



COPING MECHANISMS AND SYMPTOM LEVELS OF DEPRESSION IN CANCER PATIENTS

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ABSTRACT

A diagnosis of cancer in adults is often accompanied by negative impacts on mental health, such as changes in body image and function, persistence, pain, distress and anxiety, as well as fear of recurrence and death due to cancer, resulting in negative impacts. its impact on mental health. increased risk of depression among adults with cancer. Depression is a common problem among individuals suffering from cancer. The aim of this research is to determine the characteristics, management of coping and depression. This research used a descriptive method, the number of samples in this study was 85 respondents. The sampling technique in this research is purposive sampling and the questionnaires used were the Cancer Coping Questionnaire and BDI II, Coping mechanisms and depressive symptoms were assessed using the CCQ and BDI-II, respectively, both of which have established validity and reliability. The majority of respondents had adaptive coping mechanisms, 68 respondents (80.0%), the majority of respondents minimal depression 57 respondents (67.1%), indicating that the majority of respondents who had adaptive coping minimal depression, 51 respondents (75%). Cancer sufferers experience several changes, namely fatigue, loss of appetite, and changes in body weight. Depression causes a decrease in the quality of life of cancer patients by worsening physical symptoms, and increasing the negative impact on patients and their families during illness. Coping mechanisms can control the strengthening of problems so that cancer patients can control the symptoms of depression that arise with good coping mechanisms in resolving problems.

Keywords: cancer; cemothepary, coping mechanisms; depression

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INTRODUCTION

In 2018, about 18.1 million people worldwide were diagnosed with cancer, of which 9.6 million died from the disease. These figures are expected to double by 2040, with the maximum increase in low-to-middle-income countries, which account for more than two-thirds of the world's cancers (Bray et al., 2018). A cancer diagnosis can have a substantial impact on mental health and wellbeing (Niedzwiedz et al., 2019). A cancer diagnosis in adults is frequently accompanied by a negative impact on mental health, such as changes in body image and function, persistent pain, distress and anxiety, and a fear of cancer recurrence and death, due to which there is an increased risk of depression among adults with cancer (Hermanto et al., 2019).

One of the disorders that appears in cancer is depression (Kastubi et al., 2016). (Indonesian Ministry of Health, 2018) the prevalence rate of depression at ages > 15 years is 6.1% for Indonesia, while Central Java Province has a depression prevalence rate of 4.4% (Kastubi et al., 2016);(Kemenkes RI, 2018). Depressive disorders is highly prevalent in the general population, with an estimated 264 million people globally (3.6% of the global population) living with depression and 322 million (4.4% of the global population) living with anxiety in 2015 (World Health Organization, 2017).

Depressive disorder (also known as depression) is a common mental disorder. It involves a depressed mood or loss of pleasure or interest in activities for long periods of time (World Health Organization, 2023). Some symptoms are more specific to a depressive disorder, such as anhedonia (diminished ability to experience pleasure); diurnal variation (ie, symptoms of depression are worse during certain periods of waking hours); and intensified guilt about being ill. Other symptoms, such as neurovegetative symptoms, including fatigue, loss of appetite or weight, and insomnia, are very common in other medical illnesses (Malhi & Mann, 2018). Symptoms of depression are influenced by how a person deals with life's problems or, in other words, the patient's coping mechanisms for dealing with problems that arise.

Coping can be defined as an individual's cognitive or behavioral efforts to manage (decrease or tolerate) situations that are appraised as stress to individuals (Sarang et al., 2023). Coping occurs automatically when an individual feels that there is a stressful or threatening situation, then the individual's role is to immediately overcome the tension they are experiencing. Directly, the individual will carry out an evaluation to then decide what coping mechanisms should be displayed. Coping reactions to problems vary greatly from one individual to another and from time to time in the same individual (Nadatien & Mulayyinah, 2019). Coping mechanisms are constructive when anxiety is used as a warning sign and the individual accepts it as a challenge to solve the problem. Effective coping will help individuals be free from prolonged stress. Each individual uses different coping to face problems that involve changes in society and living systems from conditions that are considered not satisfying a better situation (Nurhikmah et al., 2018).

