

## Understanding the Diffusion of Theoretical Knowledge in Nursing: A Citation Analysis of Meleis's Transition Theory

Kemal Yayla 

### ABSTRACT

**Aim:** The aim of this study is to examine the structure of the knowledge creation process in nursing science and to investigate the dissemination of theoretical knowledge in other disciplines by analyzing citations and social network data.

**Method:** This exploratory study evaluated Metadata to find academic publications. Meleis's Transition Theory was selected as a case study. A majority of the publications that represented the transition theory were assigned as the core of the theory. Forward and backward citations were used as agents of knowledge linkage to determine the dissemination of the theory in the field of science. Social network analysis and visualization were used to depict graphical and structural relations of the research front and the knowledge base.

**Results:** The knowledge base of the Transition Theory was built on 7 different information networks. The most effective and vast information network consisted of Meleis, AI as a researcher and the central information network, which is the journal of Nursing Research. Oncology, geriatrics, public health, and psychology in the areas of information propagation within the field of nursing were considered as research areas where the theoretical framework provided by the theory was rendered functional.

**Conclusion:** In recent years, the use of theoretical frameworks has become a necessity to assess the changing needs of the study of nursing science. The method used in the study can be effectively used to analyze the conceptual structures in the nursing education and professional application processes and to understand the origins of these theories. Further research can help to structure the use of informational science-based research designs to understand the connections between theory, clinical practice, and the development of educational contents in nursing faculties.

**Keywords:** Citation analysis, nursing science, social network analysis, scholarly communication, transition theory

DOI: 10.5152/FNJN.2019.18028

**ORCID ID of the author:** K.Y. 0000-0001-9064-611X.

Information and Document Management, İzmir Kâtip Çelebi University, Faculty of Social Sciences and Humanities, İzmir, Turkey

### Corresponding author:

Kemal Yayla,  
Information and Document Management, İzmir Kâtip Çelebi University, Faculty of Social Sciences and Humanities, İzmir, Turkey

**E-mail:** kemalyayla@ikc.edu.tr

**Date of receipt:** 17.08.2018

**Date of acceptance:** 04.04.2019

**Cite this article as:** Yayla, K. (2019). Understanding the diffusion of theoretical knowledge in nursing: A citation analysis of Meleis's Transition Theory. *FNJN Florence Nightingale Journal of Nursing*, 27(3), 275-283. <https://doi.org/10.5152/FNJN.2019.18028>



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License

## INTRODUCTION

The discipline of nursing has been accepted as a specialized vocation (Fawcett, & Desanto-Madeya, 2012; Fawcett, 2004; Rogers, 1992) and a valid academic research area (Karagözoğlu, 2005; Northrup, Tschanz, Olynyk, Makaroff, Szabo & Biasio, 2004; Parse, 1999) that is based on theoretical intellectual knowledge and practice. In this context, modern nursing creates a knowledge structure through theoretical studies and professional initiatives, which helps to establish a relationship between method-based and domain knowledge. While nursing leaders represent professional practices that concern expert knowledge, which includes care processes and health policies, nursing scholars tend to produce clinical practice, medical treatment, and field-specific theoretical knowledge (Barrett, 2002; Barrett, 2017). However, the changing care needs (McKenna, 1997) and the complexity of different types of knowledge in professional practices (Carper, 1999) have lead nursing researchers to develop various theories, concepts, and models related to the field of nursing (İnan-Şengün, Üstün, & Bademli, 2013; Meleis, 2011; Risjord, 2011; Roy, 2018; Theofanidis, & Fountouki, 2008). Historically, one of the primary expectations from people in the nursing profession is the creation of new processes and the development of theories and models of academic nursing knowledge to explain the actions of the professionals (Alli-good, 2013; Meleis, 2011). However, it is not always possible to relate theory and research results to clinical situations where there are some difficulties in integrating theoretical knowledge into professional life (Risjord, 2011). Studies in the literature emphasize that the gap between nursing theories and professional practice is still an open-ended

problem (Kellehear, 2014; Landers, 2000; Maben, Latter, & Clark, 2006; Özsoy, 2007; Üstün, & Gigliotti, 2009).

