

similarity - Body image and the level of stress in cervical cancer patients

by Sri Rejeki

Submission date: 29-Nov-2022 10:47AM (UTC+0700)

Submission ID: 1965861260

File name: dy_image_and_the_level_of_stress_in_cervical_cancer_patients.pdf (300.33K)

Word count: 3733

Character count: 19916

Body image and the level of stress in cervical cancer patients



Sri Rejeki^{1*}, Eka Agustyaningrum², Macmudah¹, Nikmatul Khayati¹,
Tri Hartiti¹, Dwi Nur Rahmantika Puji Safitri³, Yanuan Ben Olina⁴

ABSTRACT

Introduction: Chemotherapy is one of the management applied to cervical cancer patients. Chemotherapy is beneficial to kill cancer cells, but it affects normal body cells, such as hair roots, skin, and changes in physical appearance. These physical changes result in poor self-assessment and stress. This study was conducted to describe the correlation between body image and stress level of cervical cancer patients undergoing chemotherapy at the Gynecology Polyclinic, Dr. Kariadi General Hospital Medical Center Semarang.

Method: This type of research is quantitative using a correlational research design. The research process was carried out in 2020 at Dr. Kariadi General Hospital Medical Center Semarang with the number of samples obtained was 87 respondents.

Results: It showed that there was a relationship between body image and stress levels in cervical cancer patients receiving chemotherapy ($r = -0.313$ and $p\text{-value} = 0.003$). With a change in physical appearance, patients would feel something different which affects psychological situations and further causes stress.

Conclusions: The level of stress has a significant correlation with the body image score of cervical cancer.

Keywords: Cervical cancer, body image, stress level.

Cite This Article: Rejeki, S., Agustyaningrum, E., Macmudah., Khayati, N., Hartiti, T., Safitri, D.N.R.P., Olina, Y.B. 2022. Body image and the level of stress in cervical cancer patients. *Bali Medical Journal* 11(3): 1739-1743. DOI: 10.15562/bmj.v11i3.3769

INTRODUCTION

Cervical cancer is the fourth most common cancer in women. It was estimated that approximately 570,000 women were diagnosed with cervical cancer in 2019, which was 6.6% of all cancers in women. Approximately 90% of the death rate is found in low and middle-income countries. In Indonesia in 2019, there was 136.2/100,000 population, and it was in the eighth place among Southeast Asia countries, while in Asia, it was in 23rd position. Based on the province's data about cervical cancer early detection by using VIA from 2015 to 2016, it was found that the cervical cancer data significantly increased. It was 364 234 people in 2015, 657 610 people in 2016, and 1,114,173 people in 2017.² In 2017, the highest level of cervical cancer early detection scope was in women between 30 – 50 years old. The data collected at the Gynecology Centers of Dr. Kariadi General Hospital Medical Centre from May to July 2018 found a quite significant increase of cervical cancer patients which number 436 in May, 576 in June, and 628 in July.

Cancer is a multiorgan and complex disease that may affect patients' confidence and their quality of life.³ A type of chemotherapy, concurrent chemoradiation (CCRT) (with

cisplatin alone or in combination), is currently the standard treatment approach for cervical cancer.⁴ There are several changes that can be found in the physical appearance of a patient during its treatment process. Cytotoxic chemotherapies, molecularly targeted therapies, immunotherapies, and radiotherapy may lead to hair disorders, including alopecia, hirsutism, hypertrichosis, and pigmentary and textural hair changes.⁵ An alopecia patch confined to the area of radiotherapy is usually observed 1-3 weeks after the first irradiation.⁶ Most patients with cancer had experienced symptoms of eating disorders that lead to malnutrition, fatigue, and skin alteration.⁷

Advanced-stage cancer may put patients under heavy stress, as some changes, especially physical changes, may affect the body image of the patient.⁸ Most of patients experienced Alopecia areata⁹, nausea and vomiting^{9,10}, weight loss¹², muscle weakness¹³, color changes in skin and nails. Eating disorders may cause a negative impact, including on the patient's body image, their psychological, and physical aspects. Moreover, it was explained that certain women are still active and others currently need support to face the changes in their lifestyle, such as

¹Department of Maternity Nursing, Faculty of Nursing and Health, Universitas Muhammadiyah Semarang (Unimus) Indonesia;

