

THE RELATIONSHIP OF NURSE'S EFFECTIVE COMMUNICATION PATTERNS TO ANXIETY LEVEL AMONG CARCINOMA PATIENTS UNDERGOING EXTERNAL RADIOTHERAPY AT ADI HUSADA CANCER CENTER SURABAYA

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Abstract

Introduction: *Anxiety is a common problem experienced by cancer patients undergoing external radiotherapy caused by physical and psychological factors. Anxiety can worsen the patient's condition because anxiety reduces the immune system by lower the activity of T lymphocyte cells as natural killer cells, so it can make increase the growth of malignant cells. Treatment for cancer patients is often only focused on physical factors, while the patient's psychological factor is sometimes neglected. One way that can be used to reduce the patient's psychological anxiety is to use communication effectively. However, the relationship between nurses' effective communication patterns to anxiety levels among carcinoma patients undergoing external radiation therapy is not yet clear.*

Methods: *A correlation analytic approach with a cross-sectional design to analyze the relationship between nurse communication and patient's anxiety level. This research was conducted on 40 respondents with carcinoma undergoing external radiation therapy in August-September 2021. Subjects were chosen using purposive sampling.*

Result: *The data were analyzed using the spearman rank test. The data shows no significant figures or numbers $p\text{-value} = 0.329 > \alpha (0.05)$. Implementing effective communication among patients with carcinoma undergoing radiotherapy can't reduce the patient's anxiety level.*

Discussion: *Effective communication can help clients clarify the burden of feelings and thoughts, get the information needed, feel heard, feeling cared for so that it can reduce the client's anxiety. But in this study, the factors that can affect anxiety levels in patients undergoing radiotherapy are the age of patients, background education, cancer stage, length of cancer, social support, financing, sources of information, and role change.*

Keywords: *Communication, Nurses, Anxiety, Radiation*

1. INTRODUCTION

Patients undergoing radiotherapy have excessive anxiety due to the disease process and the side effects of treatment. Radiotherapy is a medical procedure used to kill cancer cells, stop cancer growth and spread of cancer cells, and prevent cancer recurrence, but radiotherapy can damage healthy cells due to exposure to x-rays (Research, 2018). The causes of stress that often occur in patients undergoing radiotherapy include changes in psychological factors and physical factors (Yaribeygi et al., 2017). Psychological factors include changes in job status, changes in roles, changes in relationships. Physical factors in the form of hair loss, nausea, vomiting, decreased immune system, oral mucositis due to acini gland damage, and xerostomia or dry mouth (Eghbali et al., 2016) (Sholikhah et al., 2020). (Yaribeygi et al., 2017) stated that stress as a psychological effect is a trigger factor that can worsen various diseases and pathological conditions, and can reduce the immune system where stress can reduce the cytotoxic activity of T lymphocyte cells as natural killer cells that can increase the growth of malignant cells in cancer patients, instability genetics, and tumor expansion that can worsen the patient's condition. (Saniatuzzulfa et al., 2015) explained that psychological therapy is often not done, only focusing on physical therapy. Even though psychological health really supports the healing process.

Cancer is one of the diseases that causes morbidity and mortality worldwide. The American Cancer Society (ACS) estimates the number of cancer cases at 1.68 million with 4,600 new cancer diagnoses each day and 600,920 cancer deaths (Research,

2018). The five most common types of cancer suffered by patients in Indonesia are breast cancer, cervical cancer, lung cancer, colorectal cancer and liver cancer (Kemkes, 2022). The highest cancer prevalence was in DI Yogyakarta province at 4.86 per 1,000 population, followed by West Sumatra 2.47 per 1,000 population and Gorontalo 2.44 per 1,000 population. In East Java the number of cancer sufferers is also high as many as 61,230 people (Kemkes, 2022).

Of the 10.9 million people diagnosed with cancer worldwide each year, half of patients require radiotherapy and curative therapy (Gondhowiardjo, 2016). In Indonesia, there are only 28 hospitals that have radiotherapy facilities (Wisnubroto, 2014). This amount is of course far from sufficient to provide cancer therapy services for the Indonesian people in need. This makes patients and families more stressed due to the accumulation of patients and long therapy queues (Saniatuzzulfa et al., 2015). Many methods of treatment and the lack of information on therapy that will be carried out by the patients, it causes a state of stress and anxiety experienced by the patient while in the hospital and to reduce these problems one of them relates to how to communicate with hospital staff, especially nurses (Alatas et al., 2020).