Forms of information gathering that are created or utilized in the academic disciplines are continually evolving. In recent years, some developments such as increasing access to digital databases and the spread of interdisciplinary working practices have significantly changed scholarly communication patterns (Ying, & Xiao, 2012). The change has enabled interdisciplinary knowledge transfer and facilitated the use of theories and research methods in different disciplines by other disciplines. Researchers in different disciplines provide new perspectives to area researchers through increased knowledge transfer (Antons, Joshi, & Salge, 2018; Yan, Ding, Cronin, & Leydesdorff, 2013). As in other disciplines, the change in scholarly communication patterns within the discipline of nursing has affected the structure of the studies quantitatively and qualitatively (Barutcu, & Mert, 2017; Çatal, & Dicle, 2014; de Brito et al., 2017; Ekim, Manav, & Ocağcı, 2012; Im, & Ju Chang, 2012; Kääriäinen et al., 2011; Koç, Keskin-Kızıltepe, Çınarlı, & Şener, 2017; Luna et al., 2015; Öztürk, & Karataş, 2008; Pehlivan, & Güner, 2016; Raimondo et al., 2012; Sitzman, & Eichelberger, 2010; Spear, 2007; Terzi, & Kaya, 2017; Zuhur, & Özpancar, 2017).

The expansion and dissemination of theoretical knowledge have drawn significant attention in the development processes of all scientific research disciplines. Library and information science (LIS) has an extensive literature, such as information sharing (Pilerot, 2012), information search behaviors (Leckie, Pettigrew, & Sylvain, 1996), and scholarly communication (Borgman, & Furner, 2002; Zhang, 1998) that explicitly examines the diffusion of information. Those studies built their dissemination models similar to the transac-

tion of commercial commodities (Cronin, & Pearson, 1990; Hessey, & Willett, 2013; Yan et al., 2013). Our study aims to investigate the diffusion dynamics of theoretical knowledge in the nursing discipline by using Citation Analysis and Social Network Analysis, which is similar to the LIS discipline approach. Transition Theory (Chick, & Meleis, 1986; Meleis, Sawyer, Im, Messias, & Schumacher, 2000; Schumacher, & Meleis, 1994) was selected as the case study. Nursing has distinct classifications of theories in terms of theoretical knowledge systems such as Grand Theories and Middle Range Theories (Im, & Ju Chang, 2012; Roy, 2018).

### Research Questions

- 1) Is it possible to determine the dissemination of theoretical knowledge within the discipline of nursing using the information science approach?
- 2) How is theoretical knowledge disseminated within the discipline of nursing?

## METHOD

### Study Design

The study was designed and conducted as exploratory research based on scientific publications and metadata.

### Sample

The research strategy of the study is the citation analysis of academic publications which are cited by or citing the transition theory. Scientific publications representing the transition theory include the book chapter, "Transitions: A nursing concern" (Chick, & Meleis, 1986) and published articles, such as "Transitions: a central concept in nursing" (Schumacher, & Meleis, 1994) and "Experiencing transitions: an emerging middle-range theory" (Meleis et al., 2000) (Meleis, Sawyer, Im, Messias, & Schumacher,

2010). The publications cited in the bibliography of core publications represent backward citations and the papers citing these publications serve as forward citations.

The sample of the study obtained from the bibliographies of the scientific core publication of transition theory, the articles that were indexed in the Web of Knowledge (WoK) database between the year 1987 and 2017, citing to core publications of transition theory. The WoK database is preferred because it performs better in terms of citation coherence and arranges them, and is more organized than other academic databases (De Groote, & Raszewski, 2012; Harzing, & Van der Wal, 2008).