³Nurses Practitioners, Faculty of Nursing and Health, Universitas Muhammadiyah Semarang (Unimus) Indonesia;

²Department of Emergency and Critical Nursing, Faculty of Nursing and Health, Universitas Muhammadiyah Semarang (Unimus) Indonesia;

⁴Department of Community Faculty of Nursing and Health, Universitas Muhammadiyah Semarang (Unimus) Indonesia;

*Corresponding author:
Sri Rejeki;
Department of Maternity Nursing,
Faculty of Nursing and Health,
Universitas Muhammadiyah Semarang
(Unimus) Indonesia;
srirejeki@unimus.ac.id

Received: 2022-09-28

Accepted: 2022-10-29

Published: 2022-11-26

nutrition, and fatigue.¹⁴

According to the previous study, it was found that there was a high prevalence among the decedents. It was found that the decedents feel moderate or severe pain (84%), vaginal discharge (66%), vaginal bleeding (61%), and loss of faith (31%). In addition, there is a high prevalence of clinically significant anxiety (63% and 50%, respectively), depressed mood (52% and 38%, respectively), and sexual dysfunction (87% and 83%, respectively) that can be found among decedents and non-decedents. Most patients may feel some combination of moderate or severe physical, psychological, social, and spiritual suffering.¹⁵ The prevalence of depression and anxiety was 52.2% and 65.6% in cervical cancer patients.¹⁶ The research aimed to find out the correlation between body images and stress levels in cervical cancer patients who receive chemotherapy at the Gynecology Centers of Dr. Kariadi General Hospital Medical Centre Semarang.

METHODS

Study Design

This research is quantitative with a correlative research design. The research process was carried out in 2020 at Dr. Kariadi General Hospital Medical Centre in Semarang City, Indonesia, as a referral hospital for patients with cervical cancer.

Data Collection

The sampling technique used was total sampling based on inclusion criteria married, aged more than 20 to 70 years, cervical stage 25 to 4, and Javanese ethnicity. While the exclusion criteria were patients who did not can communicate. The sample is 87 people.

Statistical Analysis

The data collection tool uses a questionnaire body image and Depression Anxiety Stress Scale (DASS). The result of Body image is categorized as good (mean \geq) and poor (mean <23) while DASS is categorized as normal (0-14), mild (15-18), moderate (19-25), severe (26-33) and extreme severe (≥ 34). Body image questionnaire is valid (0,353-0,754) and reliable (Cronbach's alpha 0.483). Patients were given informed consent before filling

the data. The collected data was then analyzed using analysis Spearman's rho test.

RESULTS

Respondents who have been diagnosed with cervical cancer for at least one month to 24 months, show an average of 24 months (SD 29.2) All respondents are married (100%), and more than half of the respondents graduated from elementary school (50.6%) and unemployed (58.6%), and only a few respondents have a family history of cervical cancer (3.4%). More than a quarter of respondents have done chemotherapy cycle III (35.6%) while most of the respondents were diagnosed with stage III cancer (87.4%).

Table 1 shows that most categorize body image was good, and the rest was poor body image.

Table 2 shows the highest level stress was moderate (43.7%) and the lowest was extreme level (2.3%).

Table 3 showed the mean score of body image score was 23.87 (good) with the highest score was 36 (good) and the lowest score was 15 (poor). The mean score of stress level was 19.20 (moderate), with the highest was 39 (severe) and the lowest score was 4 (normal).

Table 4 shows that p value score between body images and stress levels is 0.003.

Figure 1 shows the negative linear correlation pattern between body images and stress level variables. It means the better body images, the lower the stress level of the cervical cancer patients who receive chemotherapy in the Gynecology Centers of Dr. Kariadi General Hospital Medical Center Semarang, and vice versa. The worse the body images, the higher the stress level of cervical cancer patients who receive chemotherapy in the Gynecology Centers of Dr. Kariadi General Hospital Medical Center Semarang.

The determinant coefficient of 0.104 means body images significantly affect the

stress level at 10.4%. Meanwhile, the rest, 89.6%, is affected by other factors.

