

LITERATURE REVIEW: FAMILY CARING METHOD TO PREVENT DECUBITUS IN STROKE PATIENTS

Literature Review: Metode Family Caring Untuk Mencegah Dekubitus Pada Perawatan Pasien Stroke

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ABSTRACT

Background: Stroke is a medical emergency condition that often causes death and disability recorded worldwide. About 5.5 million people died and 44 million people living with the residual effects of stroke. Stroke results weakness of the extremities and impact from prolonged bed rest that gives one of the complications called decubitus. Decubitus as result of prolonged pressure on the Protruding bone surface area, so that depressed area and over time the local tissue is ischemic, hypoxia and develops into necrosis. Cause of the patients' inability to take care of their own bodies, therefore family caring is important roles in decubitus treatment in stroke patients. **Purpose:** To collect and analyze the results of research relate the treatment management with family caring methods to prevention decubitus in stroke patients. **Methods:** this study used a research article from 2015-2021 with a data base of PubMed, google scholar, ScienceDirect, and research gates and using certain keywords. The keywords for this review included decubitus, pressure ulcers, pressure injury, stroke, family caring. **Results:** The author filtered 315 literature study from four databases (PubMed, google scholar, ScienceDirect and research gate) for review. That as many 15 articles that considered relevant, and 8 articles were included of treatment management with family caring to prevent decubitus for patient stroke. Based on the analysis of 8 articles, the family caring method can reduce the risk of decubitus in stroke patients. **Conclusion:** The Family caring method can prevent the risk of decubitus in stroke patients.

Keywords: decubitus, pressures ulcers, pressure injury, stroke, family caring

ABSTRAK

Latar Belakang: Penyakit stroke adalah suatu keadaan darurat medis yang sering mengakibatkan kematian maupun kecatatan di seluruh dunia. Sebanyak kurang lebih 5,5 juta orang meninggal serta 44 juta orang mengalami gejala sisa akibat penyakit stroke. Stroke mengakibatkan terjadinya kelemahan ekstremitas serta berdampak pada terjadinya tirah baring yang lama, sehingga menimbulkan salah satu komplikasi yaitu dekubitus. Dekubitus ini terjadi akibat dari tekanan dengan durasi lama pada area permukaan kulit yang menonjol karena tulang, sehingga area yang tertekan tersebut membentuk jaringan iskemik, hipoksia, dan nekrosis. Kondisi ini menjadi penyebab ketidakmampuan pasien dalam menjaga dirinya sendiri. Maka dari itu, keluarga diharapkan mampu berperan sebagai pendukung dalam melakukan perawatan dekubitus pada pasien stroke. **Tujuan:** Untuk mengumpulkan dan menganalisis hasil terkait suatu manajemen perawatan pasien stroke dengan metode *family caring* terhadap pencegahan luka dekubitus **Metode:** Penelitian ini menggunakan penelusuran artikel dari tahun 2015 hingga 2021 pada database pubmed, google scholar, sciendirect dan research gate dengan kata kunci tertentu. Pencarian artikel dengan menggunakan kata kunci dekubitus, *pressure ulcers*, *pressure injury*, stroke, dan *family caring*. **Hasil:** Penulis memilah 315 studi literature dari empat database (pubmed, google scoolar, sciendirect dan research gate). Sebanyak 15 artikel yang dianggap relevan dan 8 artikel yang layak untuk ditelaah tentang manajemen untuk pencegahan luka dekubitus pada pasien stroke. Bersumber perawatan dengan metode *family caring* untuk pencegahan luka dekubitus pada pasien stroke. Bersumber pada analisis dari 8 artikel tersebut diperoleh bahwa metode *family caring* dapat menurunkan resiko terjadinya luka dekubitus. **Kesimpulan:** Metode *family caring* dapat mencegah resiko terjadinya luka dekubitus pada pasien stroke.