Some situations that cause high stress and anxiety are lack of communication or lack of information about the patient's illness. This situation can be overcome by improving communication between nurses and patients (Alatas et al., 2020). Effective communication is described as a standard of professional nursing practice. One of the things that nurses do in maintaining good cooperation with

clients in helping to meet the health needs of clients, as well as with other health workers to help overcome client problems is to communicate. Communication techniques that can be used by nurses to take action to reduce anxiety are listening and giving full attention (caring) so that it is effective in reducing anxiety and accelerating healing (Antiani, 2020). Effective communication can help clients clarify the burden of feelings and thoughts, can reduce client anxiety (Rossely, 2018). Nurses who have the ability and skills both in terms of communication will establish relationships with patients and families (Rahayu et al., 2018).

Effective communication on the anxiety level of cancer patients with radiotherapy at Adi Husada Cancer Center Surabaya has never been studied. This can be used as basic data in screening and counseling to overcome anxiety problems. Based on the above background, researchers are interested in conducting research on the relationship between effective communication patterns of nurses on the level of anxiety of carcinoma patients who are undergoing external radiation therapy at Adi Husada Cancer Center Undaan Surabaya.

2. METHODS

Data collection was carried out using quantitative research with analytic observational design on 40 respondents of carcinoma patients who were going to undergo radiation therapy in the Adi Husada Cancer Center room at Adi Husada Undaan Hospital from 19 August to 30 September 2021, Surabaya with a purposive sampling technique. The inclusion criteria used were carcinoma patients who were undergoing external radiation therapy, aged 26-75 years, while the exclusion criteria were critical patients and

unconscious. The analytical method uses the Spearman rank test.

The dependent variable was effective communication patterns, and the independent variable was the anxiety level of patients with carcinoma undergoing radiation. The instruments used in this study were informed consent forms, the STAI (State-Trait Anxiety Inventory) questionnaire. (Spielberger, Gorsuch, Lushene, Vagg, 1983) to identify respondent's anxiety and nurse communication questionnaire to identify communication made by radiotherapy nurses. Respondents will be measured vital signs before filling out the questionnaire, then given time to fill out the STAI questionnaire and nurse communication before radiation therapy.

3. RESULTS

Table 1. Characteristics of participants at Adi Husada Cancer Center Undaan Hospital Surabaya from 19 August to 30 September 2021

Characteristics of participants	Frequency (n)	Percent (%)
Age (Year)		
26-40	10	25
41-55	25	62,5
56-75	5	12,5
Gender		
Man	13	32,5
Woman	27	67,5
Marital status		
Not married	1	2,5
Married	39	97,5
Divorced	0	0
Education status		
High school	13	32,5
Bachelor	27	67,5
Employment status		
Housewife	15	37,5
Civil servants	3	7,5
Private job	1	2,5
Trader	19	47,5
Retired employees	2	5

Income Level		
< Rp. 4.000.000	11	27,5
> Rp. 4.000.000	29	72,5
Sources of funding		
Private insurance	13	32,5
Company	2	5
Personal	25	62,5
Diagnosis of Cancer Disease		
Head and neck	7	17,5
Breast	14	35
Prostate	2	5
Cervical	10	25
Endometrial	1	2,5
Nasopharyngeal	6	15
Stage of Cancer		
Stage 1	1	2,5
Stage 2	26	65
Stage 3	9	22,5
Stage 4	4	10
Total	40	100

Source: Primary Data

Based on the analysis in table 1, it was found that the majority of respondents 41-55 years old were 25 respondents (62.5%), The biggest gender was 27 female (67.5), married 39 respondents (97.5%), 27 undergraduate educated people (67.5), working as traders 19 people (47.5%). The income level of the majority is more than 4 million per month 29 people (72.5%), private financing 25 people (62.5%), suffering from breast cancer as many as 14 people (35%) with stage 2 about 26 respondents (65%).

Table 2. Frequency Distribution of Respondents Based on Implementing Effective Communication patterns at Adi Husada Cancer Center Undaan Hospital Surabaya from 19 August to 30 September 2021

Variable Effective Communication	Frequency	Percent (%)
Effective Communication	33	82,5
Less Effective Communication	7	17

Total	40	100
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Source: Primary Data

Based on the analysis in table 2 Almost all of the respondents get effective communication from health workers at the Adi Husada Cancer Center Surabaya hospital as many as 33 respondents (83%).

Table 3. Frequency Distribution of Respondents Based on Anxiety Level at Adi Husada Cancer Center Undaan Hospital Surabaya from 19 August to 30 September 2021

Variable Anxiety Level	Frequency	Percent (%)
Moderate anxiety	11	27,5
Severe anxiety	29	72,5
Total	40	100

Source: Primary Data

Based on the analysis in table 3 majority all of the respondents experienced severe anxiety when they were going to undergo radiation therapy at the Adi Husada Cancer Center Surabaya hospital as many as 29 respondents (72,5%).