DISCUSSION

The resulting age of the respondent is considered as middle-aged-adult close to old aged-adult. Older people are at a higher risk of cancer. The older, the higher probability of the combination and mutation stacking within the cell nucleus associated with cell abnormality which leads to cancer. Older age also enables more DNA mutation in the nucleus, and it is unavoidable. The risk of cancer is increased by the regulating genes mutation, which controls, inhibits, or stimulates cell division.¹⁷

The research found most patients (43.7%) experienced moderate stress (mean of 19.20). Most cervical cancer patients who received chemotherapy suffered stress, anxiety^{18,19}, hope²⁰, and fear of death as the side effect of the treatment process. These psychological distress

Table 1. Body image of cervical cancer patients who receive chemotherapy in Gynecology Centers of Dr. Kariadi General Hospital Medical Center Semarang 2020 (n=87).

| Variable | n | % |
|----------|----|------|
| Good | 56 | 64.4 |
| Poor | 31 | 35.6 |

Table 2. Stress Level of cervical cancer patients who receive chemotherapy in Gynecology Centers of Dr. Kariadi General Hospital Medical Center Semarang 2020 (n=87).

| Variable | n | % |
|----------------|----|------|
| Normal | 15 | 17.2 |
| Mild | 26 | 29.2 |
| Moderate | 38 | 43.7 |
| Severe | 6 | 6.9 |
| Extreme Severe | 2 | 2.3 |

Table 3. Mean Score Body image and Stress Level of cervical cancer patients who receive chemotherapy in Gynecology Centers of Dr. Kariadi General Hospital Medical Center Semarang 2020 (n=87).

| Variable | Min | Max | Mean | Median | SD |
|--------------|-----|-----|-------|--------|------|
| Body image | 15 | 36 | 23.87 | 23 | 3.37 |
| Stress Level | 4 | 39 | 19.20 | 19 | 5.36 |

17 index of patients was negatively correlated with the level of hope.²⁰ Therefore, cervical cancer patients mostly show signs of psychological and physical side effects during the treatment process.^{18,20,21} There such as biological, and physical are some factors related to stress level, psychological, and social factors.²⁰ Some changes which are associated as main stressors are retirement, degradation or loss of physical ability, financial problem, losing family, the feeling or consciousness of death.²²

Respondents from this research are dominated by elementary school graduates, which means this level of education has a higher probability of

Table 4. The correlation between body images and stress level of cervical cancer patients who receive chemotherapy in Gynecology Centers of Dr. Kariadi General Hospital Medical Center Semarang 2 - 30 March 2020 (n=87).

| Variable | Stress Level | | |
|------------|--------------|--------|---------|
| | N | r | P-value |
| Body image | 87 | -0.313 | 0.003 |

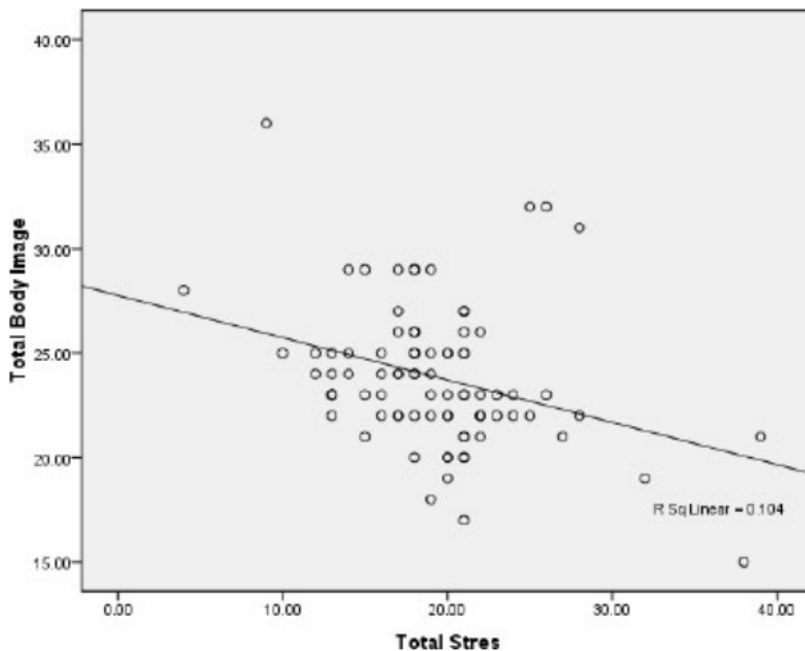


Figure 1. The correlation between body images and stress level of cervical cancer patients who receive chemotherapy in Gynecology Centers of Dr. Kariadi General Hospital Medical Center Semarang 2 - 30 March 2019 (n=87).

living unhealthy life compared to those who graduated from a higher education level. The risk factors of cervical cancer in low-educated women were four times higher compared to highly educated women.²³ Education level influenced people's perception toward themselves, their surroundings, and their behavior to cope with their disease. One of the most stress-affecting factors is education level, as the education level influences someone's perception.²¹ Therefore, the behavior or perception to cope with the problem of highly educated patients is different from that of low-educated patients.