Kata kunci: dekubitus, ulkus dekubitus, stroke, pendamping keluarga

INTRODUCTION

Stroke is one of the significant disease problems that occur in the world. Every year, approximately 5.5 million people die, and 44 million people become disabled due to stroke. In the United States, stroke is the third leading cause of death after heart disease and cancer; approximately 600,000 people experience stroke cases, and 200,000 of them experience recurrent attacks (Jessyca & Sasmita, 2021). Meanwhile, in Indonesia, according to Riskesdas data in 2018, 28.5% of patients experienced morbidity caused by stroke, and the rest suffered partial or total disability. Of the 713,783 total stroke cases, only 15% can recover from stroke and disability.

Decubitus or pressure sores are local damage to the skin and sub-dermal tissue and can even attack muscle tissue to bone (Karimi, Yaghoubinia, Keykhah, & Askari, 2018). The protruding soft tissue causes this and the outer surface being stressed continuously (Sari, 2017). Another cause of the occurrence of pressure sores due to the force of friction in between a surface, humidity, poor nutrition, anemia, infection and circulatory disorders. Body parts that often experience pressure sores are the sacrum, heels, elbows, lateral malleolus, and sitting bones (Pokorna et al., 2019).

Patients with moderate to severe disability after stroke are usually very dependent on the help of people around them, especially their families to care for them (Mohamed, 2015). Family caregivers are a person who gives assistance or treatment not only physically but also emotionally to family members who can not take care of their own (the patient's stroke) (Kristaningrum et al., 2021). Family caregivers can prevent the occurrence of injuries decubitus in stroke patients through measures of prevention such as

direct care, risk assessors, hazard prevention, ensuring comfort, providing a safe environment to help patients with stroke achieve health (Ahmadi & Ogale, 2020). It is so important when treating stroke patients is to encourage early recovery and prevent complications (decubitus) (Pitthayapong et al., 2017).

With the growth of knowledge, it's hoped that the prevention of pressure sores in stroke patients by using the family caring method can be carried out optimally. This study aims to identify the intervention of the family caring method, which is considered the most effective method to prevent pressure sores in stroke patients.

METHOD

The method used in writing this article is a literature review to obtain the effectiveness of the family caring method in preventing pressure sores in stroke patients. The strategy used in the article search is using research articles that match the topic in the Google Scholar, Pub-med, Science Direct, and Research Gate data-bases.

The literature review is limited search literature in a span of 6 years (2015-2021) by using the key " pressure sores " , " pressure ulcers " , " pressure injury " , " stroke " and " family caring " with determination questions that follow techniques PICO. Where any question P are all stroke patients at risk of developing pressure sores, I was intervention decubitus prevention using the method of family caring, C is a standard decubitus intervention, O is the risk of pressure sores. The inclusion criteria in this literature review are full-text articles, both in Indonesian and English, published in the last six years. The flow of the journal review is adjusted to the following figure.