### Data Collection

In the process of scientific research, researchers use prior studies, experiments, and observations. Academic disciplines and commercial institutions use citations to construct the intellectual link between previous and current research (Leydesdorff, 1998; Snyder, Cronin, & Davenport, 1995; White, 2004). In scientific studies, the objective criterion of a measurable effect on a particular concept, theory, or method is established by referring to other research (Moed, 2006). Forward Citation and Backward Citation forms were used to determine the spread dynamics of theoretical knowledge (Jaffe, & De Rassenfosse, 2017). It is possible to decide on the citation dynamics of scientific works chronologically using these citation forms. The backward citation is aimed at examining the knowledge base of the relevant theory through the bibliographies of the publications constituting the transition theory. The forward citation form seeks to determine the span of theoretical knowledge. In our study, forward citations were obtained from the WoK database as structured data, while backward citations were compiled from the bibliography of the works constituting the transition theory.

### Statistical Analysis

The social network analysis is preferred because it determines the knowledge upon which theoretical knowledge is established and maps the diffusion patterns of the generated theoretical knowledge in various research areas (Gallardo-Gallardo, Arroyo Moliner, & Gallo, 2017; Kadushin, 2012). In order to determine the knowledge base of the transition theory, backward citations in the references of the core publications were used, following which the author-publication media matrices were created using author name metadata. For the determination of diffusion areas, a two-mode network matrix was created (Borgatti, & Everett, 1997) using "author keyword" and "WoK research category". The obtained network graphs were visualized by Gephi (Bastian, Heymann, & Jacomy, 2009). Modularity (Newman, 2006) value was used as a performance indicator of clustering to determine the focal points of information dissemination areas.

### Ethical Considerations

This study was carried out without the approval of the ethics committee. Since the study was carried out on scientific publications and metadata, no adverse effect on any human and living things in the data collection and analysis processes was observed.

## RESULTS

The backward citations of the theory of transition were associated with 208 different publications, and the number of articles referring to these works was determined to be 530. The cognitive base of the Transition Theory, which forms seven various information networks, is indicated in Figure 1. The most effective and extensive information network was found to be the central information network, which includes *Meleis, IA* as a researcher and Nursing Research as its publication medium. As seen in Figure 1, *Dracup KA* and *Majewski J* form the network



Figure 1. Cognitive Base Graph of Transition Theory

structures directly related to the theory by linking with the journal of Nursing Clinics of North America and Health Care for Woman International. In the formation of the knowledge base of transition theory, information networks outside the central information network contributed to the theory in different degrees.

The spread of transition theory is shown in Figure 2, according to the research fields and author keywords. In Figure 2, the nurs-

ing discipline is located at the center of the spillover area. The other 4 clusters are different research areas that share relevant author keywords related to the nursing discipline. When the scattering areas of the theory were examined, it was seen that each cluster was coexisting with the research fields that could be associated with itself. In the centralized nursing cluster, there are more author keywords than other clusters. The Closeness Centrality network criterion was

