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Enhancing pain management knowledge and quality of life in cancer patients through autogenic relaxation

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Contributions to SDGs

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Abstract
Uncontrolled proliferation of cancer cells is the underlying cause of cancer in patients. This community service aimed to enhance cancer patients' knowledge and understanding of pain management using an autogenic relaxation technique incorporating specific movements and guided suggestions. The method involved demonstrations and health education sessions. This activity was attended by 30 cancer patients aged >18 years undergoing radiotherapy or chemotherapy. The study results indicated a 37.3% improvement in the participants' knowledge and understanding of the provided pain management education, increasing from 50% to 87.3%. The application of autogenic relaxation techniques effectively reduced pain intensity, and patients demonstrated increased independence in performing these techniques. Consequently, the quality of life for cancer patients undergoing treatment can be optimized.

Keywords: Autogenic relaxation: Cancer; Pain management; Roleplay education; Quality of life

Meningkatkan pengetahuan manajemen nyeri dan kualitas hidup pada pasien kanker melalui relaksasi autogenik

Abstrak
Kanker masih merupakan kontributor utama morbiditas dan mortalitas di seluruh dunia. Pertumbuhan sel kanker yang masif menyebabkan kanker pada semua pasien. Tujuan dari pengabdian masyarakat ini adalah untuk meningkatkan pengetahuan dan pemahaman pasien kanker mengenai manajemen nyeri dengan menggunakan teknik relaksasi autogenik yang berisi beberapa gerakan yang dikombinasikan dengan kalimat sugesti terpandu. Metode dalam kegiatan ini dilakukan dengan demonstrasi dan pendekatan dengan konsep pendidikan pendidikan kesehatan. Kegiatan ini diikuti sebanyak 30 pasien kanker dengan rentang usia yang bervariasi >18 tahun yang sedang menjalani pengobatan radioterapi atau kemoterapi. Hasil yang diperoleh adalah peningkatan kualitas hidup dalam aspek pengetahuan dan pemahaman terkait pendidikan yang diberikan sebesar 37,3% dari 50% menjadi 87,3%. Penerapan teknik relaksasi autogenik dapat mengurangi intensitas nyeri dan pemahaman pasien tentang melakukan teknik relaksasi manajemen nyeri meningkat secara mandiri. Dengan demikian, kualitas hidup pasien kanker yang menjalani pengobatan dapat optimal.

Kata Kunci: *Relaksasi autogenik: Kanker; Manajemen nyeri; Pendidikan roleplay; Kualitas hidup*

1. Introduction

The East Java Branch of the Indonesian Cancer Foundation (YKI) Shelter, known as the Marsudi Husada Sasana Shelter, provides crucial support to cancer patients undergoing hospital treatment. Established to offer temporary accommodation, the shelter serves patients from remote areas who require housing while receiving care at Dr. Soetomo Hospital in Surabaya. This initiative facilitates patients' access to essential health services by alleviating the financial burden of accommodation, particularly for underprivileged patients who receive services free of charge through donor funding. This support is vital for patients traveling from distant regions, such as Pacitan and Banyuwangi, who need a place to stay during their treatment.

A significant challenge for many patients at the shelter is the management of post-treatment pain. Many are unfamiliar with non-pharmacological pain management techniques, such as relaxation methods, and lack comprehensive knowledge of these alternatives, often relying solely on medication (Berlemont, 2017; Ferrier et al., 2025). The shelter has limited resources for providing regular, ongoing education or therapeutic programs related to pain management and psychological support. Cancer patients commonly experience both pain and anxiety following treatment, stemming from the effects of the therapy itself and the psychological and physical challenges faced by patients and their families. This pain not only diminishes patients' quality of life but can also complicate their recovery and increase healthcare costs (Copenhaver et al., 2021; Portenoy & Ahmed, 2018).

