotherapy Patients Who Experienced Nausea at Irna II Hospital Dr. Saiful Anwar**

		Nurse's Education Role	Nutrition Intake
<b>Nurse's Education Role</b>	Correlation Coefficient	1.000	463**
	Sig. (2-tailed)		.010
	N	30	30
<b>Nutrition Intake</b>	Correlation Coefficient	463**	1000
	Sig. (2-tailed)	.010	
	N	30	
<b>Total</b>			

Source: Primary data

The results of the Spearman correlation test showed a correlation value (r) of 0.463 (46.3%) and a p-value of 0.01. The p value <  $\alpha(0.05)$ , which means that there is a relationship between the role of nurses as educators and nutritional intake in chemotherapy patients who experience nausea at IRNA II RSUD Dr. Saiful Anwar Malang. The closeness of the relationship (46.3%) in the low category. The correlation is positive, the higher the educational role of nurses, the higher the nutritional intake, in other words, the higher the role of nurses as educators in nutrition education for chemotherapy patients, the higher the nutritional intake for chemotherapy patients who experience nausea at IRNA II RSUD Dr. Saiful Anwar Malang.

### Discussion

Chemotherapy is the process of administering anti-cancer drugs in the form of liquid pills or capsules or through infusions that aim to kill cancer (Putra, 2015). Patients receiving chemotherapy often experience nausea which causes a decrease in nutritional intake in chemotherapy patients, especially patients who experience nausea and this occurs in patients undergoing chemotherapy in the first, second and third stages, the management that can be done as a nurse is patient education about how to overcome nausea so that nutritional intake is achieved better. In this chapter, the researcher will discuss the implementation of the nurse's role as an educator in chemotherapy patients who experience nausea at IRNA II Saiful Anwar Hospital Malang.

#### *Implementation of the Nurse Educator Role at IRNA II RSUD Saiful Anwar Malang*

From the data found in this study, it was found that the nurse's role as an educator was not rated well with the questionnaire data given to 30 respondents. In a good assessment, 10 respondents and 20 questionnaires were obtained which were not good. Factors inhibiting patient education according to (Pratiwi, 2016) .

Patient education perception This is due to work overload, lack of policies and guidelines. With the wrong perception of education, patient education is still a low priority, so nurses are still lacking in educating patients, especially chemotherapy patients who experience nausea. This is in accordance with the results of the nurse education questionnaire conducted by researchers who obtained poor numbers.

Perception of the nurse's role in providing education The perception of the nurse's role in providing education is caused by a lack of professional knowledge and skills, difficulty

communicating with patients, the belief that patient education is not the nurse's responsibility. If the perception of the nurse's role is to provide good education, it will increase the knowledge and skills of professional nurses, reduce the difficulty of communicating with patients, and increase the belief that education is part of the nurse's responsibility (Pratiwi, 2016)

The low results of the questionnaire on education for chemotherapy patients who experience nausea related to nutritional intake by nurses could be due to a wrong perception from nurses that education is not the main task of nurses but the task of nutritionists. With this wrong perception, nurses can provide education related to nutrition for chemotherapy patients to nutritionists. The high workload of nurses is one of the factors that cause nurses to lack education. Nurses feel they have a workload that does not only provide education to patients, but also works to care for patients such as helping to mobilize patients, giving and taking medicines, cleaning the patient's body, coordinating with other staff, and so on. (Pratiwi, 2016)

The low results of nurse education for chemotherapy patients who experience nausea can be caused because nurses have a very high workload. In carrying out nursing care, nurses must also perform other tasks such as delegation duties from the medical profession. This causes the time to perform the role of education is very less. Especially if the number of nurses is very less. Lack of managerial attention to patient education. The manager's lack of attention is the main cause of obstacles in providing education to patients. Managers should support actions in providing education, such as evaluating staff in the implementation of the patient education process, providing appropriate facilities and places for education, preparing an interactive atmosphere between staff, and supporting the promotion and patient education process (Abdi et al., 2014).