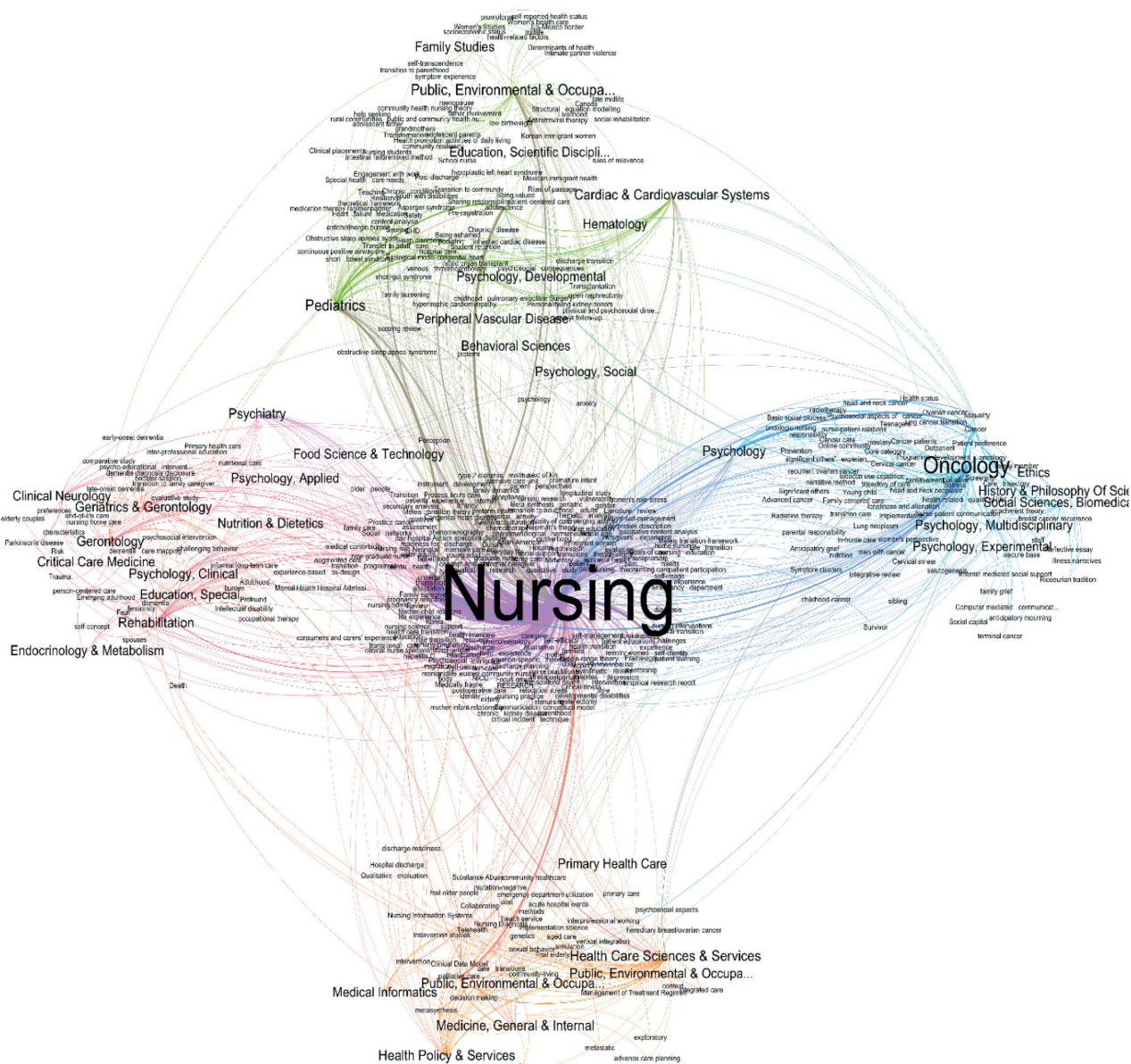


Figure 2. Diffusion Graph of Transition Theory

used to distinguish the importance of author keywords. In the nursing information network, which was centrally located, the words "nurse", "transition", and "caregiver" had the highest closeness centrality value. In the information network where the fields of oncology and psychology are valid, the words "cancer", "oncology", and "sense of loss" had the highest proximity center values. In the cluster defined by the fields of pediatric and developmental psychology, the concepts of "adolescents", "chronic diseases", and "transformation point to the first three authors" were assessed in terms of proximity centrality. In the other information network, including gerontology and geriatrics, the concepts of "dementia", "fear", and "femininity" have appeared. When the diffusion areas of the transition theory were examined, it was seen that the subjects such as "elder people", "pregnancy", and "cancer" terms were mainly handled. Oncology, geriatrics, public health, and psychology were considered as research areas in which the theoretical framework provided by the theory was made functional.

