European Health

Literacy Journal

ORIGINAL ARTICLE

INVESTIGATION OF PUBLISHED THESES ON HEALTH LITERACY IN NURSING BY SOCIAL NETWORK ANALYSIS

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ABSTRACT

Aim: Within the scope of this study, we aimed to create a network map of the keywords obtained from the theses published in the field of nursing related to health literacy.

Methods: Social network analysis was carried out using the Keywords obtained from the theses prepared on health literacy. Theses used in the Study were accessed via https://tez.yok.gov.tr/UlusalTezMerkezi/. During the review, theses in the nursing field with the phrase "health literacy" in the title were selected and the keywords obtained from these theses were included in the study.

Results: It was determined that the keyword with the highest degree and betweenness centrality was health literacy. The keywords "health literacy", "nursing", "health" and "education" had the highest degree and betweenness centrality.

Conclusion: This is a guide for researchers who want to study health literacy in the nursing field to show which concepts are related to health literacy. Through this work, we can suggest innovative research questions, focus on topics not considered necessary, and thus contribute to the literature.

Keywords: Nursing, health literacy, social network analysis, degree centrality, betweenness centrality

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Received: ***December 28, 2022;*** ***Accepted:*** ***December 31, 2022;*** ***Published Online:*** ***December 31, 2022***

Cite this article as: Ortac, H. & Ocakoglu, G. (2022). Investigation of Published Theses On Health Literacy in Nursing by Social Network Analysis. European Health Literacy Journal 2(2), 53-59.

Introduction

Health literacy considers that medical decision-making is vital and important in the process of increasing patient awareness of their diseases and understanding the appropriate treatment method for their diseases (1). Health literacy serves to Access patient health information, process and understand the information, and express individual skills to use the information and stay healthy (2). Health literacy skills are essential in making a final decision about a disease in order to lead a more healthy life. These skills help prevent illness, and allow patients to make time for self-care and make decisions that will benefit them throughout their illness (3).

One of the most important reasons for the increase in interest in health literacy in recent years is that studies on health literacy are related and based on evidence (4). With increasing evidence, it is seen that people who make health decisions for their daily lives and who do not have health literacy skills feel more vulnerable and face worse health outcomes (5-7). This has been motivating in terms of understanding, researching, and applying knowledge to patients' health problems with trust in the health system and medical process (8). Therefore, patients can improve their health behaviors and obtain protection skills for their health (9).

Within the scope of this study, theses written on Health literacy in the field of nursing were identified and it was aimed to share the content of theses published in this field. Nurses working on health literacy can then provide guidance in line with their studies.

Methods

In this study, keywords obtained from theses published on health literacy were evaluated using a bibliometric method, and social network analysis was performed. Theses used in the study were accessed via https://tez.yok.gov.tr/UlusalTezMerkezi/. During the review, theses published in the field of nursing and with the phrase "health literacy" in the title were selected and the keywords that were accessed were included in the study. As a result, 82 theses were identified, and the keywords of 81 theses were utilized. One hundred seventy-one keywords were found from 81 theses included in the study. The number of valid keywords was 57 after keywords with the same meaning were determined as a single keyword.

The bibliometric method can be defined as a method used to rank data according to a specific design within the scope of the Study and to monitor its progress, including published studies, author links, keywords, studies, and methods (10,11).

Social network analysis (SNA) enables us to obtain meaningful Results by examining the business relationships, family relationships, or social relations between people, groups, or organizations within the social network structure. In addition, SNA contributes to the studies of various disciplines in the social field (12-14). Social networks and SNA aim to improve the understanding of relationships, which are complex for researchers, and as a result, to learn what kind of intervention is required. SNA has become an increasingly used method in different fields (13,15,16). In addition, with this method, the structure of the area of interest is examined, the network structure is determined, and the relations between the communities are visualized and modeled (17). In this study, the keywords taken from the theses related to health literacy in nursing departments constitute the units. In SNA, relationships between keywords are analyzed, and links are visualized with a network map.