The lack of education carried out by nurses on chemotherapy patients who experience nausea related to nutritional intake could be due to the lack of managerial attention to nurse education to patients through audits. Nurses carry out their role as educators in an effort to improve health through behaviors that support their health (Asmadi, 2008). In this study the role of nurses as educators is still undervalued. Many factors cause the lack of a nurse's role in education or as an educator. When this research was conducted in a situation where there was a shortage of nurses in the hospital room because they were assigned to handle COVID-19, this affected the nurse's role as educator. In addition to the lack of nurses, the ability factor in nurses can also affect this research. Nurses as educators must have the ability to assess the strengths and consequences of providing information and desired behavior by individuals (Efendi, 2008). The role of the educator nurse in overcoming nausea in chemotherapy patients can lead to a lack of nutritional intake by educating the patient or patient's family on how to deal with nausea during chemotherapy. With the knowledge about how to deal with nausea in chemotherapy patients, patients can overcome nausea during chemotherapy or overcome nausea before and after chemotherapy. Nausea during chemotherapy can cause a lack of appetite so that it can affect food intake in chemotherapy patients. The importance of the role of educational nurses can overcome nausea in chemotherapy patients so as to increase nutritional intake.

### ***Nutrient intake in chemotherapy patients who experience nausea at IRNA II RSUD Saiful Anwar Malang***

Nutrients are organic and inorganic materials found in food and needed by the body to function properly. Nutrients are needed by the body to obtain energy for body activities, as well as regulate various chemical processes in the body. In fulfilling nutritional needs there is

a system that plays a role in it, namely the digestive system consisting of the digestive tract and accessory organs. The digestive tract starts from the mouth to the distal small intestine, while the accessory organs consist of the liver, gallbladder and pancreas. (Haswita & Sulistyowati, 2017).

One of the effects of chemotherapy is that it can cause nausea and cause nutritional intake in patients to be disturbed due to nausea. If the intake of nutrients is disturbed, it can interfere with the chemotherapy process. Because reduced intake makes the body weak and the lack of body components such as Hb and albumin in the body so chemotherapy can be delayed

The results of this study found that the nutritional intake of 30 people who became the sample obtained 9 people or 30% had inadequate nutritional intake and 21 people or 70% had adequate nutritional intake. These results indicate that the majority of respondents in the sample have good nutritional intake. Nutritional intake can be good because the patient and family have been in chemotherapy more than once. An experience that can make patients and their families obtain good nutritional intake.

Knowledge about the benefits of nutritious food can affect food consumption patterns. This can be caused by a lack of information so that errors can occur in understanding nutritional needs (Haswita & Sulistyowati, 2017).

The results of the questionnaire on intake nuts from chemotherapy patients who experienced nausea, out of a total of 30 respondents, 21 respondents received adequate nutritional intake, this is because the 21 respondents on average had undergone chemotherapy more than twice. Respondents who have undergone chemotherapy twice will get more experience and broader knowledge about how to deal with nausea so that nutritional intake is fulfilled during chemotherapy. The knowledge obtained by respondents during the first chemotherapy is very useful for fulfilling nutritional intake during chemotherapy and nausea occurs. The knowledge conveyed by nurses about the fulfillment of nutrition is very important for the fulfillment of the respondent's nutritional intake.

In a sample of 9 people who experienced inadequate nutritional intake on average were respondents with the first chemotherapy, this caused a lack of knowledge compared to respondents who underwent chemotherapy more than twice. In general, 70% of the 30 respondents or 21 people had their nutritional intake fulfilled because they had undergone chemotherapy more than twice.

Economic status can affect changes in nutritional status because the supply of nutritious food requires a lot of funding. People with high economic conditions are able to suffice (Haswita & Sulistyowati, 2017).

Of the total number of respondents regarding the patient's nutritional intake, 21 respondents, the adequate nutritional intake could be due to economic factors. On average, the respondent's family can afford to buy other food menus if the respondent does not consume the food from the hospital. So the ability to buy food from outside can replace the adequate nutritional intake of respondents who experience nausea during chemotherapy.

The importance of adequate nutritional intake in patients undergoing chemotherapy can make the success of chemotherapy higher. Because nutritional intake in chemotherapy patients is difficult to achieve because the effect of chemotherapy causes nausea so that there is a decrease in appetite so that nutritional intake is not fulfilled. One way to deal with nausea in chemotherapy patients is to educate patients on how to deal with nausea or their families so that they understand how to control nausea and reduce nausea so that nutritional intake can be achieved.