Pain is a significant side effect of both chemotherapy and radiotherapy, arising through various mechanisms. Chemotherapy can damage peripheral nerves, leading to neuropathic pain (de Munter et al., 2023). Radiotherapy, which targets cancerous tissue, often injures surrounding healthy tissue, resulting in inflammatory pain (Tavakoli & Carannante, 2021). Furthermore, medication can induce visceral pain, particularly when it affects internal organs, such as the digestive tract, or areas sensitive to pain stimuli. This pain exacerbates patients' emotional distress, contributing to stress, anxiety, and depression (Trisnawati, 2021).

To address these challenges, this community service program focused on improving patients' self-management of pain through a non-pharmacological approach. Specifically, the program provided counseling, education, and role-play training to cancer patients and their families at the shelter, centered on autogenic relaxation techniques. The training encompassed practical steps, including breathing exercises, concentration on bodily sensations, and the use of positive autosuggestion. Autogenic relaxation offers important benefits for cancer patients experiencing chronic pain (Minowa & Koitabashi, 2013). As a non-pharmacological intervention, it can help reduce pain intensity and improve overall quality of life. This technique induces bodily relaxation through breathing and concentration exercises, reducing muscle tension and alleviating stress. Autogenic relaxation has also been shown to be effective in mitigating anxiety and depression, common comorbidities in cancer patients. Additionally, it supports physical recovery and improves bodily functions, which is particularly beneficial for patients whose daily activities are limited by pain. Thus, autogenic pain management represents a holistic and effective approach to enhancing the comfort and well-being of cancer patients, reducing their reliance on medication (Supriyanti & Kustriyani, 2023).

The value of patient education in pain management is well-established (Sari & Masfuri, 2024). Role-playing within educational interventions is particularly effective, as it combines active learning with realistic scenarios, enhancing comprehension, skill development, and empathy in a healthcare context (Al-Sebaei, 2023). Autogenic relaxation is a specific relaxation technique that involves focused attention to achieve physical and mental calmness through self-suggestion (Darnall et al., 2021). This technique aims to reduce stress, anxiety, and pain by directing the mind to specific bodily sensations, such as feelings of warmth or heaviness in the limbs (Kohlert et al., 2022).

Previous research supports the use of autogenic relaxation for pain management. For example, Tan et al. (2024) examined the effects of autogenic relaxation techniques on mild to moderate pain (rated at 6/10) in oncology inpatients, using an experimental design with intervention and control groups. The results demonstrated a significant reduction in pain among patients receiving the autogenic relaxation intervention, compared to the control group, which received only pharmacological therapy. The authors concluded that autogenic relaxation techniques are effective in reducing pain in cancer patients. Similarly, Victorson et al. (2020) found that autogenic relaxation combined with deep breathing exercises in breast cancer patients resulted in a significant reduction in pain (by 2-3 levels) and anxiety, along with increased self-efficacy.

This community service program, therefore, focused on pain management practices to support the recovery and overall well-being of cancer patients. By providing a comprehensive understanding of pain management through relaxation techniques, the program aimed to improve patients' quality of life. Specifically, this activity sought to provide patients and their families with an understanding of, and increased knowledge about, the importance of autogenic relaxation techniques as an alternative method for self-managing pain. Through role-play exercises, the program aimed to reduce patients' anxiety levels and pain intensity, promoting a sense of calmness during treatment. Ultimately, the anticipated decrease in physical pain and psychological anxiety is expected to improve patients' quality of life, enabling them to engage more effectively in daily activities. It is hoped that this program will provide cancer patients and caregivers at the Indonesian Cancer Foundation Shelter East Java Branch with tangible benefits in the form of enhanced pain management skills and an improved quality of life throughout the cancer treatment process.

2. Method

This community service program, a mandatory activity for Master of Nursing Students specializing in medical-surgical nursing, involved the delivery of health education lectures and autogenic relaxation pain management role-play at the Indonesian Cancer Foundation Shelter East Java Branch. The activity was conducted on Wednesday, November 13, 2024, from 15:30 to 17:00 WIB. The participants comprised 30 cancer patients undergoing treatment, including both chemotherapy and radiation therapy.

