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A TELENURSING SERVICE'S IMPACT ON COVID-19 PATIENTS: LITERATURE REVIEW

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ABSTRACT

Background: Pandemic Corona Virus Disease 2019 (COVID-19) is an infectious disease caused by SARS-COV2. COVID-19 has become a world pandemic that poses various risks throughout the world such as an increase in the number of patients and the risk of disease development in the world health system, especially nursing. The WHO reports that technology has a growing role in education and good work practice. Telenursing is well defined as the application of telecommunications and information technology to provide remote nursing practice. **Purpose:** This study aimed to examine the process of establishing a telenursing service for COVID-19. **Methods:** Three databases—PubMed, Google Scholar, and Research Gate—were used to find research publications. English-language keywords included in the literature search are telenursing OR tele-nursing and Covid-19, with the inclusion of works from 2019 to 2021. **Results:** Five studies that matched the inclusion criteria and the goals of this literature review were examined from a total of 936 research articles. Following the critical evaluation of five articles, a simplified thematic analysis was performed. This research review's main finding was that non-contact counseling services, instruction, and nursing care are important. **Conclusion:** Application of the telenursing program improved information technology and enabled the delivery of nursing care remotely. As an additional treatment option for patients with COVID-19, other remote self-care instruction techniques may be applied.

Keywords: COVID-19, telehealth, telenursing, and nursing care.

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INTRODUCTION

An infectious condition known as COVID-19 is brought on by a coronavirus that has just been identified. Before the outbreak started in Wuhan, China, in December 2019, the new virus and the illness it produces were unknown. Currently, COVID-19 is a pandemic that is affecting numerous nations worldwide. The most typical signs include a fever, a dry cough, and fatigue. Aches and pains, congestion, headaches, conjunctivitis, sore throats, diarrhea, loss of taste or smell, skin rashes, or coloring of the fingers or toes are other, less frequent, symptoms that some individuals may suffer (WHO, 2020).

According to WHO, the total global confirmed cases of COVID-19 as of 30 December 2020 were 80,783,035 cases with 1,784,109 deaths (CFR 2.2%). As of July 30, 2021, the overall global situation of all Covid-19 cases is 196,553,009 confirmed cases while the death cases are 4,200,412. On August 8, 2022, a total of 581,686,197 confirmed cases. while the death cases were 6,410,961. Every day the incidence of Covid-19 cases from the outbreak to the present is still increasing by 623,707 new cases in the last 24 hours.

According to the WHO, technology is becoming more prevalent in nursing workforce education and practice. Telenursing is one of the greatest significant technological actions of the late twentieth century as an entrance to modern nursing care. The practice of nursing at a distance using telecommunications and information technology is known as telenursing. By removing geographic barriers, it improves nursing care quality, patient safety, and ease of access. The use of telephones, mobile phones, and communication tech-neologies are part of telenursing (Donati *et al.*, 2019).

According to Gholipour *et al.*'s research (2021) the benefits of distance nursing education include increased access to services, continuous care, patient education, and timely treatment. Liao *et al.*, (2021), said that Covid-19 the primary goal is to decrease the danger of infection transmission between nurses and patients. In the Covid-19 pandemic tragedy, telenursing seems to be a new and unusual option to reduce the risk of infection and costs. The authors are interested in conducting a literature study to determine the impact of telenursing services for patients with Covid-19 based on the data that has been described above.

METHOD

Literature Search Strategy

Three databases PubMed, Google Scholar, and Research Gate were used to find research publications. English-language keywords included in the literature search are telenursing OR tele-nursing and Covid-19, with the inclusion of works from 2019 to 2021. 33 articles based on keywords were discovered as a result of the aforementioned search, and 5 of those articles will be examined in this research utilizing a descriptive narrative analysis method. The 5 articles specifically discuss telenursing during the Covid-19 pandemic. Such as the development of telenursing applications, service for Covid-19 patients who experience anxiety, and others. The PRISMA flow diagram displays the search's outcomes.