Based on research results (Ruza et al., 2017) Cancer patients have a depression category mild depression 17 respondents (58.6%) used adaptive coping, moderate depression 4 respondents (10.1%) used maladaptive coping, moderate depression 10 respondents (34.3%) used adaptive coping mechanisms. The statistical test results obtained a p value of 0.046 (<0.05) which can be concluded that there is a significant relationship between coping mechanisms and the level of depression so that adaptive coping mechanisms can be researched (Yogi et al., 2018) shows that data on depression in breast cancer patients undergoing chemotherapy mostly had mild levels of depression, 15 respondents (53.57), 5 (17.86%) respondents experienced moderate depression, 8 (28.57%) respondents did not experience depression. and there were no respondents who experienced severe depression. The results of statistical analysis show that the level of depression has a p value = $0.02 < \alpha 0.05$, meaning that there is a relationship between optimism and the level of depression in breast cancer patients.

Although previous studies have reported relationships between coping mechanisms and depression, psychological responses among cancer patients may differ according to cancer type, disease condition, treatment experience, social support, and individual ability to manage stressors. Therefore, identifying coping mechanisms and depressive symptom levels in patients undergoing chemotherapy remains important to support appropriate psychosocial nursing interventions and promote adaptive coping. This study aimed to describe coping mechanisms and levels of depression among cancer patients undergoing chemotherapy and to describe the distribution of depressive symptoms according to coping mechanism.

METHOD

The method in this research is descriptive correlation with a cross sectional approach. The research was carried out in a hospital, specifically in the chemotherapy room. The population in this study were cancer patients undergoing chemotherapy, totaling 1645 cancer patients, the number of samples obtained was based on the results of the sample formula calculation, namely 85 respondents. The sampling technique in this research is purposive sampling. The questionnaires used were the Cancer Coping Questionnaire, and BDI II (Beck Depression Inventory II). The Cancer Coping Questionnaire (CCQ) and the Beck Depression Inventory-II (BDI-II) were selected

as established instruments for assessing coping mechanisms and depressive symptoms, respectively. Previous studies have reported evidence of reliability and validity for the CCQ, including internal consistency, test–retest reliability, and construct validity (Moorey et al., 2003). The BDI-II has also demonstrated satisfactory psychometric properties and has been evaluated among patients with cancer (Biracyaza et al., 2021). Accordingly, this study used the established psychometric evidence of the instruments rather than conducting an independent validity and reliability test. This research has undergone an ethical test and was declared to have passed the ethical test with No. 64/KEPK-RSISA/III/2023.

RESULT

Characteristics of Respondents Based on Gender, Age, Education, and Occupation and Stage

Tabel 1

Frequency Distribution of Respondent Characteristics (n=85)

Respondent Characteristics	f	%
Gender		
Man	13	15,3
Women	40	84,7
Age		
Midle age(45-59)	38	32,9
Elderly (60-74)	15	29,4
Education		
No School	9	10,6
Elementary school	15	44,7
Junior Hight School	16	20,0
Senior Hight School	13	16,5
Work		
Work	21	37,6
Doesn Work	32	62,4
Stadium		
Stadium 2	74	87,1
Stadium 3	9	10,6
Stadium 4	2	2,4

Based on table 1, data shows that the majority of respondents were female, 72 respondents (84.7%) while 13 respondents were male (15.3%). The majority of respondents' ages were in the early elderly range as many as 28 respondents (32.9%), early adults as many as 13 respondents (15.3%), late adults as many as 19 respondents (22.4%), and late elderly as many as 25 respondents (29.4%). The majority of respondents' education was elementary school as many as 38 respondents (44.7%), no school as many as 9 respondents (10.6%), junior high school as many as 17 respondents (20.0%), and high schools were 14 respondents (16.5%), universities were 7 respondents (8.2%). The majority of respondents do not work as many as 53 respondents (62.4%), 32 respondents (37.6%) worked. The majority of respondents were in stage 2 as many as 74 respondents (87.1%), stage 3 as many as 9 respondents (10.6%), stage 4 as many as 2 (2.4%).