The program was facilitated by one resource person, with one committee member acting as a role-play model. The activity commenced with an opening address by shelter officers, followed by the administration of a pre-test to assess baseline knowledge. The educational component and role-play session lasted approximately 50 minutes. PowerPoint presentations and printed leaflets were used as educational media, allowing

patients and caregivers to directly access the information. A post-test was administered upon completion of the education and role-play activities to evaluate the effectiveness of the intervention.

3. Results and Discussion

This community service program delivered health education on pain management for cancer patients undergoing chemotherapy and radiotherapy at the Indonesian Cancer Foundation Shelter House. The program incorporated autogenic relaxation techniques and nutritional management education. Pain management education was delivered through lectures and a role-play demonstration of autogenic relaxation techniques. The educational component included a presentation of materials via PowerPoint and the distribution of leaflets. The autogenic relaxation training covered the definition, benefits, positions, and procedures of the technique.

Autogenic Training (AT) is a self-induced relaxation technique that utilizes autosuggestion. It involves a structured series of exercises designed to guide individuals to a state of deep relaxation through focused attention on bodily sensations and specific mental exercises (Hafezi, 2010). This training is particularly relevant for cancer patients undergoing chemotherapy and radiotherapy, as treatment-related pain and stress can exacerbate their condition. AT offers a method to alleviate pain and enhance psychological well-being, which is of significant value during this challenging phase of care (Sivero et al., 2023).

The training emphasized that AT provides numerous benefits for psychological well-being, including reductions in anxiety, depression, and general psychological distress, as well as improved management of stress-related behaviors and mood states (Ramirez-Garcia et al., 2020; Vasu et al., 2020). For cancer patients, these benefits can translate to decreased anxiety associated with their diagnosis and treatment, improved emotional state, and a greater capacity to cope with the physical side effects of their therapy (Minowa & Koitabashi, 2013). Furthermore, the training detailed that AT induces changes in autonomic cardiorespiratory functions and central nervous system activity, culminating in a state of deep relaxation. It has also been observed to modulate pain activity patterns within the brain (Breznoscakova et al., 2023). This is especially important for cancer patients, as AT can contribute to a reduction in pain perception and an enhancement of the body's response to treatment.

Participants were instructed that AT can be practiced in various positions, such as sitting or lying down, provided the individual is comfortable and able to maintain focus on the exercises without distractions (Breznoscakova et al., 2023; Hafezi, 2010). The key is to adopt a relaxed posture that facilitates concentration and autosuggestion. Finally, the training outlined the six standard exercises that target different parts of the body to promote relaxation: heaviness in the limbs, warmth in the limbs, regulation of cardiac activity, regulation of breathing, warmth in the abdomen, and coolness in the forehead (Sakai et al., 2020).

Figure 1 illustrates the program activities. The left side of Figure 1 depicts the health education session, led by a medical-surgical nursing student (TD), which included explanations of the definition, benefits, time, and steps involved in autogenic relaxation. Participants actively engaged in this session, as evidenced by the questions they raised.

The right side of Figure 1 shows the subsequent role-play demonstration, led by TD and assisted by FI, where patients and their families practiced autogenic relaxation exercises under the supervision of facilitators (IMDBAS, KFN, AF, and RNA). This support during the role-play demonstration was recommended by Breznoscakova et al. (2023).

Figure 1. Community service activities

Participants completed a pre-test before the educational session and role-play, and a post-test upon completion. The results indicate a significant improvement in participant knowledge. The pre-test revealed an average knowledge level of 50%, which increased to 87.3% following the education and role-play intervention, as shown in Figure 2. These findings align with previous research. De Paolis et al. (2019) reported that autogenic relaxation techniques can effectively reduce pain in cancer patients, and other relaxation techniques, such as progressive muscle relaxation (PMR) and guided imagery (GI), have also demonstrated pain-relieving effects in this population. Furthermore, autogenic relaxation has been shown to significantly reduce both pain and emotional distress in patients with advanced cancer.