## DISCUSSION

In recent years, the use of theoretical frameworks to satisfy different demands and create new knowledge in nursing research has become a necessity (Çatal, & Dicle, 2014; Ekim et al., 2012; İnan-Şengün et al., 2013). The conceptual framework of nursing practice and education programs is shaped through models and theories developed within nursing. Furthermore, those frameworks have been applied to new foundations that were initially used by nursing education, management, and research. There are national (Ekim et al., 2012; İnan-Şengün et al., 2013; Koç et al., 2017; Paşalak, Eroğlu, & Akyüz, 2018) and international publications

dealing with nursing theories and models in the literature. They examine grand and mid-range theories and conceptual models in the nursing discipline in the context of field expertise with content analysis or meta-analysis methods in terms of research methodology (Im, & Ju Chang, 2012; Luna et al., 2015; Raimondo et al., 2012; Roy, 2018; Spear, 2007).

In our study, the findings are based on a model supported by concrete evidence such as forward citation and backward citation for the dissemination of theoretical knowledge according to the information diffusion model. The research model used within the scope of the study allows the data set to be repeated by compiling by different researchers. This model allows for the validation of the research designs by various researchers in terms of scientific consistency and ensures the structural validity of the obtained information.

Transition theory produces information for limited subject areas within the nursing discipline following the category of mid-level theories in which it is classified. The relationship it has established with other research disciplines with which it is associated arises from the fact that other disciplines deal with the situation or phenomena under different dimensions within their subjects.

### Study Limitations

While this study provides reproducible results of the diffusion of theoretical knowledge of nursing science, it has some limitations. This study examines the dissemination of academic knowledge within the discipline of nursing only in the context of Meleis' transition theory. This does not allow the results obtained to be generalized as per diffusion dynamics of other nursing theories.

## CONCLUSION AND RECOMMENDATIONS

Transition theory can be classified in the Middle Range Theory class, which is referred to as limited scope theories about a particular topic or concept (Kralik, Visentin, & Van Loon, 2006; Meleis, 2011; Meleis et al., 2000). The present study results indicate that the transition theory is in interaction with other research areas that examine the ideas that were dealt with mainly in the nursing discipline. Other findings obtained from citation and social network analysis show that the discipline-specific theoretical knowledge occupies an essential place in the production of new knowledge. In particular, the fact that all publication channels within the "backward citation" network are nursing journals reveals that theoretical knowledge is fed from its sources within the nursing discipline.

In light of these findings, the diffusion of research areas in the field of health and medicine related to the nursing discipline dramatically influences theoretical knowledge diffusion patterns. The method used in the study can be used effectively to analyze the conceptual structures in nursing education and professional practice processes and to understand the origins of these theories. It is also recommended that research designs specific to the discipline of information science be used to increase the possibility of interdisciplinary work with mixed research methods in the future.

**Peer-review:** Externally peer-reviewed.

**Acknowledgements:** I would like to thank Dr. Oğuzhan Şahin ve Dr. Muhittin Sağnak for all contribution to this manuscript.