Centrality criteria explain the determination of the actors in the social network according to their level of importance. Centrality measures are divided into degree and betweenness centrality. Degree centrality can be expressed in two different ways with the number of connections belonging to a node or the number of degrees of relations connected to that node (18,19). A high number of bonds for an actor indicates that it is in a central location. The actor with a high degree of centrality is the most active actor in the network (20). Betweenness centrality refers to the degree to which an actor is among non-relationship actors. Betweenness centrality mediates the exchange of information between non-connected nodes and connected actors (21). Keywords obtained from 81 theses related to health literacy were used. These keywords were analyzed with SNA and the network map was visualized. Analyses were made using the UCINET (22) program. A 57x57 data matrix was created using the UCINET 6 program with 57 keywords obtained from the theses. Because some keywords were repetitive and had the same meaning, words with the same meaning were combined into one keyword.

Results

The cumulative distribution of the theses published on health literacy in the field of nursing between the years 2012-2022 is given in Figure1. In Figure 1, it is seen that theses on health literacy in the field of nursing started to be written in 2012. The number of theses has increased over the years. We aimed to visualize the network structure of the keywords accessed using SNA.

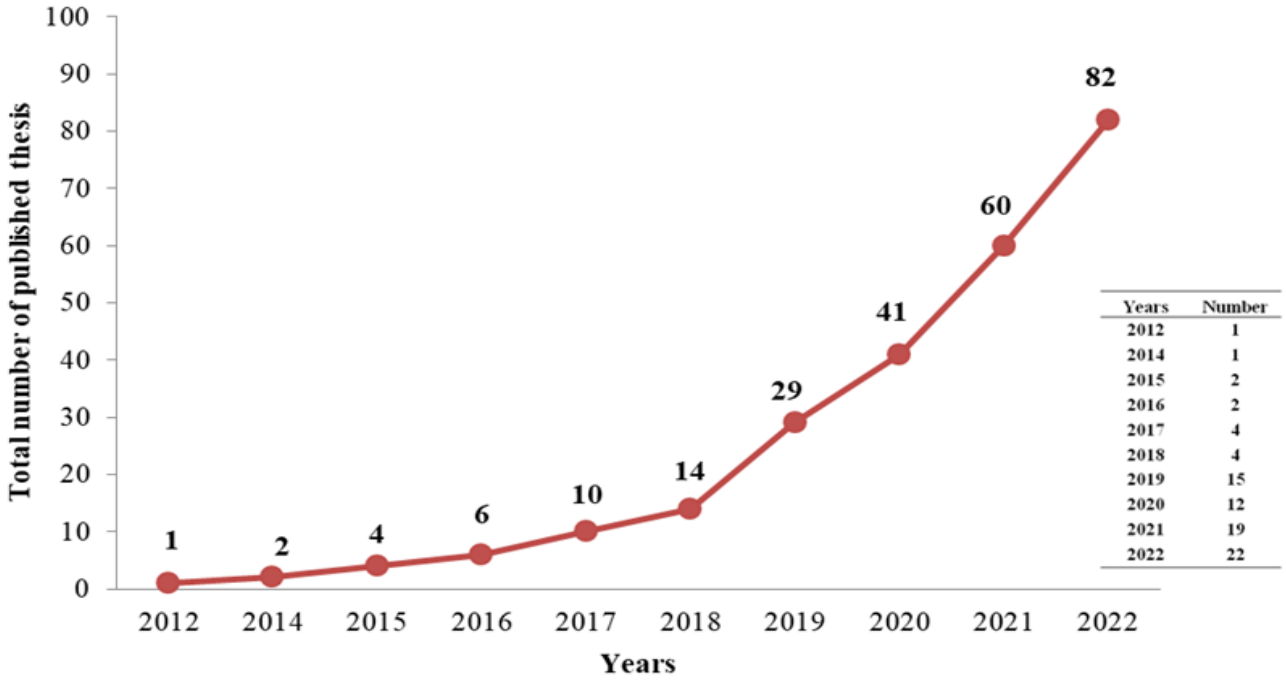

Figure-1. Distribution of the thesis according to the year

After forming a 57x57 square matrix of the 57 keywords obtained from the 81 theses in the study, the SNA was made. Table1 presents the degree and betweenness centrality findings for the keywords. For table1 not to be too long, words with less than ten-degree centrality were not considered.