Characteristics of coping Mecanism

Tabel 2

Frequency Distribution Based on Respondents' Coping Mechanisms (n=85)

Coping Mechanisms	f	%
Mal Adaptif	17	20,0
Adaptif	68	80,0

Based on the table 2 data obtained that the majority of respondents had adaptive coping mechanisms, 68 respondents (80.%). Based on the research results, the majority have adaptive coping because respondents have positive social support so that a person's coping becomes more adaptive. Emotional support, activeness, and self-acceptance describe patients who use coping mechanisms well. If the use of coping mechanisms is not good, patients will tend to blame themselves, reject or accept themselves (Ryan D. Nipp et al., 2016).

Characteristics of Respondents Based on Level of Depression

Tabel 3

Frequency Distribution Based on Respondent's Level of Depression (n=85)

Depression	f	%
Minimal depression	57	67,1
Mild depression	12	14,1
Moderate Depression	16	18,8

Based on table 3, data shows that the majority of respondents experienced depression at least 57 respondents (67.1%), experienced mild depression as many as 12 respondents (14.1%), and experienced moderate depression as many as 16 respondents (18.8%). This indicates that the majority of respondents have accepted The conditions experienced now are shown by the majority of respondents to be at a minimal level of depression.

Analysis Based on Coping Mechanisms with Levels of Depression in Cancer Patients Undergoing Chemotherapy

Tabel 4

Coping Mechanisms With Levels of Depression (n=85)

Variabel	Minimal Depression	Mild Depression	Moderate Depression	Total
Maladaptif	6	2	9	17
Adaptif	51	10	7	68

Table 4, it shows that the majority of respondents who had adaptive coping experienced depression at least 51 respondents (75%), and respondents with maladaptive coping experienced moderate depression as many as 9 respondents (52.9%). Previous research findings show that cancer patients have a higher risk of experiencing depression and anxiety during cancer disease (Götze et al., 2020).

DISCUSSION

In the present study, most respondents were women. This finding is consistent with the epidemiology of cancer, indicating that women are more susceptible to several types of cancer due to hormonal factors. Women are approximately twice as likely to develop hormone-related cancer because of imbalance in estrogen and progesterone levels, which may stimulate abnormal cell proliferation (Rodriguez et al., 2019). Supported by Subagja (2014), the hormonal imbalance that occurs, namely excess estrogen hormone and lack of progesterone hormone, can cause an increased risk of cancer. Therefore, the predominance burden experienced during cancer treatment, particularly the increased risk of depressive symptoms.

As people get older they experience changes both physically and psychologically, one of which is depression (Lianawati, 2018). Middle-aged adults with cancer may experience anxiety and depressive symptoms when cancer-related conditions and functional limitations interfere with their usual activities, independence, and daily functioning (Rodríguez-González et al., 2023; Vu et al., 2023). So that feelings of anger will arise at the situation and are often accompanied by rejection. Setyarini et al. (2022) explained that aging is a process that cannot be avoided and is a developmental stage where physical and psychological changes occur. Anxiety conditions in the elderly can occur as they get older, this is caused by thoughts of death. Werdani (2020) Depression often occurs in the elderly population who experience physiological disorders for a long time. because the elderly are more susceptible to experiencing negative emotions which are influenced by the severity of the stressor.