***The Relationship between the Implementation of the Role of Nurse Educator And Nutrition Intake in Chemotherapy Patients who Experience Nausea at IRNA II RSUD Dr. Saiful Anwar Malang***

In this study, the results of the Spearman correlation test showed a correlation coefficient or correlation coefficient ( $r$ ) of 0.463 (46.3%) and a  $p$ -value of 0.01. The  $p$  value  $< \alpha(0.05)$ , which means that there is a relationship between the role of nurses as educators and nutritional intake in chemotherapy patients who experience nausea at IRNA II RSUD Dr. Saiful Anwar Malang. In this study, it was found that patients had good nutritional intake in patients who had undergone chemotherapy more than 2 times and patients who experienced poor nutritional intake because they had only undergone chemotherapy 1 to 2 times. The role of nurses as educators in this study is said to be bad. Because there are many factors, one of which is the lack of energy when doing research in a pandemic. Where many nurses are assigned to handle COVID-19 patients.

In this study, there were many inhibiting factors that could not be controlled by the researcher. According to (Pratiwi, 2016) there are several inhibiting factors that can hinder the process of successful education. One of them is the perception of patient education. This is due to the lack of policies and guidelines on patient education, and patient education is still a low priority. The more nurses feel that patient education is part of a professional nursing process, the fewer obstacles there will be from nurses' difficulties in dealing with problems that affect the perception of patient education .

One thing that makes the nurse educator role less than optimal is the perception of the nurse's role in providing education due to the lack of professional knowledge and skills, difficulty communicating with patients, the belief that patient education is not the nurse's responsibility. If the perception of the nurse's role is to provide good education, it will increase the knowledge and skills of professional nurses, reduce the difficulty of communicating with patients, and increase the belief that education is part of the nurse's responsibility. so that it is possible to increase the virginity of nurses as educators.

The problem is that patients who have not been found in this study exist if those who are illiterate can cause the patient to be unable to read, write, and understand the information provided by the nurse. Patients who are illiterate will also have lower knowledge about health, such as delayed diagnosis, poor disease management skills, and higher health care costs. Nurses are responsible for enhancing skills, preferences, and providing health information.

In addition to the culture of the patient, the words and everyday language used by the patient need to be known. Because if the nurse can know the patient's speech and accent it will be easier to provide education. Nurses have the challenge of knowing every language of a wide variety of patients. If the language used by the patient is already attached and as the main language, then this becomes an obstacle for nurses to communicate with patients. Usually nurses use family members who are able to communicate in the language used by nurses, but there are some terms in nursing that cannot be translated related to the education provided by nurses.

In carrying out maximum education, there are many obstacles that must be considered, one of which is physical barriers and the patient 's environment . Physical factors play a role in how patients are able to process health information. As the patient ages, visual clarity and auditory acuity will decrease, making it difficult for the patient to receive information, think and retain information. Changes in mental capacity due to pathological disease processes, such as Alzheimer's disease or pharmacological interventions can create barriers to providing effective education. Patients who experience short-term memory loss and the amount of new

information will limit the sessions in providing education and the amount of information provided. Patients who feel pain due to physical limitations will also inhibit the patient's ability to receive information, as a result, patients feel anticipation, anxiety, and fear due to lack of knowledge. Environmental factors are also a determinant of success in the educational process. If the lighting is bad, there is noise and the room temperature is erratic, it will hinder the educational process. It is a challenge for nurses to shorten patient care in hospitals by providing education during patient health care.

Patient learning styles Nurses must understand the learning styles of each patient. Patient assessment is very important for nurses to be effective in providing education, because each patient has a different learning style. The learning pattern of each patient is different depending on several patterns that the patient likes, namely visual, auditory, and kinesthetic learning patterns. Nurses need to study patient learning patterns so that nurses are successful in conveying messages and building patient understanding (Beagley, 2011).