Tablo-1.The most important keywords with a degree and betweenness centrality value for health literacy in nursing.

Degree centrality		**Betweenness centrality**	
Keyword	**Value**	**Keyword**	**Value**
Health literacy	55	Health literacy	1,789.294
Nursing	38	Nursing	511.256
Health	19	Health	132.806
Education	16	Education	96.894
Quality of life	15	Quality of life	61.947
Mental Health	14	Mental Health	47.741
Comorbid disorder	13	Comorbid disorder	28.344
Cancer	10	Medication	21.667
Self-efficacy	10	Diabetes	15.939
Medication	10	Cancer	13.288

When table-1 is examined, the keyword with the highest degree and betweenness centrality is "health literacy". The keywords "health literacy", "nursing", "health" and"education" have the highest degree of centrality. These keywords are the words with the most links, the most focus on the word web, and the most discussed in theses. There is a high centrality of in-betweenness between the concepts of "health literacy", "nursing", "health" and "education". These keywords act as a bridge to connect unrelated words. The network map of the keywords compiled from the theses written related to health literacy in the field of nursing is demonstrated in Figure 2.

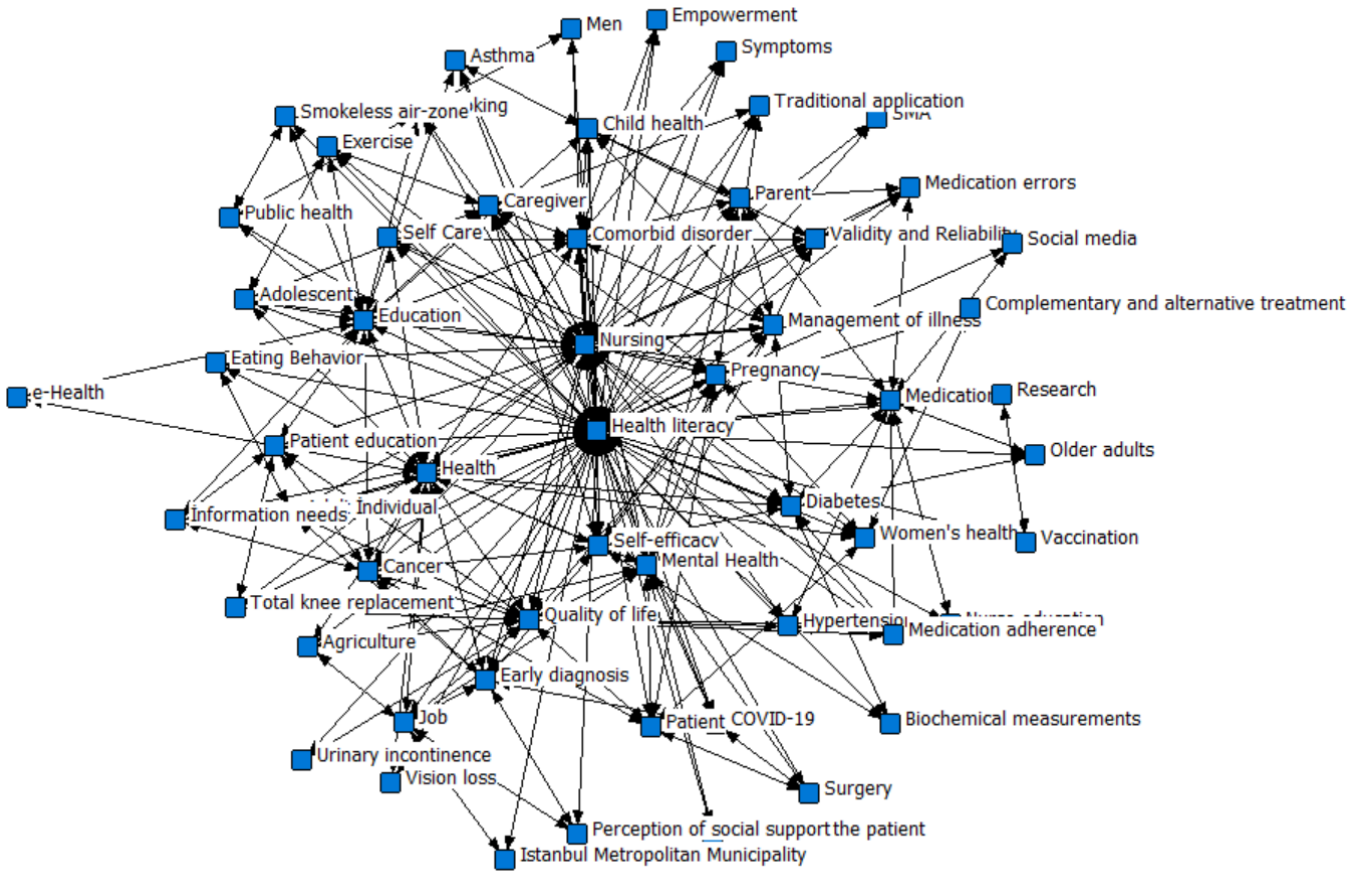

Figure-2. Network map of keywords obtained from theses included in the study

Discussion

In today's world, where access toin formation is readily available, individuals are expected to research, recognize and diagnose their diseases and make healthy decisions. Their ability to make these decisions correctly is related to their level of health literacy (23). An inadequate health literacy level brings with it many important issues, such as the incorrect transmission of health-related information, disruption of the treatment received by the person, and improper use of resources. Increasing the level of health literacy is of great importance both socially and economically.

Health literacy has become an increasingly popular field in recent years to improve individuals' health. Research shows that optimizing health literacy improves health and well-being and reduces health inequalities.

Within the scope of this study, we aimed to create a network map of the Keywords obtained from the theses published in the field of nursing related to health literacy.

The concept of health literacy had the highest centrality as a result of the findings obtained with SNA. Considering the theses related to health literacy in the nursing field within the study's framework, it is expected that the keyword "health literacy" is present in all theses. It was seen that the degree centrality of the words "nursing" and "health" after the keyword