Based on theoretical concepts proposed Suwistianisa et al. (2015) that a person's education will influence cognitive thinking patterns, this is due to the information obtained during the education period and the experiences that a person experiences. According to Yuliati et al. (2020) the higher a person's education, the easier it will be for someone to receive information so that the more knowledge they have. Someone who has a high level of education will have a developed and more logical mindset. The level of education also greatly influences the respondent's determination in

shaping a person's behavior. Meanwhile, according to Taple et al. (2022) explained that the absence of a relationship between education level and depression could also be influenced by other sociodemographic factors such as gender.

According to research (Utami, 2017) someone who does not work will be more likely to experience depression because someone who does not work has less activity, while physical activity can reduce a person's psychological burden. So someone who doesn't work will have a low quality of life, while someone who works will interact more socially. Social relationships are one of the factors that most influence a person's quality of life, where someone who rarely has social relationships or tends to be alone will have a poor quality of life on every scale its function (Juwita et al., 2018). According to research Rashighi & Harris (2017) explained that the inability to carry out routine activities and the pressure associated with a much greater frequency of illness can make a person experience depression and explained that when someone has a job they will not experience depression.

Yulianti & Kurniawati (2018) This is because the average cancer patient has been suffering for more than a year, this shows that cancer patients are able to accept and control themselves, think according to reality and are able to continue their future without being overshadowed by the disease they are suffering from. Based on research Guntari & Suariyani (2016) Respondents admitted that they surrendered to God and tried to accept everything that would happen to them, because they believed that a person's life or death was in God's hands. Therefore, the most important thing that can be done now is to pray and remain enthusiastic in undergoing every treatment and therapy recommended by the doctor for his recovery. Previous research findings show that cancer patients have a higher risk of experiencing depression and anxiety during cancer disease (Götze et al., 2020).

Depression causes a greatly diminished QOL in cancer patients by worsening physical symptoms, and increases the negative impact on patients and their families throughout the course of the disease. For example, during treatment for breast cancer, patients with higher pre-chemotherapy levels of fatigue, depression and sleep disturbances suffered increased levels of these symptoms during treatment, which had severe and adverse effects on their QOL. Depression in cancer patients increases the length of hospital stay and resource use, increasing health expenditure. Depressed cancer patients are also at a higher risk of suicide compared with the general public.

Coping mechanisms is a way to include problem solving techniques directly to respond to threats or that regulate emotional distress and provide self-protection against threats and stress. (Potter & Perry, 2017). By having adaptive coping mechanisms, a person will think positively, such as asking for support from others to solve problems, and express things well (Waty, 2018). Titipangesti & Candra (2020) also believes that respondents who have adaptive coping will usually tell the problems they are facing to those closest to them and try to be open, able to accept suggestions from other people so they are able to solve problems selectively. Respondents with good or adaptive coping mechanisms are able to apply what they learn in their daily lives, thereby avoiding feelings of anxiety and depression. Dedova et al. (2023) Having social support is positively correlated with adaptive coping, thereby avoiding maladaptive coping and helping to reduce stress against illness.

According to research (Sugo et al., 2019) The respondent's adaptive and good coping cannot be separated from the source of coping, which is a condition that can help someone in making choices to overcome the problems and stressors they face. The individual's ability to overcome physical and emotional changes that cause stress has been successful so that the individual can adapt to problems. According to Maulina & Bahri (2016) Cancer patients can overcome the side effects of chemotherapy they experience by using coping resources that focus on problems from the environment, both social, interpersonal and intrapersonal, where these sources are in the form of

beliefs, social support and the ability to solve problems so that individuals can adapt to the level of depression or the effects of chemotherapy although the side effects experienced by individuals vary.

The findings of the present study are consistent with those reported by Yulianti & Kurniawati (2018) stated that coping mechanisms have a significant influence on the level of depression in cancer patients undergoing chemotherapy, meaning that the level of depression will decrease if the patient has good or adaptive coping mechanisms. This shows that coping mechanisms can be one of the factors that can reduce the level of depression in cancer patients undergoing chemotherapy, with the resulting R Square ($R^2 = 0.878$), which means the percentage of influence of coping mechanisms is 87.8%.