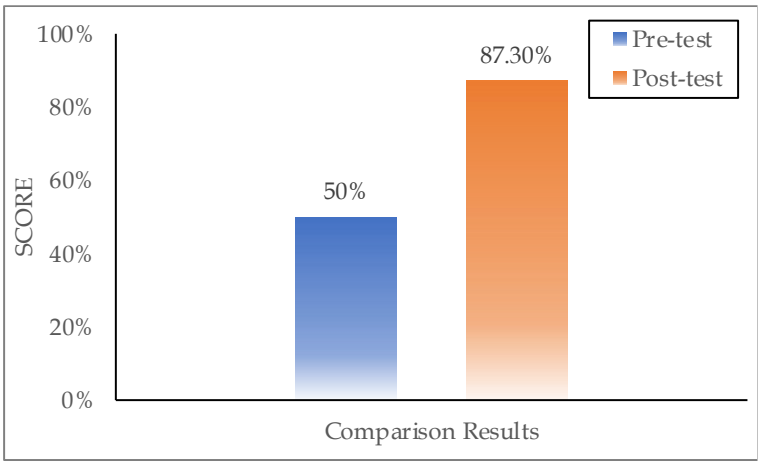

Figure 2. Participants' knowledge regarding the health education material

This community service program aimed to empower cancer patients to manage their pain independently through education and role-play of autogenic relaxation techniques. The health education component provided participants with an understanding of pain mechanisms, including the distinction between acute and chronic pain, and the impact of pain on quality of life. This is consistent with previous research on pain management education for cancer patients (Danon et al., 2022).

The role-play demonstration actively engaged participants in practicing autogenic relaxation techniques. This approach is supported by Wu et al. (2023), who found that role-play, where participants simulate real-world scenarios, enhances their ability to apply learned techniques. Role-play can increase patients' and caregivers' confidence in using relaxation therapy to manage pain and anxiety related to cancer treatment and symptoms (Mikolasek et al., 2021; Sinha et al., 2021).

The question-and-answer session provided an opportunity for participants to clarify their understanding and share their experiences. As noted by Haryanto et al. (2024) and Sjattar et al. (2024), question-and-answer sessions are valuable for assessing participant feedback. Consistent with Melly et al. (2022) and Wang et al. (2024), the session also allowed patients to discuss their pain experiences and previously attempted strategies. Gok Metin et al. (2019) further emphasize the importance of such sessions in addressing participant doubts and clarifying key concepts.

The improvement in knowledge and practical skills observed in this program underscores the importance of pain management education for enhancing the quality of life of cancer patients. This finding is consistent with Rahmawati et al. (2024) and the World Health Organization (WHO), which have highlighted the positive impact of health education, including role-play and educational videos, on patients' knowledge of pain management techniques, such as progressive muscle relaxation, in lung cancer patients. It is expected that this program will equip patients and their families with the knowledge and skills to effectively manage pain using autogenic relaxation, thereby preventing complications, reducing pain intensity, and improving patients' overall quality of life.

The 20-minute autogenic relaxation intervention, incorporating education and role-play, aligns with Tan et al. (2024), who demonstrated its potential for integration into routine cancer care. Similarly, Haryanto et al. (2024) found that education significantly increased public knowledge and understanding of non-pharmacological nursing interventions in colorectal cancer patients, from 27.5% pre-intervention to 82.5% post-intervention.