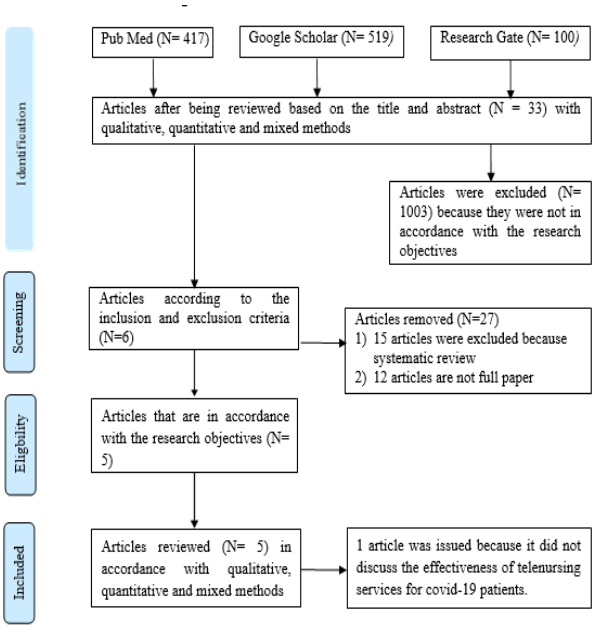

Chart 1. PRISMA Flow Diagram

RESULT

The following is a PRISMA flowchart for the article screening process used in this literature review (Chart 1). The initial search for the article began by entering keywords into the three databases and then the searches with the keywords "Telenursing" and "Covid-19" and "Telenursing for Covid-19 patients" were combined with the Boolean operator "AND" resulting in 1036 articles. Articles that did not

meet the inclusion criteria were excluded, 1033 articles, leaving a total of 33 articles.

Articles that were excluded because they were not in accordance with the research objectives were 27 articles and 15 articles were excluded due to systematic reviews, and 12 articles were not full papers. 6 articles were then selected again based on articles that discussed telenursing services for Covid-19 patients and got the final results of 5 articles.

Researchers analyzed the data using critical appraisal with the Aveyard approach (2014). There are five articles which were analyzed further, namely Chakeri *et al*., (2020), Gholipur *et al*., (2021), Heo *et al*., (2021), Rizk & Siam (2021), and Kord *et al*., (2021).

According to Masrat et al. in Chakeri (2020), with the title of "Evaluating the effect of nurse-led telephone follow-ups (tele-nursing) on the anxiety levels in people with coronavirus", telenursing is the right choice to improve the education of chronic disease patients. Therefore, telenursing is effective for patients with Covid-19, and this method can be used to improve their condition.

According to Gholipur et al. (2021) in "Effect of Telenursing Education on the Comfort of Patients with Covid-19 in Home Quarantine", telenursing education is ineffective and unable to significantly enhance patient outcomes for those with Covid-19. As a result, it is advised that alternative forms of remote self-care teaching be employed in addition to telenursing instruction in patients with Covid-19 as a complementary approach to decrease the frequency of visits to medical facilities, associated expenditures, and timewasting.

According to Heo et al. (2021) in "Developing the First Telenursing Service for Covid-19 Patients: The Experience of South Korea", First, a nursing protocol that uses both face-to-face and telenursing services can be created and put into use to effectively implement a patient-centered individual approach in emergency situations outside of the typical healthcare environment, or when patients find it difficult to travel to a hospital. Second, despite legal issues, the non-contact healthcare service was only offered to COVID-19 patients in the CTC and had good outcomes in terms of halting the spread of the virus, making effective use of the scarce medical resources and improving patient satisfaction.

According to Rzik & Siam (2021) in "Effect of Tele-nursing Education Program on Nurses Compliance with Standard Precautions during COVID- 19 Pandemic", the study's findings indicated that the telenursing education package should be used as it has improved the nurses' compliance scores with a standard precaution scale. In addition, telenursing appears to be interesting for nurses that can be used in the care of community-dwelling subjects.

According to Kord *et al*., (2021) in "Telenursing home care and COVID-19: a qualitative study", the current study's findings suggested that a thorough assessment of the enablers and impediments to telenursing for the care of COVID-19 patients at home could help this technology to be implemented effectively and efficiently.