Almost patients are unemployed patients, which is significantly related to stress caused by the family's poor economic factors.²⁴ They said worries about the cost of the treatment, despite their status as unemployed. Moreover, the long chemotherapy process could not instantly heal the disease but worsened the condition effects of the treatment. Social-economic status is correlated to people's stress levels. It is caused by the expenses for children's education, healthcare, and maintaining the social status of the family member.²⁵ In addition, low-class

1 patients had higher levels of depressive and anxiety symptoms, cancer-related distress, and perceived stress compared to the moderate-class patients, who, in turn, reported higher levels of these symptoms compared with those in the high class.²⁶

The experience of chemo procedure mostly in third cycles may become the reason level moderate stress the face, meanwhile, patients who have done more than four cycles of chemotherapy experience severe stress. Cancer stage and period also increase the risk of stress on cancer patients caused by the long-term treatment and also the fear of death, the inability to reach life's plan, self-esteem, the changes in social role and lifestyle, some other financial problem, and changes in body images.²⁷ It will cause the increasing sleep time or decrease in sleep problems corresponded with a reduction in self-reported emotional distress and attenuation of pro-inflammatory, Th2, and counter-regulatory cytokines.²⁸

The body images are correlated to the stress level of cervical cancer patients who received chemotherapy in the Gynecology Centers of Dr. Kariadi General Hospital Medical Center. Patients' average body image was categorized as good but those with the lowest score thought that the disease, along with the chemotherapy, resulted in worse body condition, hair loss, weakness, fatigue, loss of appetite, and less social contact as the loss of confidence regarding the physical changes.^{29,30}

There is a significant correlation between the level of stress and body image, in which the higher stress level was significantly associated with greater body image disturbance, and this relationship was mediated by self-compassion.³¹ In reflection the poorer body image was related to physical and psychological distress.^{32,33} More than half the patient is young and have married, therefore of Sexuality, intimacy, and body image concerns were found to be associated with younger age and treatment types received by younger women.³²

Body image or self-confidence is a significant positive relationship with quality of life.³⁴ Patients with cervical cancer should possess a positive self-concept and life quality to live their lives and cope with any physical changes.

They need strong psychological sources and good life quality to enjoy and do their activities well by improving their self-concept. Self-concept is formed by internal experience, the relationship with other people, and interaction with the surrounding. Interaction highly affects people's behavior.³⁵

CONCLUSIONS

The level of stress has a significant correlation with the body image score of cervical cancer, and both have grades. From the research nurses and families can increase patient body image by decreasing their level of stress by offering "support group" therapy and stress management for cervical cancer patients to minimize or relieve the stress.

DISCLOSURES

Author Contribution

All authors have contributed³ to this research process, including conception and design, analysis and interpretation of the data, drafting of the article, critical revision of the article for important intellectual content, final approval of the article, collection and assembly of data.

Funding

None.

19

Conflict of Interest

The author declares there is no conflict of interest.

Ethic Approval

Ethical was conducted¹⁵ in research committee ethic of Dr. Kariadi General Hospital Medical Center Semarang with number 124/EC/KEPK-RSDK/2019.

22

ACKNOWLEDGEMENTS

The authors⁶ would like to thank the participants so this study can be carried out well. This study would hopefully give a positive contribution to the educational development or those who are willing to conduct further research.