4. Conclusion

Educational activities focused on pain management with a role-play approach for cancer patients have significant potential in reducing pain intensity and improving quality of life. Providing patients with an understanding of pain mechanisms, the benefits of relaxation, and the technical steps involved in autogenic relaxation increases their awareness and motivation to actively participate in the pain management process. Autogenic relaxation role-play, which incorporates mental exercises and guided imagery to enhance feelings of calm and control over the body, has been shown to effectively reduce pain perception by modulating physiological responses to stress, such as lowering muscle tension and heart rate. The implementation of such a pain management program, particularly within a supportive and consistent environment, can serve as a valuable holistic, non-pharmacological intervention, complementing standard medical therapies to improve the overall well-being of cancer patients. It is anticipated that increased knowledge and understanding will empower patients and caregivers to effectively utilize relaxation techniques to manage cancer-related pain, leading to a more optimal quality of life.

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Author Contribution

Supervisor: TS; Preparation of articles and presentation of service results: AHZ, NSAPM, AA; Implementers of activity documentation: LGWRD, LI, DPL; Chief executive: WGP; Roleplay event organizers: IMDBAS, KFN, AF, RNA.

Conflict of Interest

All authors declare that there is no financial or non-financial conflict of interest related to this article.

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References

Al-Sebaei, M. O. (2023). Evaluating the use of role-play simulations in teaching management of medical emergencies in the dental clinic. *BMC Medical Education*, *23*(1), 1–10. https://doi.org/10.1186/s12909-023-04818-9

Berlemont, C. (2017). The non-pharmacological management of chronic pain. *Soins*, *62*(815), 38–40. https://doi.org/10.1016/j.soin.2017.03.011

Breznoscakova, D., Kovanicova, M., Sedlakova, E., & Pallayova, M. (2023). Autogenic Training in Mental Disorders: What Can We Expect? *International Journal of Environmental Research and Public Health*, *20*(5). https://doi.org/10.3390/ijerph20054344

Copenhaver, D. J., Huang, M., Singh, J., & Fishman, S. M. (2021). History and Epidemiology of Cancer Pain. In *Cancer Treatment and Research* (Vol. 182, pp. 3–15). https://doi.org/10.1007/978-3-030-81526-4_1

Danon, N., Al-Gobari, M., Burnand, B., & Rodondi, P.-Y. (2022). Are mind-body therapies effective for relieving cancer-related pain in adults? A systematic review and meta-analysis. *Psycho-Oncology*, *31*(3), 345–371. https://doi.org/10.1002/pon.5821

Darnall, B. D., Roy, A., Chen, A. L., Ziadni, M. S., Keane, R. T., You, D. S., Slater, K., Poupore-King, H., Mackey, I., Kao, M. C., Cook, K. F., Lorig, K., Zhang, D., Hong, J., Tian, L., & Mackey, S. C. (2021). Comparison of a Single-Session Pain Management Skills Intervention With a Single-Session Health Education Intervention and 8 Sessions of Cognitive Behavioral Therapy in Adults With

Chronic Low Back Pain A Randomized Clinical Trial. *JAMA Network Open*, *4*(8), E2113401. https://doi.org/10.1001/jamanetworkopen.2021.13401

de Munter, J., Dodlek, N., Khmaladze, A., Parreira, S. T., Ullgren, H., de Man, R., de Jong, F. A., & Oldenmenger, W. H. (2023). The role of cancer nurses in cancer-related pain management in Europe. *Palliative Care and Social Practice*, *17*, 26323524231216996. https://doi.org/10.1177/26323524231216996

De Paolis, G., Naccarato, A., Cibelli, F., D'Alete, A., Mastroianni, C., Surdo, L., Casale, G., & Magnani, C. (2019). The effectiveness of progressive muscle relaxation and interactive guided imagery as a pain-reducing intervention in advanced cancer patients: A multicentre randomised controlled non-pharmacological trial. *Complementary Therapies in Clinical Practice*, *34*(December 2018), 280–287. https://doi.org/10.1016/j.ctcp.2018.12.014

Ferrier, G., Filipovic, A., Wasan, H., di Pietro, A., Mittal, D., Kamath, G., Kharawala, S., & Mehmud, F. (2025). A targeted literature review on the impact of tailored interventions on patient outcomes in oncology. *Oncogene*. https://doi.org/10.1038/s41388-025-03424-x