CONCLUSION

Cancer patients experience several changes, namely fatigue, loss of appetite, and change in body weight. Depression causes a decrease in the quality of life of cancer patients by exacerbating physical symptoms, and increasing the negative impact on patients and their families throughout the disease. Coping mechanisms can control the strengthening of problems so that cancer patients can control the symptoms of depression that appear with good coping mechanisms for problem-solving.

REFERENCES

- Biracyaza, E., Habimana, S., & Rusengamihigo, D. (2021). Psychometric properties of the Beck Depression Inventory (BDI-II) in cancer patients: Cancer patients from Butaro Ambulatory Cancer Center, Rwanda. *Psychology Research and Behavior Management*, 14, 665–674. <https://doi.org/10.2147/PRBM.S306530>
- Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: A Cancer Journal for Clinicians*, 68(6), 394–424. <https://doi.org/10.3322/caac.21492>
- Dedova, M., Banik, G., & Vargova, L. (2023). Coping with cancer: the role of different sources of psychosocial support and the personality of patients with cancer in (mal)adaptive coping strategies. *Supportive Care in Cancer*, 31(1). <https://doi.org/10.1007/s00520-022-07454-z>
- Götze, H., Friedrich, M., Taubenheim, S., Dietz, A., Lordick, F., & Mehnert, A. (2020). Depression and anxiety in long-term survivors 5 and 10 years after cancer diagnosis. *Supportive Care in Cancer*, 28(1), 211–220. <https://doi.org/10.1007/s00520-019-04805-1>
- Guntari, G. A. S., & Suariyani, N. L. P. (2016). Gambaran Fisik dan Psikologis Penderita Kanker Payudara Post Mastektomi Di RSUP Sanglah Denpasar Tahun 2014. *Arc. Com. Health • Juni*, 3(1), 24–35.
- Hermanto, A., Sinawang, G. W., Alfaqih, M. R., & Faizah, R. (2019). The Impacts of Depression Treatment on Health-Related Quality of Life in Cancer Patients: A Systematic Review. *Jurnal Ners*, 14(3 Special Issue), 209–212. <https://doi.org/10.20473/jn.v14i3.17060>
- Juwita, D. A., Almahdy, & Afdhila, R. (2018). Pengaruh Karakteristik Pasien Terhadap Kualitas Hidup Terkait Kesehatan Pada Pasien Kanker Payudara di RSUP Dr.M. Djamil Padang, Indonesia. 5(2), 126–133.
- Kastubi, Norontoko, D. A., & Miadi. (2016). Peningkatan Self Efficacy Melalui Intervensi Psikoreligi Pada Pasien Kanker Yang Mengalami Depresi. *Jurnal Keperawatan*, Vol. IX No(2), 110.
- Kemenkes RI. (2018). Laporan Nasional Rikesdas 2018. Kementrian Kesehatan RI.
- Lianawati, D. M. (2018). Gambaran dukungan keluarga pada pasien kanker payudara yang menjalani kemoterapi di RSUD dr. Moewardi Surakarta. Universitas Muhammadiyah Surakarta, 12.
- Malhi, G. S., & Mann, J. J. (2018). Depression. *Lancet*, 392(18), 2299–2312. [https://doi.org/https://doi.org/10.1016/S0140-6736\(18\)31948-2](https://doi.org/https://doi.org/10.1016/S0140-6736(18)31948-2)