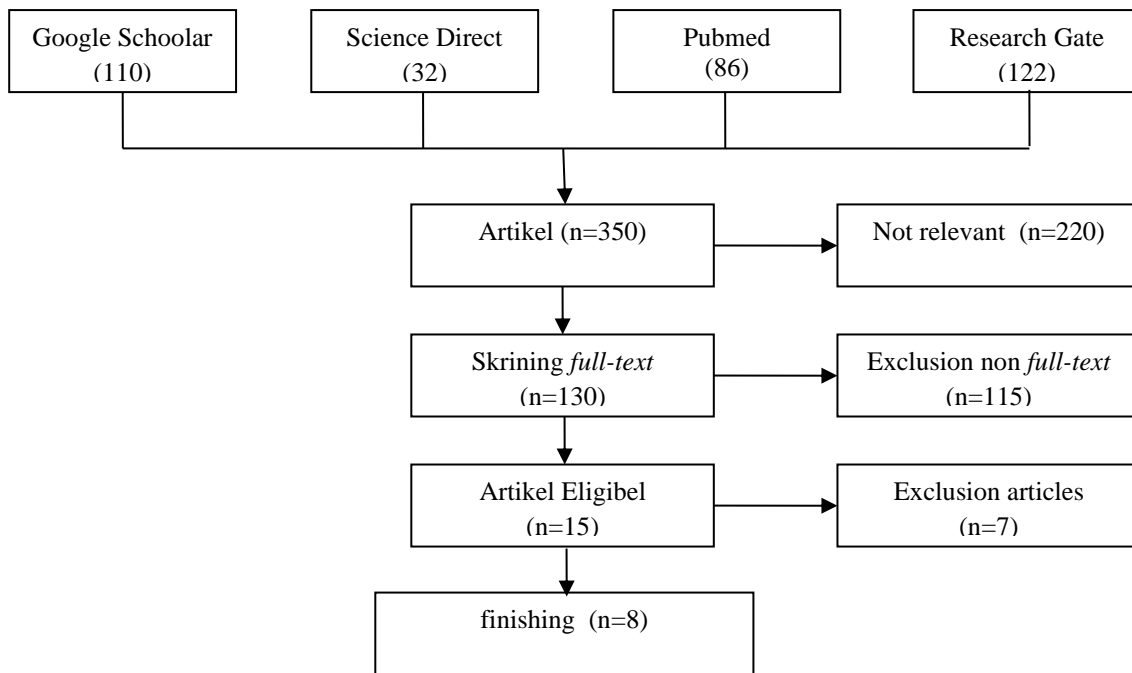


Figure 1. Flowchart of Search Results and Study Selection.

Full-text articles examination were undertaken to choose a journal the results of research in accordance with inclusion samples. Fifteen articles were obtained that meet inclusion criteria, and eight articles possessed relevant titles and abstracts about family care in

the prevention of pres--sure sores in patients with stroke.

RESULT

Analysis of the 8 articles research into the sample in the *literature review* outlined in the ta b ulcers l following:

Tabel 1. Tabel hasil *Literature Review*

No	Title	Researcher	Design	Sample	Appraisal Procedure	Conclusion
1	Hubungan Peran Keluarga dengan Pencegahan Decubitus pada Pasien Stroke di Ruang Rawat Inap RSUD Muntilan	(Elmawati, 2019)	Non-experimental Design correlation with cross sectiona l approach	A total of 35 care givers who are waiting for stroke patients are hos-pitalized at the Muntilan Hospital	Using a questionnaire about the role of the family as a motivator, educator, facilitator and observation of decubitus events using the Braden Scale	The role of the family in stroke patients can reduce the incidence of pressure sores with a p value of 0.002. A total of 8 stroke patients who received assistance from family caregivers did not have an experience decubitus events during hospitalization

Continuation

No	Title	Researcher	Design	Sample	Appraisal Procedure	Conclusion
2	A Community Based Program for Family Caregivers for Post Stroke Survivors in Thailand	Pitthayapong et al.,	Quasi-Eksperimental	62 pairs of stroke patients and family caregivers were divided into 2 groups: 31 couples in the intervention group and 31 pairs in the control group.	Measuring tools using: 1) post-stroke care skills checklist 2) MBI (Modified Barthel Index) 3) Post-stroke patient complications. Interventions were carried out for 4 weeks in the form of information distribution and skills training to the intervention groups and for the control groups only routine care was given by the nurses.	Post-stroke care program in improving the skills of post-stroke family caregivers, resulting in an increase in functional status and a decrease in complications in post-stroke patients ($-p$ value <0.001)
3	Investigating the Effect of Home-Based Training for Family Caregivers on the Incidence of Bedsore in Patients with Stroke in Ali Ebne Abitaleb Hospital, Zahedan, Iran: A Clinical Trial Study	(Karimi et al., 2018)	Quasi-eksperimental	70 family caregivers of stroke patients who referred to Ali Ebne Abitaleb Hospital, Zahedan, Iran were then divided into 2 groups; 35 people in the intervention group and 35 people in the control group	Experimental group: given an explanation to family caregivers about stroke, the problems it causes, bedsores, methods of prevention and treatment of bedsores at home	Home-based training is a practical and inexpensive method for the participation of family members in providing care for stroke patients and reducing the incidence of bedsores in these patients.