**Conflict of Interest:** The author have no conflicts of interest to declare.

**Financial Disclosure:** The author declared that this study has received no financial support.

## References

- Alligood, M. R. (2013). Introduction to Nursing Theory: Its History, Significance, and Analysis. In M. R. Alligood (Ed.), *Nursing Theorist and Their Work* (8 ed.). St. Louis, Missouri: Elsevier Mosby.
- Antons, D., Joshi, A. M., & Salge, T. O. (2018). Content, Contribution, and Knowledge Consumption: Uncovering Hidden Topic Structure and Rhetorical Signals in Scientific Texts. *Journal of Management*. <https://doi.org/10.1177/0149206318774619> [CrossRef]
- Barrett, E. A. M. (2002). What is nursing science? *Nursing Science Quarterly*, 15(1), 51-60. [CrossRef]
- Barrett, E. A. M. (2017). Again, what is nursing science? *Nursing Science Quarterly*, 30(2), 129-133. [CrossRef]
- Barutcu, C. D., & Mert, H. (2017). Sample of nursing care plan of an individual with congestive heart failure according to the Neuman Systems Model. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi*, 6(2), 88-92.
- Bastian, M., Heymann, S., & Jacomy, M. (2009). Gephi: an open source software for exploring and manipulating networks. *ICWSM*, 8(2009), 361-362.
- Borgatti, S. P., & Everett, M. G. (1997). Network analysis of 2-mode data. *Social Networks*, 19(3), 243-269. [CrossRef]
- Borgman, C. L., & Furner, J. (2002). Scholarly communication and bibliometrics. *Annual Review of Information Science and Technology*, 36(1), 2-72. [CrossRef]
- Carper, B. A. (1999). Fundamental patterns of knowing in nursing. In C. E. Polifroni & M. Welch (Eds.), *Perspectives on Philosophy of Science in Nursing: an historical and contemporary anthology* (pp. 12-20). Philadelphia: Lippincott.
- Chick, N., & Meleis, A. I. (1986). Transitions: A nursing concern. In P. L. Chinn (Ed.), *Nursing research methodology: Issues and implementation* (pp. 237-257). Rockville, MD: Aspen Publications.
- Cronin, B., & Pearson, S. (1990). The export of ideas from information science. *Journal of Information Science*, 16(6), 381-391. [CrossRef]
- Çatal, E., & Dicle, A. (2014). Theory-research component: Example of Roy Adaptation Model. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi*, 7(1), 33-45.
- de Brito, L. S. A., de Sousa, N. D. L., Alencar, A. M. P. G., Rebouças, V. d. C. F., Pinheiro, P. P., & Júnior, J. G. (2017). Concepts, theoretical models and nursing theories: integrative review. *International Archives of Medicine*, 10(166), 1-8. [CrossRef]
- De Groote, S. L., & Raszewski, R. (2012). Coverage of Google Scholar, Scopus, and Web of Science: A case study of the h-index in nursing. *Nursing Outlook*, 60(6), 391-400. [CrossRef]
- Ekim, A., Manav, G., & Ocakçı, A. F. (2012). Theory based nursing research in Turkey: A systematic review. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi*, 5(4), 157-161.
- Fawcett, J. (2004). *Analysis and evaluation of contemporary nursing knowledge: Nursing models and theories* (2 ed.). Philadelphia: FA Davis.
- Fawcett, J., & Desanto-Madeya, S. (2012). *Contemporary nursing knowledge: Analysis and evaluation of nursing models and theories* (3 ed.). Philadelphia: FA Davis.
- Gallardo-Gallardo, E., Arroyo Moliner, L., & Gallo, P. (2017). Mapping collaboration networks in talent management research.