REFERENCES

- World Health Organization. Cervical Cancer. WHO. 2018.
- Dirjen P2P. Cegah Deteksi Respon. Kementerian Kesehatan Republik Indonesia. 2019.
- Lee H, Sohn S. Predictive factors of hope in patients with cancer. *J Korean Acad Adult Nurs*. 2000;12(2):95–184.
- Kumar L, Gupta S. Integrating Chemotherapy in the Management of Cervical Cancer: A Critical Appraisal. *Oncol*. 2016;91(1):8–17.
- Freites-Martinez A, Shapiro J, Goldfarb S, Nangia J, Jimenez JJ, Paus R, et al. CME Part 1: Hair disorders in cancer patients. *J Am Acad Dermatol*. 2019;80(5):1179–96.
- Ounsakul V, Iamsumang W, Suchonwanit P. Radiation-Induced Alopecia after Endovascular Embolization under Fluoroscopy. *Case Rep Dermatol Med*. 2016;2016(Figure 3):1–5.
- Wardani WNA& EK. Chemotherapy Physical Effects in Cervical Cancer. *Pros Semin Nas Int*. 2014;2(2):97–106.
- Prates ACL, Freitas-Junior R, Prates MFO, Veloso M de F, Moura N de. Influence of Body Image in Women Undergoing Treatment for Breast Cancer. *Rev Bras Ginecol Obs*. 2017;39(4):175–83.
- Rugo HS, Klein P, Melin SA, Hurvitz SA, Melisko ME, Moore A, et al. Association between use of a scalp cooling device and alopecia after chemotherapy for breast cancer. *JAMA - J Am Med Assoc*. 2017;317(6):606–14.
- Naito Y, Kai Y, Ishikawa T, Fujita T, Uehara K, Doihara H, et al. Chemotherapy-induced nausea and vomiting in patients with breast cancer: a prospective cohort study. *Breast Cancer*. 2020;27(1):122–8.
- Hamano H, Mitsuhashi C, Suzuki Y, Zamami Y, Tsujinaka K, Okada N, et al. Effects of palonosetron on nausea and vomiting induced by multiple-day chemotherapy: A retrospective study. *Biol Pharm Bull*. 2021;44(4):478–84.
- Abu Zaid Z, Kay Neoh M, Mat Daud ZA, Md Yusop NB, Ibrahim Z, Abdul Rahman Z, et al. Weight Loss in Post-Chemoradiotherapy Head and Neck Cancer Patients. *Nutrients*. 2022;14(3):1–9.
- Toftagen C, Overcash J KK. Falls in persons with chemotherapy-induced peripheral neuropathy. *Support Care Cancer*. 2012;20(3):583–9.
- de Kruif AJtC, Westerman MJ, Winkels RM, Koster MS, van der Staaij IM, van den Berg MMGA, et al. Exploring changes in dietary intake, physical activity and body weight during chemotherapy in women with breast cancer: A Mixed-Methods Study. *J Hum Nutr Diet*. 2021;34(3):550–61.
- Krakauer EL, Kwete X, Kane K, Afshan G, Bazzett-Matabele L, Bien-Aimé DDR, et al. Cervical Cancer-Associated Suffering: Estimating the Palliative Care Needs of a Highly Vulnerable Population. *JCO Glob Oncol*. 2021;7(7):862–72.
- Yang YL, Liu L, Wang XX, Wang Y, Wang L. Prevalence and associated positive psychological variables of depression and anxiety among Chinese cervical cancer patients: A cross-sectional study. *PLoS One*. 2014;9(4).
- Boguszewski CL, Boguszewski MCDS. Growth hormone's links to cancer. *Endocr Rev*. 2019;40(2):558–74.