Table 4. Relationship and Crosstabulation Nurse's Effective Communication Patterns to Anxiety Level Among Carcinoma Patients Undergoing External Radiation Therapy At Adi Husada Cancer Center Surabaya from 19 August to 30 September 2021

Character istics	Anxiety Level		Total	P-value
	Moderate n %	Severe n %		
Effective Communi cation	8 24,	25 75,	33	0,329
Effective Communi cation Less Effective Communi cation	2 8	8		
Less Effective Communi cation	3 42,	4 57,	7	
Effective Communi cation	9	1		

Total	11	40
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Source: *Spearman rank test*

Statistical test using Spearman rank test show that there was no relationship between nurses' effective communication patterns with the anxiety level of carcinoma patients undergoing external radiotherapy with p-value = 0.329 ($\alpha < 0,05$). So it can be concluded that there is no relationship between the effective communication pattern of nurses and the level of anxiety of carcinoma patients undergoing external radiotherapy at Adi Husada Cancer Center Surabaya.

4. DISCUSSION

The result of this study is there is no relationship between the effective communication pattern of nurses and the level of anxiety of carcinoma patients undergoing external radiotherapy. In this study respondents felt majority of nurses have communicated effectively, but there were 7 respondents felt nurses who communicated less effectively. Factors that can affect influenced communicated effective are several factors, namely age, barrier and knowledge (Agustrianti, 2015). Nurses' effective communication patterns are influenced by age and knowledge or level of education because increasing the age the experience will improve (Fatmawati, 2010) and the level of knowledge is a predisposing factor in positive behavior because with knowledge a person will start to know and try or take an action (Kesrianti et al., 2017). Communication barriers can occur due to mechanical disturbances and semantic disturbances, differences in interests, Prejudice, and latent motivations. (Zuwirna, 2016). Efforts to improve effective nurse-patients

communication skill are nurses be effectively trained in communication skills and be encouraged by constant monitoring of obtained skills, and mini-workshops improving communication skills (Norouzinia et al., 2015).

In this study, the most common type of cancer was breast cancer (Alatas et al., 2020) and the largest number patients are woman. Breast cancer is influenced by exposure to the hormone estrogen in women so that they have a higher risk of mutations than other types of cancer. Most cancer incidence in this study was at the age of 41-55 years. Based on the results of (Alatas et al., 2020) states that malignancy in the breast is more common at the age of ≥ 40 years compared to ages < 40 years. The majority of patients in this study according to age are still productive, so severe anxiety can be experienced by patients even though nurses have implemented effective communication.

Anxiety is a subjective experience that involves psychological components (affective, cognitive, behavior) and biology (somatic, neurophysiology) and the physiological symptoms of anxiety such as shaking, sweating, heart rate increase (Fauziah, 2016). Anxiety cancer survivors can affect two factors, namely internal factors and external factors. Internal factors include age of patients, while external factors include background education, cancer stage, marital status, length of cancer and social support, financing, sources of information, disease stage, type of cancer, treatment process, support received, role changes (Fauziah, 2016). The anxiety that is felt can be due to the clinical manifestations of cancer that the patients feels, namely the patients feels pain that does not go away despite being treated with medication pain reliever, a lump or swelling in a part of

the body, fatigue despite just doing daily activities, weight loss occurs due to loss of appetite (Maulana, 2021). Patients perceive cancer as a death knell (Fauziah, 2016).

The patients anxiety that does not decrease even though effective communication has been implemented can be due to side effects of radiotherapy such as interference with the spinal cord causes a decrease in blood cells white, drop platelet count, and anemia so easily tired, gastrointestinal disorders, nausea and vomiting and loss appetite, hair loss to even experience alopecia or baldness, skin disorders, mouth and throat, oral mucositis (Irna & Subita, 2008), xerostomia or reduced salivation (Kaae et al., 2016) .

Anxiety have bad effect for patients. Stress will cause dysregulation of the Hypothalamic Pituitary Adrenal (HPA Axis) which causes changes in serotonin metabolism. Negatively affects cognitive control in the frontal lobe of the brain as well as causes damage to the hippocampus and decreases dopaminergic function resulting in decreased cognitive abilities, difficulty concentrating, decision making. decisions, easily confused, impaired memory, feelings of guilt or regret, and lack of self-esteem (Rosyanti et al., 2017). One common feature of depression is a change in mood in the form of feeling down, sad or cheap, crying, and increased irritability.

