

# CORRELATION BETWEEN SELF-EFFICACY AND ANXIETY IN CANCER PATIENTS WHO WILL COMMENCE EXTERNAL RADIATION THERAPY (A MULTIDISCIPLINARY APPROACH)

<sup>1</sup>Yulia Kusuma Indah, <sup>2</sup>Nurul Fitri, <sup>3</sup>Rita Anita, <sup>4</sup>Moh.Haris, <sup>5</sup>Fifi Dwijayanti  
The National Cancer Center, Dharmais Cancer Hospital, Jakarta, Indonesia

## INTRODUCTION

Cancer is a disease considered frightening for the majority of people. An estimated 50% of cancer patients in the world require radiotherapy. The highest anxiety occurs immediately before they start radiotherapy. Therefore, cancer patients require high self-efficacy to reduce anxiety and adhere to therapy. Radiation oncology nurses, radiation oncologists, and radiotherapists play a big role in preventing excessive anxiety and preparing patients to commence therapy properly with a high self-efficacy.

## OBJECTIVE

This study mainly aimed to investigate the correlation between self-efficacy and anxiety in cancer patients who would commence external radiation therapy.

## METHODS

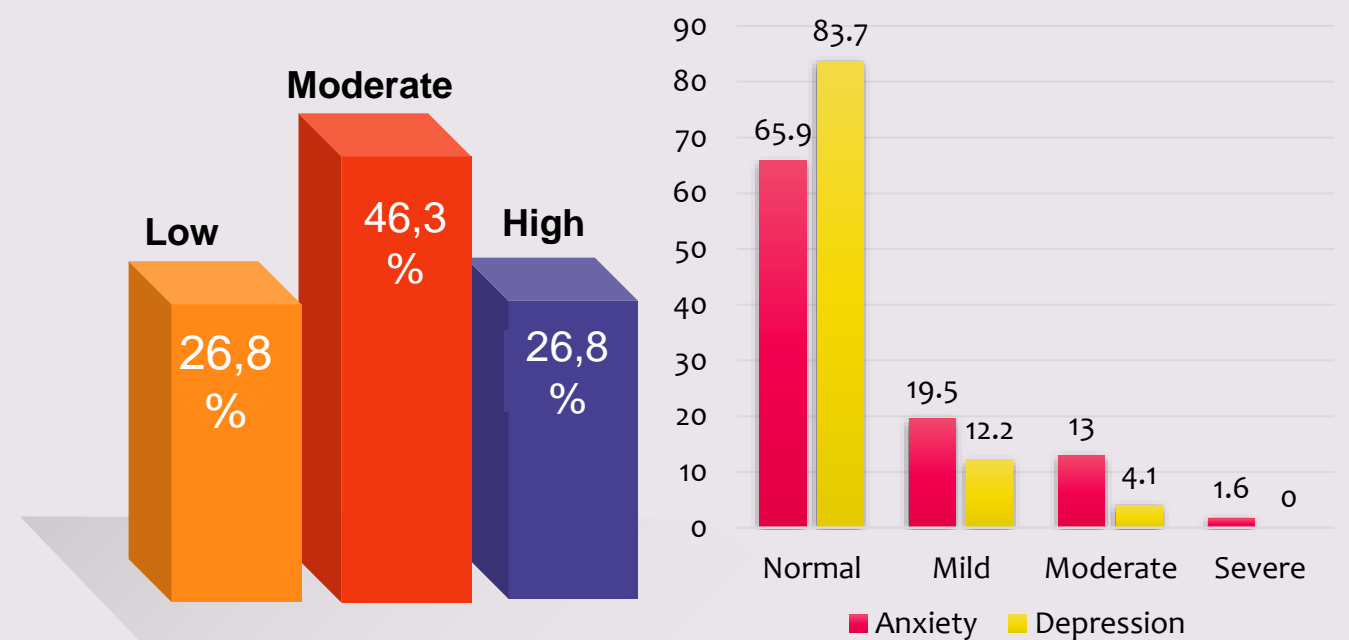
This study used an associative quantitative design with a cross-sectional approach. A consecutive sampling of 123 respondents and 30 respondents for the validity test were collected from January to February 2023 at Radiotherapy Department, The National Cancer Center, Dharmais Cancer Hospital, Jakarta, Indonesia. The inclusive respondents fulfilled questionnaires in advanced before CT-Simulator/Simulator imaging. The Instruments used were the Indonesian version of the Cancer Behavior Inventory-Brief (CBI-B) and the Indonesian version of the Hospital Anxiety and Depression Scale (HADS). Univariate data analysis used the frequency distribution technique and bivariate used Spearman's Rank.