Continuation

No	Title	Researcher	Design	Sample	Appraisal Procedure	Conclusion
4	Peran Keluarga dengan Pencegahan Dekubitus pada Pasien Stroke	(Agustina & Rasid, 2020)	Quantitative Research with cross sectional design	40 respondents (family of stroke patients)	Using primary data with questionnaire as the measuring instrument, it will be analyzed univariate and bivariate using the Kendall's Tau Correlation test	The results of the study show that the role of the family has a very positive impact on preventing the occurrence of pressure sores, so that the family's knowledge of how to treat pressure sores care of patients with stroke is very important with the result p value <0.001. One of the important aspects in preventing pressure sores is to maintain and maintain the integrity of the patient's skin by conducting risk factor assessments, and medical intervention. treatment.
5	Family caregivers experience of activities of daily living handling in older adult with stroke: a qualitative research in the Iranian context	(Hesamzadeh et al., 2016)	Studi kualitatif	Respondents are 19 participating family caregivers	Data were obtained by in-depth interviews with each individual to explore how caregivers in the family handle patients with stroke. The results of the interviews were analyzed using MAXQDA 2007 software.	Family caregivers have an important role in handling stroke patients, one of which is to prevent pressure sores. This study states that stroke patients who have a higher level of emotional support improve the prevention of subacute complications of stroke (decubitus ulcers).

Continuation

No	Title	Researcher	Design	Sample	Appraisal Procedure	Conclusion
6	Effect of a Caregiver Education Program on Stroke Rehabilitation	(Hong, Kim, Kim, Joa, & Kim, 2017)	Quasi-Experimental	There were 181 respondents then divided into 2 groups; for intervention groups (n=81) with or control groups (n=100)	The measuring instruments used are: Stroke Scale (K-NIHSS), mini-Mental Status Examination (K-MMSE), Modified Barthel Index (K-MBI) and Berg Balance Scale (K-BBS).	The role of family caregivers is also related to the basic knowledge of handling needs possessed by family caregivers, where if the caregiver has a good education, it will have a positive effect on functional improvement.
7	Activities of Daily Living in Nursing Home and Home Care Settings: A Retrospective 1-Year Cohort Study	(Wha et al., 2015)	-	22,557 elderly stroke patients who have undergone 1 year of care at home and in nursing homes	National LCTI data (Secondary data)	Elderly stroke patients who are cared for at home by their families get better care than patients who are cared for in nursing homes
8	Role and Function of Family in Care of Patients	(Agianto & Nuntaboot, 2018)	Critical ethnographic design	There are 15 respondents who are family caregivers	Data collection using notes, recorders, and interview guides	Family caregivers (Families) play an important role in caring for stroke patients, thereby reducing the incidence of pressure sores. The roles and functions of family caregivers are to help stroke patients maintain personal hygiene such as helping to bathe, oral hygiene, self-care, caregivers also help for active rehabilitation and passive at home.

Elmawati (2019) conducted a study on the relationship between the role of the family and the prevention of pressure sores in stroke patients in the inpatient ward of the Muntilan General Hospital. The sample is 35 caregivers who are waiting for stroke patients. The

characteristics of the respondents are mostly male 18 (51.4%), aged 30 years as many as 24 (68.8%), and most are children of patient 23 (65.7%). It was found that p value <0.001 illustrates that the role of the family can reduce the incidence of pressure sores. Interventions to

prevent pressure sores carried out by caregivers include adjusting the sleeping position or suddenly, the position of the body pads that must be fixed. being kept dry, changing diapers every 6 hours, changing positions every 2 hours, and humidity management.