According to research (Norouzinia et al., 2015) effective communication skills of health professionals are important to make good service and can decreased anxiety, guilt, pain, and disease symptoms. Moreover, good communication skill can increase patients satisfaction, acceptance, compliance, and cooperation with the

medical team, and improve physiological and functional status of the patient; it also has a great impact on the training provided for the patients. This is due to the fact that health care quality is strongly affected by nurse-patients relationship, and lack of communication skills (or not using them) has a negative impact on services provided for the patients. Hospitalization is potentially stressful and involves unpleasant experiences for patients and their families. Key treatment in nursing care are effective communication with patients, as the patients consider interaction with the nurses. Application of effective communication nurses can be more familiar, examine in more detail the needs and problems felt by patients so as to provide high quality health care services.

For a cancer patients, self-management greatly influenced by the information they receive, so if it causes uncontrollable emotions it will cause problem getting worse. Therefore, the role of nurses is very necessary in controlling patient understanding by conveying information exactly what is needed and give a positive thought or picture, so patients can adapt and also be able to improve their abilities in deal with various problems that arise in patients.

How to do effective communication is 1). The pre-interaction stage, namely the nurse seeks information about the client as the interlocutor. 2). The orientation stage is building a trusting relationship, making time contracts, meeting places, and topics of conversation. 3). The work stage is exploring the feelings and problems of the client, the nurse listens actively with full attention, seeks solutions to problems and evaluates them and concludes. 4). The termination stage is

evaluating the patients feelings, planning follow-up (Zuwirna, 2016).

5. CONCLUSION

There is no a relationship between the effective communication pattern of nurses and the level of anxiety of carcinoma patients undergoing external radiotherapy. Factors that can affect anxiety level in patient cancer undergoing radiotherapy are age of patients, background education, cancer stage, length of cancer, social support, financing, sources of information and role change.

REFERENCES

- Agustrianti, P. (2015). Analisis Faktor-Faktor yang Berhubungan dengan Efektivitas Komunikasi Perawat dan Pasien di Ruang Rawat Inap Rumah Sakit Harapan Mulia Kabupaten Bekasi Tahun 2015. *Jurnal Administrasi Rumah Sakit Indonesia*, 2(1), 72–83. <https://doi.org/10.7454/arsi.v2i1.2190>
- Alatas, F., Sulistyowati, E., & Indria, D. M. (2020). Pengaruh Komunikasi Hubungan Dokter-Pasien dan Aspek Pelayanan Kesehatan Pasien Kanker Terhadap Kualitas Hidup Pasien Kanker Di Malang. *Jurnal Bio Komplementer Medicine*, 7(1), 1–9.
- Antiani, N. P. (2020). (2020). *Strategi Komunikasi Persuasif Dalam Memberikan Motivasi Terhadap Kesembuhan Penderita Kanker (Studi Kasus Yayasan Kanker Anak Yogyakarta)* [Univerdsitas Mercu Buana Yogyakarta]. <http://eprints.mercubuana-yogya.ac.id/9364/>
- Eghbali, A., Taherkhanchi, B., Bagheri, B., & Sadeghi Sedeh, B. (2016). Effect of Chewing Gum on Oral Mucositis in Children Undergoing Chemotherapy: A Randomized Controlled Study. *Iranian Journal of Pediatric Hematology and Oncology*, 6(1), 9–14. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4867166/pdf/ijpho-6-009.pdf>
- Fatmawati, M. & S. (2010). *Komunikasi Keperawatan Plus Materi Komunikasi Terapeutik*. Nuha Medika.
- Fauziah, R. (2016). *Kecemasan Pada Penderita Kanker Naskah Publikasi*. http://eprints.ums.ac.id/43931/12/NASKAH_PUBLIKASI.pdf
- Gondhowiardjo, S. (2016). *Daftar Rumah Sakit yang Gunakan Teknologi Nuklir untuk Kanker*. <https://www.liputan6.com/health/read/2453125/daftar-rumah-sakit-yang-gunakan-teknologi-nuklir-untuk-kanker>
- Irna, & Subita, G. P. S. (2008). Identifikasi dan Pengendalian Faktor Risiko Mukositis Oral selama Radioterapi Kanker Nasofaring Laporan Kasus. *Indonesian Journal of Dentistry*, 15(4), 155–162.
- Kaae, J. K., Stenfeldt, L., & Eriksen, J. G. (2016). Xerostomia after radiotherapy for Oral and Oropharyngeal cancer: increasing salivary Flow with Tasteless sugar-free chewing gum. *Frontiers in Oncology*, 6(May), 1–6. <https://doi.org/10.3389/fonc.2016.00111>
- Kemkes. (2022). *Kanker Payudara Paling Banyak di Indonesia, Kemenkes Targetkan Pemerataan Layanan Kesehatan*. <https://www.kemkes.go.id/article/view/22020400002/kanker-payudara-paling-banyak-di-indonesia-kemenkes-targetkan-pemerataan-layanan-kesehatan.html>
- Kesrianti, A. M., Noor, N. B., & Maidin, A. (2017). *Factor Affecting Commnication At The Time Of Handover In Inppatient Room Of Hasanuddin University Hospital*. 13.
- Maulana, R. A. (2021). *Pengaruh Pemberian Radioterapi terhadap Ansietas dan Depresi pada Pasien Kanker Payudara di Rumah Sakit MRCCC Siloam Semanggi* [Politeknik Kesehatan kemenkes Jakarta II]. <https://perpus.poltekkesjkt2.ac.id/>