- Kim A, Chung KC, Keir C, Patrick DL. Patient-reported outcomes associated with cancer screening: a systematic review. *BMC Cancer*. 2022;22(1):1–23.
- Wilford J, Osann K, Hsieh S, Monk B, Nelson E, Wenzel L. Validation of PROMIS emotional distress short form scales for cervical cancer. *Gynecol Oncol*. 2018;151(1):111–6.
- Li LR, Lin MG, Liang J, Hu QY, Chen D, Lan MY, et al. Effects of intrinsic and extrinsic factors on the level of hope and psychological health status of patients with cervical cancer during radiotherapy. *Med Sci Monit*. 2017;23:3508–17.
- Dahiya N, Acharya AS, Bachani D, Sharma DN. Quality of Life of Patients with Advanced Cervical Cancer before and after Chemoradiotherapy. *Asian Pac J Cancer Prev*. 2016;17(7):3095–9.
- Shin JY, Lim JW, Shin DW, Kim SY, Yang HK, Cho J, et al. Underestimated caregiver burden by cancer patients and its association with quality of life, depression and anxiety among caregivers. *Eur J Cancer Care (Engl)*. 2018;27(2):1–9.
- Carneiro SR, Da Silva Lima AA, De Fátima Silva Santos G, De Oliveira CSB, Almeida MCV, Da Conceicao¸õ Nascimento Pinheiro M. Relationship between Oxidative Stress and Physical Activity in Women with Squamous Intraepithelial Lesions in a Cervical Cancer Control Program in the Brazilian Amazon. *Oxid Med Cell Longev*. 2019;2019.
- Hendricke V, Kelvin C, Yu K, Andrea P, Raphael C, Chua J, et al. Quality of Life among Survivors of Locally Advanced Cervical Cancer Treated with Definitive Chemoradiotherapy in a Decade of Transition. 2022.
- Bjelic-Radicic V, Jensen PT, Vlastic KK, Waldenstrom AC, Singer S, Chie W, et al. Quality of life characteristics inpatients with cervical cancer. *Eur J Cancer*. 2012;48(16):3009–18.
- Atallah M, Cooper B, Muñoz RF, Paul SM, Anguera J, Levine JD, et al. Psychological Symptoms and Stress Are Associated With Decrements in Attentional Function in Cancer Patients Undergoing Chemotherapy. *Cancer Nurs*. 2020;43(5):402–41.
- Thapa N, Maharjan M, Xiong Y, Jiang D, Nguyen TP, Petrini MA, et al. Impact of cervical cancer on quality of life of women in Hubei, China. *Sci Rep*. 2018;8(1):2–10.
- Tucker JA, Osann K, Hsieh S, Wahi A, Monk BJ, Wenzel L, et al. Longitudinal Changes in Sleep: Associations with Shifts in Circulating Cytokines and Emotional Distress in a Cancer Survivor Population. *Int J Behav Med*. 2021;28(1):140–50.
- Holzer LA, Huyer N, Friesenbichler J, Leithner A. Body image, self-esteem, and quality of life in patients with primary malignant bone tumors. *Arch Orthop Trauma Surg*. 2020;140(1):1–10.
- Li CC, Chang TC, Tsai YF, Chen L. Quality of life among survivors of early-stage cervical cancer in Taiwan: an exploration of treatment modality differences. *Qual Life Res*. 2017;26(10):2773–82.
- Swami V, Todd J, Robinson C, Furnham A. Self-compassion mediates the relationship between COVID-19-related stress and body