Pitthayapong, et al (2017) with the research title A Community Based Program for Family Caregivers for Post Stroke Survivors in Thailand used a sample of 62 couples (134 respondents) of stroke patients and family caregivers with 31 couples as the intervention group and 31 couples as the intervention group. control group. The characteristics of respondents in the intervention group were 64.74 years old, female 25 (80.6%), and had 23 primary school education (74.2). Meanwhile, in the control group, the majority were female, 26 (83.9%), with an average age of 69.03 years, and primary school education as many as 24 (77.4%). Interventions for preventing pressure sores include increasing caregiver skills (family caregivers) in caring for stroke patients including feeding and preventing aspiration, preventing pressure sores, preventing falls, mobility, and rehabilitation to increase the activity ability of the patient.

Artikel Karimi, et al (2018) with the title Investigating the Effect of Home-Based Training for Family Caregivers on the Incidence of Bed-sore in Patients with Stroke in Ali Ebne Abitaleb Hospital, Zahedan, Iran: A Clinical Trial Study aims to examine the effect of training to treat the incidence of pressure sores in stroke patients. A sample of 70 family caregivers of stroke patients was divided into 2 groups, 35 of which were included in the intervention group, while the other 35 were considered as the control group. The characteristics of respondents in this article are 38.14 years old, most of whom are women (65.7%) with a diploma level of education (44.28%) and 52.8% do not work. This study shows that nursing care training based on home caregivers can be effective in reducing the incidence of pressure sores in patients with stroke, which is one of the most common secondary complications. By providing training in skincare protocols such as washing and protecting the lower skin (including the shoulder and heel sacrum), sensory perception, moisture management, mobility, body position control, and nutritional patterns.

Agustina & Rasid, (2020) stated in their research about the role of 20 pairs of families of

stroke patients for the prevention of pressure sores in the inpatient ward. The characteristics of the respondents are mostly 31 women (77.5%) with 22 respondents (55%) having high school education. The role of the family has a positive impact on the prevention of pressure sores in stroke patients. An important aspect in preventing pressure sores is to maintain and maintain skin integrity by conducting an assessment of risk factors and treatment interventions.

Hesamzadeh et al., (2016) examined how the experience of family caregivers influences the prevention of pressure sores. Respondents were 19 family caregivers with 11 women, with an average age range of 21 years to 71 years, namely 44.31 percent. The role of the family has a positive impact in preventing pressure sores in stroke patients, an important aspect in preventing pressure sores is to maintain and maintain skin integrity by conducting an assessment of risk factors and internal factors. Treatment intervention. Caregivers have different experiences from 1 month to 12 years. Treatment for stroke patients includes encouraging physical mobilization, training in physiotherapy, maintaining patient hygiene, and maintaining nutritional patterns.

Article of Hong, et al (2017) entitled Effect of a Caregiver Education Program on Stroke Rehabilitation, aims to evaluate the caregiver education program on the functional recovery of stroke patients and rehabilitation treatment. A sample of 181 respondents with characteristics mostly with 55 respondents is ischemic stroke and received family caregivers as many as 21 respondents and caregivers from rehabilitation centers as many as 60 respondents. Although there was no significant difference, it was found that family caregivers had a positive effect on the functional improvement of stroke patients. As for the care that caregivers can give to stroke patients to prevent pressure sores from occurring, namely increasing awareness through sensory stimulation, sitting and rolling over, axial strengthening exercises, upper extremity exercises, practicing lying down positions. sideways, and humidity management.