- Maulina, R., & Bahri, T. S. (2016). The Coping Mechanism of Cancer Patients Undergoing Chemotherapy In Dr. Zainoel Abidin General Hospital of Banda Aceh. *Jurnal Endurance*, 2(3), 1–6.
- Moorey, S., Frampton, M., & Greer, S. (2003). The Cancer Coping Questionnaire: A self-rating scale for measuring the impact of adjuvant psychological therapy on coping behaviour. *Psycho-Oncology*, 12(4), 331–344. <https://doi.org/10.1002/pon.646>
- Nadatien, I., & Mulayyinah, M. (2019). Hubungan Mekanisme Koping Dengan Tingkat Stres Pada Pasien Kanker Di Yayasan Kanker Indonesia Cabang Jawa Timur. *JI-KES (Jurnal Ilmu Kesehatan)*, 2(2), 68–71. <https://doi.org/10.33006/ji-kes.v2i2.121>
- Niedzwiedz, C. L., Knifton, L., Robb, K. A., Katikireddi, S. V., & Smith, D. J. (2019). Depression and anxiety among people living with and beyond cancer: A growing clinical and research priority. *BMC Cancer*, 19(1), 1–8. <https://doi.org/10.1186/s12885-019-6181-4>
- Nurhikmah, W., Wakhid, A., & Rosalina, R. (2018). Hubungan Mekanisme Koping Dengan Kualitas Hidup Pada Pasien Kanker Payudara. *Jurnal Ilmu Keperawatan Jiwa*, 1(1), 38. <https://doi.org/10.32584/jikj.v1i1.35>
- Potter, & Perry. (2017). *Buku Ajar Fundamental Keperawatan: Konsep, Proses dan Praktik*. Jakarta: EGC.
- Rashighi, M., & Harris, J. E. (2017). What precipitates depression in African-American cancer patients? Triggers and stressors. *Physiology & Behavior*, 176(3), 139–148. <https://doi.org/10.1053/j.gastro.2016.08.014>.CagY
- Rodriguez, A. C., Blanchard, Z., Maurer, K. A., & Gertz, J. (2019). Estrogen Signaling in Endometrial Cancer: a Key Oncogenic Pathway with Several Open Questions. *Hormones and Cancer*, 10(2–3), 51–63. <https://doi.org/10.1007/s12672-019-0358-9>
- Rodríguez-González, A., Velasco-Duránte, V., Cruz-Castellanos, P., Hernández, R., Fernández-Montes, A., Jiménez-Fonseca, P., Castillo-Trujillo, O. A., García-Carrasco, M., Obispo, B., & Calderon, C. (2023). Mental adjustment, functional status, and depression in advanced cancer patients. *International Journal of Environmental Research and Public Health*, 20(4), 3015. <https://doi.org/10.3390/ijerph20043015>
- Ruza, A. F. N., Sugiyanto, E. P., & Kandar. (2017). Hubungan Mekanisme Koping Dengan Tingkat Depresi Pada Pasien GSK Yang Menjalani Hemodialisa Di RSUD Dr. H. Soewondo Kendal. *Jurnal Ilmiah Kesehatan Keperawatan*, 1–13.
- Ryan D. Nipp, M. D., Areej El-Jawahri, M. D., Joel N. Fishbein, B. A., Justin Euseblo, B., Jamie M. Stagi, P., Emily R. Gallagher, R. N., Elyse r. park, P. M. P. H., Vicki a. jackson, M.D., M. P. H., William F. Piri, M.D., M. P. H., Joseph A. Greer, P., & Jennifer S. Temel, M. D. (2016). The Relationship Between Coping Strategies, Quality of Life, and Mood in Patients with Incurable Cancer. *Cancer*, 122(13), 2110–2116. <https://doi.org/10.1002/ncr.30025>.The
- Sarang, B., Bhandarkar, P., Parsekar, S. S., Patil, P., Venghateri, J. B., Ghoshal, R., Veetil, D. K., Shah, P., Gadgil, A., & Roy, N. (2023). Concerns and coping mechanisms of breast cancer survivor women from Asia: a scoping review. *Supportive Care in Cancer*, 31(9), 1–13. <https://doi.org/10.1007/s00520-023-07996-w>
- Setyarini, E. A., Niman, S., Parulian, T. S., & Hendarsyah, S. (2022). Prevalensi Masalah Emosional: Stres, Kecemasan dan Depresi pada Usia Lanjut. *Bulletin of Counseling and Psychotherapy*, 4(1), 21–27. <https://doi.org/10.51214/bocp.v4i1.140>
- Sugo, M. E., Kusumaningrum, T., Fauziningtyas, R., & Keperawatan, F. (2019). Faktor Strategi Koping pada Pasien Kanker yang Menjalani Kemoterapi (Coping Strategy Factors in Cancer Patients Undergoing Chemotherapy). *Pedimaternat Nursing Journal*, 5(1), 99–108.
- Suwistianisa, R., Huda, N., & Ernawaty, J. (2015). Faktor-Faktor Yang Mempengaruhi Tingkat Depresi Pada Pasien Kanker Yang Dirawat Di Rsud Arifin Achmad Provinsi Riau. *Oktober*, 2(2), 1463.
- Taple, B. J., Chapman, R., Schalet, B. D., Brower, R., & Griffith, J. W. (2022). The Impact of Education on Depression Assessment: Differential Item Functioning Analysis. *Assessment*, 29(2), 272–284. <https://doi.org/10.1177/1073191120971357>