- Journal of Organizational Effectiveness: People and Performance*, 4(4), 332-358. [CrossRef]
- Harzing, A.-W. K., & Van der Wal, R. (2008). Google Scholar as a new source for citation analysis. *Ethics in Science and Environmental Politics*, 8(1), 61-73. [CrossRef]
- Hessey, R., & Willett, P. (2013). Quantifying the value of knowledge exports from librarianship and information science research. *Journal of Information Science*, 39(1), 141-150. [CrossRef]
- Im, E. O., & Ju Chang, S. (2012). Current trends in nursing theories. *Journal of Nursing Scholarship*, 44(2), 156-164. [CrossRef]
- İnan-Şengün, F., Üstün, B., & Bademli, K. (2013). Exploration of theory/model based nursing research In Turkey. *Journal of Anatolia Nursing and Health Sciences*, 16(2), 132-139.
- Jaffe, A. B., & De Rassenfosse, G. (2017). Patent citation data in social science research: Overview and best practices. *Journal of the Association for Information Science and Technology*, 68(6), 1360-1374. [CrossRef]
- Kääriäinen, M., Kanste, O., Elo, S., Pölkki, T., Miettunen, J., & Kyn-gäs, H. (2011). Testing and verifying nursing theory by confirmatory factor analysis. *Journal of Advanced Nursing*, 67(5), 1163-1172. [CrossRef]
- Kadushin, C. (2012). *Understanding social networks: Theories, concepts, and findings*. New York: Oxford University Press.
- Karagözoğlu, Ş. (2005). Nursing as a scientific discipline. *Cumhuriyet Üniversitesi Hemşirelik Yüksekokulu Dergisi*, 9(1), 6-14.
- Kellehear, K. J. (2014). The theory–practice gap: Well and truly alive in mental health nursing. *Nursing & Health Sciences*, 16(2), 141-142. [CrossRef]
- Koç, Z., Keskin Kızıltepe, S., Çınarlı, T., & Şener, A. (2017). The use of theory in nursing practice, research, management and education. *Journal of Education and Research in Nursing* 14(1), 62-72. [CrossRef]
- Kralik, D., Visentin, K., & Van Loon, A. (2006). Transition: a literature review. *Journal of Advanced Nursing*, 55(3), 320-329. [CrossRef]
- Landers, M. G. (2000). The theory–practice gap in nursing: the role of the nurse teacher. *Journal of Advanced Nursing*, 32(6), 1550-1556. [CrossRef]
- Leckie, G. J., Pettigrew, K. E., & Sylvain, C. (1996). Modeling the information seeking of professionals: A general model derived from research on engineers, health care professionals, and lawyers. *The Library Quarterly*, 66(2), 161-193. [CrossRef]
- Leydesdorff, L. (1998). Theories of citation? *Scientometrics*, 43(1), 5-25. [CrossRef]
- Luna, I. T., da Silva, K. L., de Oliveira, S. K. P., de Lima, F. E. T., de Araújo, T. L., & Damasceno, M. M. C. (2015). Analysis of references of the Brazilian nursing doctoral thesis: bibliometric study. *Journal of Nursing UFPE On Line*, 9(5), 7753-7759.
- Maben, J., Latter, S., & Clark, J. M. (2006). The theory–practice gap: impact of professional–bureaucratic work conflict on newly-qualified nurses. *Journal of Advanced Nursing*, 55(4), 465-477. [CrossRef]
- McKenna, H. P. (1997). Theory and research: A linkage to benefit practice. *International Journal of Nursing Studies*, 34(6), 431-437. [CrossRef]
- Meleis, A. I. (2011). *Theoretical nursing: Development and progress*. Philadelphia: Lippincott Williams & Wilkins.
- Meleis, A. I., Sawyer, L. M., Im, E.-O., Messias, D. K. H., & Schumacher, K. (2000). Experiencing transitions: an emerging middle-range theory. *Advances in Nursing Science*, 23(1), 12-28. [CrossRef]
- Meleis, A. I., Sawyer, L. M., Im, E.-O., Messias, D. K. H., & Schumacher, K. (2010). Experiencing Transitions: An Emerging Middle-Range Theory. In A. I. Meleis (Ed.), *Transitions theory: Middle range and situation specific theories in nursing research and practice*. New York: Springer publishing company.
- Moed, H. F. (2006). *Citation analysis in research evaluation*. Dordrecht: Springer Science & Business Media.
- Newman, M. E. (2006). Modularity and community structure in networks. *Proceedings of the National Academy of Sciences*, 103(23), 8577-8582. [CrossRef]
- Northrup, D. T., Tschanz, C. L., Olynyk, V. G., Makaroff, K. L. S., Szabo, J., & Biasio, H. A. (2004). Nursing: whose discipline is it anyway? *Nursing Science Quarterly*, 17(1), 55-62. [CrossRef]
- Özsoy, S. A. (2007). The struggle to develop nursing research in Turkey. *International Nursing Review*, 54(3), 243-248. [CrossRef]
- Öztürk, C., & Karataş, H. (2008). Orem's Self-Care Deficit Theory of Nursing and nursing care in posttraumatic epilepsy. *Journal of Anatolia Nursing and Health Sciences*, 11(2), 85-91.
- Parse, R. R. (1999). Nursing: The discipline and the profession. *Nursing science quarterly*, 12(4), 275-276. [CrossRef]
- Paşalak, Ş. İ., Eroğlu, K., & Akyüz, A. (2018). Theory/model usage in research in women's health nursing. *Journal of Ege University Nursing Faculty*, 34(1), 91-108.
- Pehlivan, T., & Güner, P. (2016). The use of theories in psychiatric nursing-II. *Journal of Psychiatric Nursing*, 7(2), 100-104. [CrossRef]
- Pilerot, O. (2012). LIS research on information sharing activities–people, places, or information. *Journal of Documentation*, 68(4), 559-581. [CrossRef]
- Raimondo, M. L., Fegadolli, D., Méier, M. J., Wall, M. L., Labronici, L. M., & Raimondo-Ferraz, M. I. (2012). Brazilian scientific production based on Orem's Nursing Theory: integrative review. *Revista Brasileira de Enfermagem*, 65(3), 529-534. [CrossRef]
- Risjord, M. (2011). *Nursing knowledge: Science, practice, and philosophy*. Chichester: John Wiley & Sons.
- Rogers, M. E. (1992). Nursing science and the space age. *Nursing Science Quarterly*, 5(1), 27-34. [CrossRef]
- Roy, C. (2018). Key Issues in Nursing Theory: Developments, Challenges, and Future Directions. *Nursing Research*, 67(2), 81-92. [CrossRef]
- Schumacher, K. L., & Meleis, A. I. (1994). Transitions: a central concept in nursing. *Image: The Journal of Nursing Scholarship*, 26(2), 119-127. [CrossRef]
- Sitzman, K., & Eichelberger, L. W. (2010). *Understanding the work of nurse theorists: A creative beginning*. Jones & Bartlett Learning.
- Snyder, H., Cronin, B., & Davenport, E. (1995). What's the use of citation? Citation analysis as a literature topic in selected disciplines of the social sciences. *Journal of Information Science*, 21(2), 75-85. [CrossRef]
- Spear, H. J. (2007). Nursing theory and knowledge development: A descriptive review of doctoral dissertations, 2000–2004. *Advances in Nursing Science*, 30(1), E1-E14. [CrossRef]
- Terzi, B., & Kaya, N. (2017). Comfort Theory and analysis. *Journal of Anatolia Nursing and Health Sciences*, 20(1), 67-74.