Wha, et al.(2015) made a study to find out the comparison of the welfare of patients who are cared for at home by family caregivers or in nursing homes. Of the 22557 elderly stroke patients, 10,789 received care at home by family caregivers. Those who received care at

home by family caregivers experienced increased changes in daily activities. So, it is necessary to develop the care ability of family caregivers, as for the care that will be given to improve the daily activity ability of stroke patients, namely by maintaining and maintaining skin integrity, moisture management, nutrition, stimulation, and change of position.

DISCUSSION

The method in selecting the sample was in accordance with the research standards used. The number of research samples ranged from 19 to 22,557 people. The inclusion and exclusion criteria of the samples varied widely, based on the specific objectives of each study, of course, the researchers had considered carefully so that the sample criteria did not give a negative impact. Influence on research results. Based on the results of 8 studies that have been reviewed, proved that the method of family caring or family caregivers had a positive impact on reducing the incidence of pressure sores in stroke patients. However, this must be supported by assistance from professional experts (nurses) who have received special training and there is a need for a program to provide additional training for family caregivers to support the improvement of family caregivers. functional status and prevention of pressure sores in stroke patients.

Stroke is itself brain damage that appears suddenly, progressive, and quickly due to circulatory disorders of the brain non-traumatic, causing stunted its availability of oxygen and nutrients (Hesamzadeh et al., 2015). The inhibition of the availability of oxygen to the brain can affect the performance of the nerves in the brain, causing various problems (Agustina & Rasid, 2020). Besides stroke can also leave sequelae or disability, it depends on the part of the brain affected by stroke, which can cause disruption of motor function, sensory, and cognitive in the long term (Bucki & Spitz, 2019). Bedrest that stroke patients for a long period of time can lead to suppression of the bone protrusion and causes the body to become ischemic and resulting in skin damage or pressure sores (Agustina & Rasid, 2020).

CONCLUSION

The results of a literature review in 8 research journals related to family caring

methods to prevent pressure sores in stroke patients by adjusting the sleeping position, managing humidity, and maintaining skin integrity (keeping the body pad dry, and keeping the skin dry). changing diapers every 6 hours, protecting the lower skin including the shoulder sacrum and heels), changing positions every 2 hours, nutritional patterns (feeding and preventing aspiration), practicing activities to improve daily abilities, and also hygiene for stroke patients.

SUGGESTION

Implementation of interventions from prevention of decubitus in stroke patients should be facilitated by experts or nurses who have been based on the results of the literature review on family caring methods in preventing decubitus wounds in the care of stroke patients has a positive impact. prevention of decubitus understanding and in its subsequent implementation it is better if it has received previous training.

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REFERENCES

- Agianto, & Nuntaboot, K. (2018). Role and function of family in care of patients with. *Dunia Keperawatan*, 6(1), 134–143. <https://doi.org/10.20527/dk.v6i2-.5226>
- Agustina, E. N., & Rasid, H. Al. (2020). Peran keluarga dengan pencegahan decubitus pada pasien Stroke. *Jurnal Ilmiah Wijaya*, 12, 116–219. <https://jurnalwijaya.com/index.php/jurnal/article/view/9>
- Ahmadi, H. M. A., & Ogale, R. J. (2020). *Effectiveness of Home Caregivers Teaching Program on Prevention of Decubitus Ulcer in Bed Ridden Elderly Patients*. 7(2), 69–79. <https://doi.org/10.-15640/ijn.v7n2a8>
- Bucki, B., & Spitz, E. (2019). *Emotional and social repercussions of stroke on patient-family caregiver dyads: Analysis of diverging attitudes and profiles of the differing dyads*. 1–15. PLOS ONE. <https://doi.org/10.1371/journal.pone.0215425>