Gok Metin, Z., Karadas, C., Izgu, N., Ozdemir, L., & Demirci, U. (2019). Effects of progressive muscle relaxation and mindfulness meditation on fatigue, coping styles, and quality of life in early breast cancer patients: An assessor blinded, three-arm, randomized controlled trial. *European Journal of Oncology Nursing*, *42*, 116–125. https://doi.org/10.1016/j.ejon.2019.09.003

Hafezi, C. (2010). Autogenic training for children and adolescents. *Ergotherapie Und Rehabilitation*, *49*(11), 21–27.

Haryanto, H., Khairillah, Y. N., Erwhani, I., Purnamawati, D. A., Rahmawati, A., Surtikanti, S., Mentari, T. A., & Fitriana, E. E. (2024). Enhancing Understanding of Colorectal Cancer Through Public Education at MHCC Clinic, Pontianak. *Community Empowerment*, *9*(5), 754–762. https://doi.org/10.31603/ce.11179

Kohlert, A., Wick, K., & Rosendahl, J. (2022). Autogenic Training for Reducing Chronic Pain: a Systematic Review and Meta-analysis of Randomized Controlled Trials. *International Journal of Behavioral Medicine*, *29*(5), 531–542. https://doi.org/10.1007/s12529-021-10038-6

Melly, M., Magdalena, M., & Lestari, K. (2022). Breast cancer prevention through the SADARI program in Padang Mutung Village, Kampar Regency. *Community Empowerment*, *7*(7), 1236–1241. https://doi.org/10.31603/ce.6238

Mikolasek, M., Witt, C. M., Barth, J., Wang, Y., Yang, L., Lin, G., Huang, B., Sheng, X., Wang, L., Chen, L., Qiu, X., Wu, X., & Lin, R. (2021). Effects and implementation of a mindfulness and relaxation app for patients with cancer: Mixed methods feasibility study. *JMIR Cancer*, *7*(1), 1–14. https://doi.org/10.2196/16785

Minowa, C., & Koitabashi, K. (2013). Effects of autogenic training on perioperative anxiety and pain in breast cancer patients: A randomized controlled trial. *Kitakanto Medical Journal*, *63*(1), 1–11. https://doi.org/10.2974/kmj.63.1

Portenoy, R. K., & Ahmed, E. (2018). Cancer Pain Syndromes. *Hematology/Oncology Clinics of North America*, *32*(3), 371–386. https://doi.org/10.1016/j.hoc.2018.01.002

Rahmawati, A. F., Inayati, A., & Dewi, N. R. (2024). Penerapan Pendidikan Kesehatan Tentang Manajemen Nutrisi pada Pasien Kanker. *Jurnal Cendikia Muda*, *4*(2), 186–193.

Ramirez-Garcia, M. P., Leclerc-Loiselle, J., Genest, C., Lussier, R., & Dehghan, G. (2020). Effectiveness of autogenic training on psychological well-being and quality of

life in adults living with chronic physical health problems: A protocol for a systematic review of RCT. *Systematic Reviews*, *9*(1). https://doi.org/10.1186/s13643-020-01336-3

Sakai, S., Inoue-Sato, M., Amemiya, R., Murakami, M., Inagaki, K., & Sakairi, Y. (2020). The influence of autogenic training on the physical properties of skin and cardiac autonomic activity in postmenopausal women: an exploratory study. *International Journal of Dermatology*, *59*(1), 103–109. https://doi.org/10.1111/ijd.14582

Sari, M., & Masfuri, M. (2024). Penggunaan Teknologi Digital dalam Manajemen Nyeri pada Pasien Kanker: Literature Review. *Jurnal Ilmu Dan Teknologi Kesehatan*, *15*(1), 78–85. https://doi.org/10.36308/jik.v15i1.620