The method of education is very important for nurses to understand to provide education to patients. The methods provided can be in the form of demonstration methods, printed instruction methods (eg leaflets, pamphlets, etc.), and video methods. These methods must be adapted to the patient's condition, before the nurse must assess the patient's educational needs, then the nurse provides educational interventions according to the method to be given.

During the pandemic, where this research took place, the number of nurses in the room was reduced because they were assigned to treat COVID 19 patients. This made the workload even higher. Nurses feel they have a workload that does not only provide education to patients, but also works to care for patients such as helping to mobilize patients, giving and taking medicines, cleaning the patient's body, coordinating with other staff, and so on.

Job dissatisfaction is a barrier to implementing patient education. The existence of high job dissatisfaction is caused by lack of motivation, insufficient salary, lack of appropriate opportunities to learn, lack of medical staff, job stress, anxiety, depression and an unsupportive work environment that worsens nurse satisfaction.

The factor that influences education outside of nurses and patients is the lack of managerial attention to patient education . The manager's lack of attention is the main cause of obstacles in providing education to patients. Managers should support actions in providing education, such as evaluating staff in the implementation of the patient education process, providing appropriate facilities and places for education, preparing an interactive atmosphere between staff, and supporting the promotion and patient education process (Abdi et al., 2014). Differences in point of view between educational staff Differences in point of view between nurses and other medical staff, such as doctors, are an obstacle to educating patients. Differences in point of view between staff to provide education to patients due to lack of appropriate interaction and education between different staff, lack of coordination and communication between staff can hinder the patient education process. To offer the right treatment related to patient education, interaction and discussion between staff is needed to determine what actions should be taken in an effort to educate patients

In this study, nutrition in patients was said to be good for patients undergoing chemotherapy. Because several factors can affect nutritional intake in patients undergoing chemotherapy. Because in the case of patients undergoing chemotherapy, the effects of chemotherapy can cause nausea, thereby reducing appetite. Due to reduced appetite the data causes a lack of nutritional intake.

Factors that can affect nutrition in this study are the patient's knowledge and experience in undergoing chemotherapy. Knowledge of the patient and the patient's family greatly influences the patient's nutritional intake. Knowledge that can reduce nausea is usually

obtained from experience or from talking to patients who have undergone chemotherapy first. Meanwhile, lack of experience and knowledge about the benefits of nutritious food can affect food consumption patterns. This can be caused by a lack of information so that errors can occur in understanding nutritional needs.

From the results of the cross tabulation, it was found that 20 respondents had poor education, but 11 respondents had adequate nutritional intake and 9 respondents did not. In addition to the experience and knowledge of the patient or the patient's family, the patient's feelings or prejudices, both good and bad, can affect appetite and thus affect nutritional intake. Bad prejudice against certain types of highly nutritious food can affect a person's nutritional status. For example, in some areas, tempeh, which is the cheapest source of protein, is not used as food that is fit to eat because people think that consuming this food can lower their status. In research, patients can find foods that do not increase nausea by talking or exchanging experiences with other patients in the room or in the family waiting room so that it can have an impact on the level of self-taught patient knowledge in dealing with nausea while undergoing chemotherapy.

From the education that was not good, it was found that 11 respondents had adequate nutrition because even though nurses did not provide education in all of the 30 total questions about nutrition education for chemotherapy patients who experienced nausea, nurses had provided principles of knowledge on how to overcome nausea so that nutritional intake was met during chemotherapy and nausea occurs

Habits can affect nutritional intake The existence of harmful habits or restrictions on certain foods can also affect nutritional status. For example, in some areas, there is a ban on eating bananas and papayas for teenage girls. In fact, these foods are a very good source of vitamins. Habits found in this study that can affect the results so that they get good marks in research are habits where patients always chat with other patients and exchange experiences so that it becomes a good habit.

Preference and economy are additional factors in influencing intake in chemotherapy patients. Excessive liking for a type of food can result in a lack of variety in food, so that the body does not get enough of the substances it needs. Likes can lead to a decline in nutrition in adolescents if the nutritional value is not as expected. Economic status can affect changes in nutritional status because the supply of nutritious food requires a lot of funding. Communities with high economic conditions are able to suffice.