- Theofanidis, D., & Fountouki, A. (2008). Nursing theory: A discussion on an ambiguous concept. *International Journal of Caring Sciences*, 1(1), 15-20.
- Üstün, B., & Gigliotti, E. (2009). Nursing research in Turkey. *Nursing science quarterly*, 22(3), 206-208. [\[CrossRef\]](#)
- White, H. D. (2004). Citation analysis and discourse analysis revisited. *Applied Linguistics*, 25(1), 89-116. [\[CrossRef\]](#)
- Yan, E., Ding, Y., Cronin, B., & Leydesdorff, L. (2013). A bird's-eye view of scientific trading: Dependency relations among fields of science. *Journal of Informetrics*, 7(2), 249-264. [\[CrossRef\]](#)
- Ying, T., & Xiao, H. (2012). Knowledge linkage: A social network analysis of tourism dissertation subjects. *Journal of Hospitality & Tourism Research*, 36(4), 450-477. [\[CrossRef\]](#)
- Zhang, Y. (1998). The impact of Internet-based electronic resources on formal scholarly communication in the area of library and information science: A citation analysis. *Journal of Information Science*, 24(4), 241-254. [\[CrossRef\]](#)
- Zuhur, Ş., & Özpancar, N. (2017). The use of nursing models in the management of chronic diseases in Turkey: A systematic review. *Hemşirelikte Araştırma Geliştirme Dergisi*, 19(2), 57-74.