- AprilElmawati, C. (2019). *Hubungan Peran Keluarga dengan Pencegahan Decubitus pada Pasien stroke di ruang rawat inap RSUD Muntilan Kabupaten Magelang*. Retrieved from http://digilib.unisa-yogya.ac.id/4589/1/NASKAH_PUBLIKASI_CHANIFAH_ELMAWATI.pdf
- Hesamzadeh, A., Dalvandi, A., Maddah, S. B., Khoshknab, M. F., Ahmadi, F., & Arfa, N. M. (2016). Family caregivers' experience of activities of daily living handling in older adult with stroke: a qualitative research in the Iranian context. *Scand J Caring Sci*, (7). <https://doi.org/10.1111/scs.12365>
- Hesamzadeh, A., Nursing, S., Dalvandi, A., Maddah, S. B., Khoshknab, M. F., & Ahmadi, F. (2015). Family Adaptation to Stroke: A Metasynthesis of Qualitative Research based on Double ABCX Model. *Asian Nursing Research*, 9(3), 177–184. <https://doi.org/10.1016/j.anr.2015.03.005>
- Hong, S., Kim, C., Kim, E., Joa, K., & Kim, T. (2017). *Effect of a Caregiver's Education Program on Stroke Rehabilitation*. 41(1), 16–24. <https://doi.org/10.5535/arm.2017.41.1.16>
- Jessyca, F., & Sasmita, P. K. (2021). Hubungan tingkat pendidikan dan pengalaman terkait stroke dengan pengetahuan stroke relationship between education level and stroke-related experience with knowledge of stroke. *Damianus Journal O Medicine*, 20(1), 63–71. Retrieved from <https://media.neliti.com/media-publications/75946-ID-none.pdf>
- Karimi, F., Yaghoubinia, F., Keykhah, A., & Askari, H. (2018). Investigating the Effect of Home-Based Training for Family Caregivers on the Incidence of Bed-sore in Patients with Stroke in Ali Ebne Abitaleb Hospital, Zahedan, Iran: A Clinical Trial Study. *Med Surg Nurs*, 7(3). <https://doi.org/10.5812/msnj.87325.Research>
- Kristaningrum, N. D., Ramadhani, D. A., & Hayati, Y. S. (2021). *Correlation between the burden of family caregivers and health status of people with diabetes mellitus*. 10, 326–331. doi: 10.4081/jphr.2021.2227.
- Mohamed, S. A. (2015). *Effects of implementing educational program about pressure ulcer control on nurses' knowledge and safety of immobilized patients*. 5(3). <https://doi.org/10.5430/jnep.v5n3-p12>
- Pitthayapong, S., Thiangtam, W., Powwattana, A., Leelacharas, S., & Waters, C. M. (2017). A Community Based Program for Family Caregivers for Post Stroke Survivors in Thailand. *Asian Nursing Research*, 11(2), 150–157. <https://doi.org/10.1016/j.anr.2017.05.009>
- Pokorna, A., Klugar, M., Kelnarova, Z., & Klugarova, J. (2019). *Effectiveness and Safety of Patient-centred Care Compared to Usual Care for Patients with Pressure Ulcers in Inpatient Facilities: A Rapid Review*. 20(1), 61–70. doi: 10.35279/jewma201905.07
- Sari, R. (2017). Pengalaman keluarga dalam merawat dekubitus family's experience in taking care decubitus ulcer Rita Sari Dekubitus / luka tekan merupakan masalah yang dihadapi oleh pasien – pasien dengan penyakit kronis, pasien yang sangat lemah dan pasien yang lumpuh. *Wacana Kesehatan*, 1(1). Retrieved from <https://docplayer.info/58076319-Wacana-kesehatan-vol-1-no-1-juli-2017-pengalaman-keluarga-dalam-merawat-dekubitus-family-s-experience-in-taking-care-decubitus-ulcer.html>
- Wha, T., Rn, L., Rn, E. C., Shil, E., Rn, Y., Sun, H., ... Rn, S. K. (2015). Activities of Daily Living in Nursing Home and Home Care Settings: A Retrospective 1-Year Cohort Study. *Journal of the American Medical Directors Association*. <https://doi.org/10.1016/j.jamda.2014.07.013>