Based on the results of data synthesis from the eight articles above, it was found that telenursing had a significant effect on Covid-19 patients. It can be seen in all articles (1-5) that telenursing is a digital-based nursing care method that has a very positive impact on improving remote information technology. Especially for Covid-19 patients who must keep their distance. One in five articles mention that telenursing does not have a significant effect. Therefore, it is recommended that health education be used for remote self-care in patients with Covid-19.

DISCUSSION

The Severe Acute Respiratory Syndrome (SARS) virus is the source of the contagious illness known as Covid-19. Before the outbreak started in Wuhan, China, in December 2019, the new virus and the illness it produces were unknown. Currently, Covid-19 is a pandemic that is spreading to numerous nations worldwide. The most typical signs include a fever, a dry cough, and fatigue. Aches and pains, congestion, headaches, conjunctivitis, sore throats, diarrhea, loss of taste or smell, skin rashes, or coloring of the fingers or toes are other, less frequent, symptoms from which some individuals may suffer (WHO, 2020). This virus is spread through coughing and sneezing droplets from an infected individual, as well as by touching surfaces that have been exposed to the virus.

The American Nursing Association (2001) defines telenursing as a subset of

telehealth that focuses on the practice of a specific profession (nursing). Telehealth is the use of communication and information technology using electronic media that can be used remotely between health workers, patients, and professionals as well as health administrative officers (Health Resources and Services Administration, 2007).

Hughes (2008) states that in the practice of telenursing there are three components or activities that can be carried out by a health worker, namely: diagnosis and teleconsultation, health monitoring and surveys and health clinical services. According to Reirson *et al*., (2015) in Rizk & Siam (2021), telenursing is one such proposed means of improving health care globally. Sjattar *et al*., (2021) state that the use of telenursing technology to deliver educational programs from a distance has proven to be an effective way of overcoming certain barriers introduced during the Covid-19 pandemic.

According to Heo *et al*., (2021) the importance of this study lies in the fact that patients with Covid-19 who are required to be separated and had little access to healthcare services in a community context received the country's first non-contact nursing service. According to Kord *et al*., (2021), patients' experiences with Covid-19 demonstrated that there were both facilitators and hurdles to the introduction of telenursing-assisted home care. Facilitators of caregiving can make it easier to administer nursing care, which will ultimately enhance patients' health. Patients and the target population need to be properly understood in order for us to have a clear grasp of the remote care process, which will assist the construction of efficient telenursing.

Based on the data above, telenursing is one of the right ways to process long-distance nursing care for patients with direct contact transmission, such as Covid-19. Therefore, researchers are interested in conducting this literature study because it attempts to identify whether telenursing is a method of remote nursing care that affects patients with Covid-19. This can facilitate communication between patients with nurses who continue to apply health protocols during the Covid-19 pandemic, providing a comfortable life for the patient and giving them a chance to effectively maintain health education without interruption.

CONCLUSION

All the information in this literature review strengthens telenursing as a method of remote care for Covid-19 patients, such as teleconsultation, health education, health monitoring and surveys and health clinical services.

The advantages can be obtained from the use of this remote technology in providing nursing services, including that telenursing is more effective and efficient in terms of finances that must be spent by patients and families. It can also reduce visits to healthcare facilities, but information remains to be conveyed, especially to Covid-19 patients who limit contact between patients and nurses.

Further research and studies related to telenursing services for COVID-19 patients with the addition of telenursing education interventions need to be carried out.

SUGGESTION

It is hoped that health workers can gain new knowledge about telenursing to be used as a digital-based nursing action plan for patients with COVID-19 or chronic diseases.

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CONFLICT OF INTEREST

The author has no conflict of interest.

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AUTHOR CONTRIBUTION

Author Tentry Fuji Purwanti, Data collection, data analysis, manuscript writing, literature review, reference. Author Yuly Peristiowati, Study design, data collection and supervision, data analysis, manuscript revision. Author Agusta Dian Ellina, Study design, data collection and supervision, data analysis, manuscript revision. Author Asuria Sani Fajriah Study design, data collection and supervision, data analysis, manuscript revision.

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