## RESULTS

Table 1. Characteristics of Respondents

Characteristics	n	%
<b>Age</b>		
19 – 44 years	38	30,9
45 – 59 years	58	47,2
≥ 60 years	27	22,0
<b>Gender</b>		
Male	43	35,0
Female	80	65,0
<b>Education</b>		
Elementary school	30	24,4
Secondary school	51	41,5
Post-Secondary school	40	32,5
<b>Type of cancer</b>		
Head and neck	34	27,6
Breast	41	33,3
Lung	3	2,4
Colorectal	11	8,9
Prostate	2	1,6
Bladder	3	2,4
Cervix	17	13,8
Endometrial	1	0,8
Others	11	8,9
<b>Radiation Area</b>		
Head and neck	46	37,4
Chest	37	30,1
Abdominal and pelvic	32	26,0
Others	8	6,5

The study represented the characteristics of respondents (Table 1). The majority of cancer patients who would commence external radiotherapy were aged 45-59 years 58 (47,2%), females 80 (65,0%), secondary school educated 51 (41,5%), unemployed 62 (50,4%). In addition, breast cancer was the highest rate for 41 (33,3%), and the irradiated head-and-neck area was the most common at 46 (37,4%).



Graph 1. Self-Efficacy Distribution Graph 2. Anxiety and Depression Distribution

On the other hand, the frequency distribution of self-efficacy indicated that the highest rate was the moderate level at 57 (46,3%), while low and high levels had the same rate at 33 (26,8%) as shown in Graph 1. Whereas, the Graph 2 presented the anxiety frequency distribution that the majority was the normal level at 81 (65,9%), followed by mild 24 (19,5%), moderate 16 (13,0%), and severe 2 (1,6%). Likewise, the major rate of depression was the normal level of 103 (83,7%).

Table 2. Correlation of Self-Efficacy with Anxiety and Depression

Variables	Anxiety	Depression
	r(p)	r(p)
Self-Efficacy	-0,461 (<0,001)	-0.392 (<0,001)

The study revealed a significant and moderate negative correlation between self-efficacy and anxiety in cancer patients who would start external radiation therapy at Radiotherapy Department of Dharmais Cancer Hospital where the P value <0.001 below alpha 0.05, with a moderate negative correlation (r -0,461) (Table 2).

## CONCLUSIONS

The higher self-efficacy the respondents had, the less anxiety they experienced, and vice versa. The study suggested multidisciplinary involvement to raise cancer patients' self-efficacy mainly before commencing external radiotherapy and in all trajectories as well. Good communication and empathy between health professionals and patients, as well as providing adequate information and education about treatment and its side effects can develop self-efficacy, reduce anxiety, help manage side effects, and promote adherence to complete therapy.

## REFERENCES

- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. W.H. Freeman and Company.
- Burns, M., Campbell, R., French, S., Dhillon, H. M., Butow, P. N., Pritchard, A., & Sundaresan, P. (2022). Trajectory of Anxiety Related to Radiation Therapy Mask Immobilization and Treatment Delivery in Head and Neck Cancer and Radiation Therapists' Ability to Detect This Anxiety. *Advances in Radiation Oncology*, 7(5). <https://doi.org/10.1016/j.adro.2022.100967>
- Chirico, A., Lucidi, F., Merluzzi, T., Alivernini, F., de Laurentiis, M., Botti, G., & Giordano, A. (2017). A meta-analytic review of the relationship of cancer coping self-efficacy with distress and quality of life. *Oncotarget*, 8(22), 36800–36811. <https://doi.org/https://doi.org/10.18632/oncotarget.15758>