In this study, one of the factors that can affect nutritional intake in chemo therapy patients is age, gender and type of drug or drug dose. Age is clearly a determining factor in the study of nutritional intake in this study. Because the younger the age, the better the immune system to withstand the effects of chemotherapy, namely nausea. Gender in this study can also be said to have an influence but not significantly. The type of drug in this study on average uses 5fu but each drug has a different dose for patients undergoing chemotherapy so that the drug dose may have an influence in this study.

Congenital diseases that can cause nausea in this study were not disaggregated and could not be detected for example gastritis, vertigo, etc. Diseases that can cause nausea before chemotherapy can affect the results in this study. In addition to the patient factor, there are also nurse factors who think that education about nutritional needs or nutritional intake in this research is the task of nutritionists. So that it affects the results of this study

The test results obtained a close relationship between the role of nurses as educators and nutritional intake of (46.3%) in the low category. The correlation is positive, the higher the educational role of nurses, the higher the nutritional intake, in other words, the higher the role of nurses as educators in nutrition education for chemotherapy patients, the higher the

nutritional intake for chemotherapy patients who experience nausea at IRNA II RSUD Dr. Saiful Anwar Malang. This relationship proves that the role of nurses as educators can affect the quality of patient's nutritional intake so that patients can improve and improve the quality of nutritional intake, especially when undergoing chemotherapy. Because if the nutritional intake is not met properly it can disrupt the chemotherapy cycle that has been programmed, therefore the role of the nurse educator is needed so that the chemotherapy program can be implemented.

## CONCLUSION

Based on the results of research and discussion in this study, conclusions can be drawn regarding the relationship between the role of nurses as educators on patient nutrition at IRNA II RSUD Dr. Saiful Anwar Malang, which is the result of identifying the role of nurses as educators in chemotherapy patients who experience nausea, the results are not good because many things, one of which is at the time of research in the room there is a shortage of nurses so that it affects the level of education in patients. Results of identifying nutritional intake in chemotherapy patients who experience nausea. It was found that the nutritional intake of chemotherapy patients was said to be good. From the results of the study, it was found that the nutrition of chemotherapy patients was good due to several factors, one of which was because the patient had experience undergoing chemotherapy or had undergone chemotherapy more than twice. Meanwhile, patients who were still undergoing chemotherapy twice or once experienced a decrease in nutritional intake and those who were more than two times had good nutritional intake. The results of the analysis of the relationship between the implementation of the nurse's role as an educator with nutritional intake in chemotherapy patients who experience nausea. The role of nurses as educators has a significant effect in the low category on the patient's nutritional intake. The results of the correlation are positive, the higher the educational role of nurses, the higher the nutritional intake, in other words, the higher the role of nurses as educators in nutrition education for chemotherapy patients, the higher the nutritional intake for chemotherapy patients who experience nausea at IRNA II RSUD Dr. Saiful Anwar Malang.

## REFERENCES

- Ahmad, MM, Dardas, LA, & Ahmad, H. (2015). Cancer Prevention and Care: a National Sample from Jordan. *Journal of Cancer Education*, 30 (2), 301–311.
- Al Qadire, M. (2018). Chemotherapy-Induced Nausea and Vomiting: Incidence and Management in Jordan. *Clinical Nursing Research*, 27 (6), 730–742.
- Asmadi. (2008). *Basic Concepts of Nursing*.
- Hall, LE (2011). Factors Associated with the Occurrence of Food Leftovers in Inpatients at the Jakarta Hajj Hospital. *Indonesian Journal of Human Nutrition*, 2 (1), 123. kalteng.litbang.pertanian.go.id
- Byju, A., Pavithran, S., & Antony, R. (2018). INTERNATIONAL COLUMN Effectiveness of acupressure on the experience of nausea and vomiting among patients receiving chemotherapy. *Canadian Oncology Nursing Journal*, 28 (2), 132–138.
- DeSantis, CE, Ma, J., Gaudet, MM, Newman, LA, Miller, KD, Goding Sauer, A., Jemal, A., & Siegel, RL (2019). Breast cancer statistics, 2019. *CA: A Cancer Journal for*

*Clinicians*, 69 (6), 438–451.