- image disturbance: Evidence from the United Kingdom under lockdown. *Pers Individ Dif*. 2020;183(January).
32. Paterson CL, Lengacher CA, Donovan KA, Kip KE, Tofthagen CS. Body Image in Younger Breast Cancer Survivors. *Cancer Nurs*. 2016;39(1):E39–58.
33. Zhang X, Pennell ML, Bernardo BM, Clark J, Krok-Schoen JL, Focht BC, et al. Body image, physical activity and psychological health in older female cancer survivors. *J Geriatr Oncol*. 2021;12(7):1059–67.
34. Shafae FS, Mirghafourvand M, Harischi S, Esfahani A, Amirzehni J. Self-confidence and Quality of Life in women undergoing treatment for breast cancer. *Asian Pacific J Cancer Prev*. 2018;19(3):733–40.
35. Derks M, Van Lonkhuijzen LRCW, Bakker RM, Stiggelbout AM, De Kroon CD, Westerveld H, et al. Long-Term Morbidity and Quality of Life in Cervical Cancer Survivors: A Multicenter Comparison between Surgery and Radiotherapy as Primary Treatment. *Int J Gynecol Cancer*. 2017;27(2):350–6.



This work is licensed under a Creative Commons Attribution

similarity - Body image and the level of stress in cervical cancer patients

ORIGINALITY REPORT

19%

SIMILARITY INDEX

15%

INTERNET SOURCES

16%

PUBLICATIONS

6%

STUDENT PAPERS

PRIMARY SOURCES

| | | |
|---|---|----|
| 1 | profiles.stanford.edu Internet Source | 1% |
| 2 | Sri Rejeki, Enny Widayati, Machmudah Machmudah, Arief Yanto. "Decreasing Labor Pain through Sacralist Counter-pressure Therapy Using Tennis Ball in the Mother during the Labor Process", Open Access Macedonian Journal of Medical Sciences, 2021 Publication | 1% |
| 3 | jyx.jyu.fi Internet Source | 1% |
| 4 | docksci.com Internet Source | 1% |
| 5 | escholarship.org Internet Source | 1% |
| 6 | proceedings.polije.ac.id Internet Source | 1% |
| 7 | revistasrd.ro Internet Source | 1% |

| | | |
|----|--|-----|
| 8 | www.tandfonline.com Internet Source | 1 % |
| 9 | Submitted to SDM Universitas Gadjah Mada Student Paper | 1 % |
| 10 | arro.anglia.ac.uk Internet Source | 1 % |
| 11 | journals.plos.org Internet Source | 1 % |
| 12 | Carissa Adriana, Asih Budiastuti, Kabulrachman Kabulrachman, Retno Indar Widayati, Puguh Riyanto, Muslimin Muslimin. "Coenzyme Q10 Supplementation as an Adjuvant Therapy Potentially Increase Serum Superoxide Dismutase Levels in Acne Vulgaris Patients", Open Access Macedonian Journal of Medical Sciences, 2021 Publication | 1 % |
| 13 | aogd.org Internet Source | 1 % |
| 14 | www.research.manchester.ac.uk Internet Source | 1 % |
| 15 | Submitted to Universitas Diponegoro Student Paper | 1 % |
| 16 | repository.unja.ac.id Internet Source | 1 % |

17 Li-Rong Li, Mei-Guang Lin, Juan Liang, Qiong-Yan Hu et al. "Effects of Intrinsic and Extrinsic Factors on the Level of Hope and Psychological Health Status of Patients with Cervical Cancer During Radiotherapy", *Medical Science Monitor*, 2017
Publication

18 research.wur.nl
Internet Source

19 jmp.ir
Internet Source

20 prosiding.respati.ac.id
Internet Source

21 Xiaochen Zhang, Michael L. Pennell, Brittany M. Bernardo, Justin Clark et al. "Body image, physical activity and psychological health in older female cancer survivors", *Journal of Geriatric Oncology*, 2021
Publication

22 assets.researchsquare.com
Internet Source

23 www.aseanjournalofpsychiatry.org
Internet Source

24 Madison M. Kindred, Bernardine M. Pinto, Shira I. Dunsiger. "Association of Body Esteem with Fitness and Body Fat Among Colorectal

Cancer Survivors: Secondary Analyses from a Randomized Trial", International Journal of Behavioral Medicine, 2019

Publication

| | | |
|----|---|------|
| 25 | cris.maastrichtuniversity.nl Internet Source | <1 % |
| 26 | etd.aau.edu.et Internet Source | <1 % |
| 27 | pdfs.semanticscholar.org Internet Source | <1 % |
| 28 | repository.um-surabaya.ac.id Internet Source | <1 % |
| 29 | www.apjon.org Internet Source | <1 % |
| 30 | www.frontiersin.org Internet Source | <1 % |
| 31 | Lan Zhang, Jia Wang, Tangzhen Chen, Min Tian, Qimin Zhou, Jianhua Ren. "Symptom Clusters and Quality of Life in Cervical Cancer Patients Receiving Concurrent Chemoradiotherapy: The Mediating Role of Illness Perceptions", Frontiers in Psychiatry, 2022 Publication | <1 % |
| 32 | Farhah Amaliya Zaharuddin, Nazrita Ibrahim, Azmi Mohd Yusof. "A Conceptual Framework | <1 % |

for Designing Virtual Environments for Stress Therapy", Applied Sciences, 2022

Publication

33

Irfanul Chakim, Tepanata Pumpaibool, Sayono, Ekha Rifki Fauzi. "Adherence to Dihydroartemisinin + Piperaquine Treatment Regimen in Low and High Endemic Areas in Indonesia", Journal of Tropical Medicine, 2022

Publication

<1 %

34

Zahra Hosseini, Shokrollah Mohseni, Rahimeh Momeni, Teamur Aghamolaei, Azin Alavi, sakineh dadipoor. "Increasing the Prevalence of Cervical Cancer Screening in Iran: Effectiveness of a Theory-Based Educational Intervention", Research Square Platform LLC, 2022

Publication

<1 %

Exclude quotes On

Exclude matches Off

Exclude bibliography On