- Titipangesti, A., & Candra, D. (2020). Hubungan Religiusitas Dan Mekanisme Koping Terhadap Tingkat Depresi Pada Pasien Kemoterapi Di Rs Pku Muhammadiyah Yogyakarta.
- Utami, S. S. (2017). Aspek Psikososial Pada Penderita Kanker Payudara : Pendahuluan Metode. 20(2), 65–74. <https://doi.org/10.7454/jki.v20i2.503>
- Vu, T. T., et al. (2023). Mental health, functional impairment, and barriers to mental health access among cancer patients in Vietnam. *Psycho-Oncology*. <https://doi.org/10.1002/pon.6114>
- Waty, S. (2018). Analisis Faktor Yang Berhubungan Dengan Strategi Koping Pada Pasien Skizofrenia Di Kota Sungai Penuh Tahun 2017. *Indonesian Journal for Health Sciences*, 2(1), 26. <https://doi.org/10.24269/ijhs.v2i1.807>
- Werdani, Y. D. W. (2020). Pengaruh Tingkat Stres Terhadap Mekanisme Koping Pasien Kanker Berbasis Manajemen Terapi Kanker. *Care : Jurnal Ilmiah Ilmu Kesehatan*, 8(3), 346. <https://doi.org/10.33366/jc.v8i3.1262>
- World Health Organization. (2017). Depression and other common mental disorders: global health estimates (No. WHO/MSD/MER/2017.2). <https://iris.who.int/bitstream/handle/10665/254610/W?sequence=1>
- World Health Organization. (2023). Depressive disorder (depression). 31 March 2023. <https://www.who.int/news-room/fact-sheets/detail/depression>
- Yogi, P., Trifuaningsih, D., & Agustina, D. M. (2018). Hubungan Optimisme dengan Tingkat Kecemasan dan Depresi pada Pasien Kanker Payudara yang Menjalani Kemoterapi di Rumah Sakit Umum Daerah. *Ilmu Kesehatan*, 15, 9.
- Yulianti, T. S., & Kurniawati, L. I. (2018). Faktor-Faktor Yang Berhubungan Dengan Tingkat Depresi Pada Pasien Kanker Yang Menjalani Kemoterapi Di Rumah Sakit Dr. Oen Surakarta. *Kosala : Jurnal Ilmu Kesehatan*, 6(2), 63–71. <https://doi.org/10.37831/jik.v6i2.146>
- Yuliati, L. D., Fitriani, R. D., & Maliya, A. (2020). Hubungan Dukungan Keluarga dengan Depresi pada Pasien Kanker Payudara. *Prosiding Seminar Nasioanal Keperawatan Universitas Muhammadiyah Surakarta*, 56–61.