Efendi, NF (2008). *Education In Nursing - Google Books*.

Escobar, Y., Cajaraville, G., Virizuela, J.A., Ivarez, R., Muñoz, A., Olariaga, O., María, &, Tamés, J., Muros, B., Lecumberri, J., Feliu, J., Martínez, P., Carlos Adansa, J., Martínez, J., López, R., Blasco, A., Gascón, P., Calvo, V., Luna, P., ... Tornamira, V. (2015). Incidence of chemotherapy-induced nausea and vomiting with moderately emetogenic chemotherapy: ADVICE (Actual Data of Vomiting Incidence by Chemotherapy Evaluation) study. *Support Care Cancer*, 23, 2833–2840. <https://doi.org/10.1007/s00520-015-2809-3>

Fahra, RU., Widayati, N., &, Sutawardana, JH (2017). The Relationship of the Role of Nurses as Educators with Self-Care for Type 2 Diabetes Mellitus Patients in the Internal Medicine Polyclinic of the Bina Sehat Hospital, Jember. *Nurseline Journal*, 2 (1), 67–72.

Fajrina, D., Norontoko, DA, Surabaya, SO, Leukocytes, K., Levels, L., & Society, C. (2018). *Self Acceptance and Side Effects of Breast Cancer Clients Through*. XI (1), 24–34.

*Nursing Concepts & Methods (ed. 2) - Google Books*. (nd). Retrieved May 9, 2021, from

Kottschade, L., Novotny, P., Lyss, A., Mazurczak, M., Loprinzi, C., & Barton, D. (2016). Chemotherapy-induced nausea and vomiting: incidence and characteristics of persistent symptoms and future directions NCCTG N08C3 (Alliance). *Supportive Care in Cancer*, 24 (6), 2661–2667.

Marvell, C. (1992). Anticipatory Nausea and Vomiting Among Cancer Patients: A Review. *Psychology & Health*, 6 (1–2), 97–106.

Momayyezi, M., Fallahzadeh, H., Farzaneh, F., & Momayyezi, M. (nd). *Sleep Quality and Disturbances in Children and Adolescents with Cancers: A Cross-Sectional Study*. 6 (52), 7529–7542.

Notoatmodjo. (2012). *Health Research Methodology*. Rineka Cipta.

Nursalam. (2015). *Health Research Methodology* (4th ed.). MEDICAL SALE.

Implementation, H., Educator, P., Satisfaction, D., Ispa, P., Ruang, DI, Children, P., Karsa, RSU, Batu, K., Ratnasari, A., Studies, P., Nursing, I., Health, FI, & Malang, UM (2016). *The relationship between the implementation of the role of educator and the satisfaction of ARI patients in the pediatric ward of RSU Karsa Husada, Batu City*.

Primary, Ferina Nadya. (2020). Digital Digital Repository Repository University of Jember Jember Staphylococcus aureus Digital Digital Repository Repository University of Jember Jember University. *Thesis*.

Pratiwi, DW (2016). The Relationship between the Role of Nurses as Educators and Self-Efficacy in Type 2 Diabetes Mellitus Patients at the Internal Polyclinic RSD dr. Soebandi Jember. *Thesis, Digital Repository, University of Jember*, 164.



- Sutandyo, N. (2007). Nutrition In Cancer Patients Who Receive Chemotherapy. In *Indonesian Journal of Cancer* (Vol. 4, pp. 144–148).
- Torre, LA, Bray, F., Siegel, RL, & Ferlay, J. (2015). *Global Cancer Statistics, 2012*. 65 (2), 87–108..
- Tunas, IK, Yowani, SC, Indrayathi, PA, Noviyani, R., & Budiana, ING (2016). The Assessment Quality of Life For Patients with Cervical Cancer Using Chemotherapy Paclitaxel-Carboplatin in Sanglah. *Indonesian Journal of Clinical Pharmacy*, 5 (1),
- Wella. (2019). No TitleEAENH. *Wella*, 8 (5), 55.
- World Health Statistics 2015 - World Health Organization - Google Books*. (nd). Retrieved March 4, 2021, from WHO.(2015). World Health Statistics 2015. World Health Organization.

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