"Health literacy" was high. The concept of health literacy has often been discussed together with "nursing" and "health". The nurse has an essential role in realizing steps, such as accessing, understanding, and implementing health-related information. Nurses are responsible for the healthcare of individuals and spend more time with the patient compared to other Health professionals. Nurses should have high health literacy skills by following changes in health systems (24). It has been found that the limited health literacy level of nurses has significant effects on health outcomes. Therefore, it is recommended that nurses receive Health Literacy training (25). Another concept that was frequently encountered within the scope of the study was health. According to the World Health Organization (WHO), "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (26). The concept of health cannot be explained by the absence of disease. It can be explained by the fact that individuals keep up with the changes in the irinternal and external environments and continue to be well (27). Since health literacy is essential for the health of individuals and society, the responsibility for improvement falls on health professionals and politicians. A healthy society can be achieved with an increase in the level of health literacy. It is extremely important to improve the health literacy levels of nurses during nursing education. Therefore, it is necessary to raise the level of health literacy and create awareness in nursing education. The level of health literacy affects the quality of life of individuals. It has been observed that individuals with low Health literacy also have poor physical and mental health, which reduces their quality of life (28-30).

As expected in the study, the concept with the highest betweenness centrality was "health literacy". It can be said that health literacy serves as a transition between unrelated concepts. Besises the health literacy keyword, it was seen that there was a high centrality between the concepts of "nursing" and "health" as in degree centrality.

Conclusion

This study indicates which concepts are related to health literacy, and is a guide for those who want to work on health literacy education in the field of nursing. Through this work, we can create innovative research questions, focus on topics that are not considered important, and contribute to the literature.

Conflict of Interest: The authors declare that there is no conflict of interest.

Financial Disclosure: No financial support was provided for the study.

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