- respoj/js/hpdfjs/web/viewer3.php?file=../../repository//P23130117039_Rahadian Ahmad Maulana.pdf&loc_name=../../repository//P23130117039_Rahadian Ahmad Maulana.pdf
- Norouzinia, R., Aghabarari, M., Shiri, M., Karimi, M., & Samami, E. (2015). Communication Barriers Perceived by Nurses and Patients. *Global Journal of Health Science*, 8(6), 65–74. <https://doi.org/10.5539/gjhs.v8n6.p65>
- Rahayu, U. H., Ernawati, & Tafwidayah, Y. (2018). Hubungan Komunikasi Terapeutik Terhadap Tingkat Kecemasan Orang Tua Pasien Anak di Ruang Perawatan II Rawat Inap Anak RSUD Sultan Syarif Mohamad Alkadrie Kota Pontianak. *Journal of Nursing Practice and Education*, 2(2).
- Research, U. C. (2018). *Together we will beat cancer*. <https://www.cancerresearchuk.org/health-professional/cancer-statistics-for-the-uk>
- Rossely, D. J. (2018). *Hubungan Komunikasi Terapeutik Perawat Dengan Tingkat Kecemasan Orangtua Saat Anak Mengalami Hospitalisasi Di Ruang Perawatan Anak Rsud Dr. Harjono Kabupaten Ponorogo* [Universitas Muhammadiyah Ponorogo]. <http://eprints.umpo.ac.id/4481/>
- Rosyanti, L., Devianti Usman, R., Hadi, I., & Syahrianti. (2017). HIJP: HEALTH INFORMATION JURNAL PENELITIAN Kajian Teoritis Hubungan antara Depresi dengan Sistem Neuroimun. *Health Information Jurnal Penelitian*, 9(2), 78–97. <https://myjurnal.poltekkes-kdi.ac.id/index.php/HIJP>
- Saniatuzzulfa, R., Retnowati, S., & Magister Profesi Psikologi Fakultas Psikologi Uniersitas Gadjah Mada, P. (2015). Program “Pasien PANDAI” untuk Meningkatkan Optimisme Pasien Kanker. *Gadjah Mada Journal of Professional Psychology*, 1(3), 163–172.
- Sholikhah, D. U., Sudiana, I. K., & Kurniawati, N. D. (2020). The Effectiveness Chewing gum versus Cryotherapy on Salivary Volume among Patient with Head and Neck Cancer undergoing Radiotherapy. *Jurnal Ners*, 15(1), 91–97. <https://doi.org/10.20473/jn.v15i1.19444>
- Spielberger, Gorsuch, Lushene, Vagg, & J. (1983). *The State-Trait Anxiety Inventory (STAI)*. America Psychological Association. <https://www.apa.org/pi/about/publications/caregivers/practice-settings/assessment/tools/trait-state>
- Wisnubroto, D. S. (2014). *Baru 28 RS di Indonesia yang Memiliki Layanan Radioterapi*. <https://www.liputan6.com/health/read/2097776/baru-28-rs-di-indonesia-yang-memiliki-layanan-radioterapi>
- Yaribeygi, H., Panahi, Y., Sahraei, H., Johnston, T. P., & Sahebkar, A. (2017). The impact of stress on body function: A review. *EXCLI Journal*, 16, 1057–1072. <https://doi.org/10.17179/excli2017-480>
- Zuwirna. (2016). Komunikasi Yang Efektif. *Universitas Negeri Padang*, 1(1), 1–8. <http://ejournal.unp.ac.id/index.php/e-tech/article/view/10464/pdf>