Sinha, M. K., Barman, A., Goyal, M., & Patra, S. (2021). Progressive Muscle Relaxation and Guided Imagery in Breast Cancer: A Systematic Review and Meta-analysis of Randomised Controlled Trials. *Indian Journal of Palliative Care*, *27*(2), 336–344. https://doi.org/10.25259/IJPC_136_21

Sivero, S., Maldonato, N. M., Chini, A., Maione, R., Vitale, R., Volpe, S., Siciliano, S., Bottone, M., & Sivero, L. (2023). Evaluation of the effect of autogenic training as psychological support to patients operated for cancer: a systematic review. *Chirurgia (Turin)*, *36*(1), 34–37. https://doi.org/10.23736/S0394-9508.22.05469-9

Sjattar, E. L., Arafat, R., & Ling, L. W. (2024). Cancer pain self-management interventions in adults: Scoping review. *BMJ Supportive and Palliative Care*, *14*, 411–415. https://doi.org/10.1136/spcare-2024-004893

Supriyanti, E., & Kustriyani, M. (2023). Manajemen Nyeri Nonfarmakologi Pada Pasien Kanker. *Jurnal Implementasi Pengabdian Masyarakat Kesehatan (JIPMK)*, *5*(2), 36–40. https://doi.org/10.33660/jipmk.v5i2.112

Tan, S. B., Chai, C.-S., Ng, D., Zainuddin, S., Capelle, D., Lam, C., Ang, C., Chai, W., Ishak, N., Ong, Y., & Ngu, Y. (2024). Mindful breathing for cancer pain: efficacy of a single 20-minute session - a randomised controlled study. *BMJ Supportive & Palliative Care*. https://doi.org/10.1136/spcare-2023-004762

Tavakoli, A., & Carannante, A. (2021). Nursing Care of Oncology Patients with Sepsis. *Seminars in Oncology Nursing*, *37*(2), 151130. https://doi.org/10.1016/j.soncn.2021.151130

Trisnawati, I. (2021). Perilaku Caring Perawat Mempengaruhi Kepatuhan Pasien Kanker dalam Menjalani Kemoterapi. *Indonesian Scholar Journal of Nursing and Midwifery Science (ISJNMS)*, *1*(02), 52–58. https://doi.org/10.54402/isjnms.v1i02.37

Vasu, D. T., Nordin, N. A. M., Xu, S. X., Ghazali, S. E., & Zarim, S. N. A. (2020). Feasibility and outcomes of autogenic relaxation training in addition to usual physiotherapy for stroke survivors - a pilot study. *Malaysian Journal of Public Health Medicine*, *20*(3), 134–139. https://doi.org/10.37268/MJPHM/VOL.20/NO.3/ART.561

Victorson, D., Murphy, K., Benedict, C., Horowitz, B., Maletich, C., Cordero, E., Salsman, J. M., Smith, K., & Sanford, S. (2020). A randomized pilot study of mindfulness-based stress reduction in a young adult cancer sample: Feasibility, acceptability, and changes in patient reported outcomes. *Psycho-Oncology*, *29*(5), 841–850. https://doi.org/10.1002/pon.5355

Wang, Y., Yang, L., Lin, G., Huang, B., Sheng, X., Wang, L., Chen, L., Qiu, X., Wu, X., & Lin, R. (2024). The efficacy of progressive muscle relaxation training on cancer-related fatigue and quality of life in patients with cancer: A systematic review

and meta-analysis of randomized controlled studies. *International Journal of Nursing Studies*, *152*, 104694. https://doi.org/10.1016/j.ijnurstu.2024.104694

Wu, X., Li, X., Su, T., Liang, J., Wang, L., Huang, Q., Zhang, J., Wang, S., Wang, N., & Xiang, R. (2023). Development and validation of a questionnaire to evaluate the knowledge, attitude, behaviour and care preference of family members of Chinese older adults related to palliative care. *Nursing Open*, *10*(2), 673–686. https://doi.org/10.1002/nop2.1334