

## Essential Role of Theory in Nursing Research for Advancement of Nursing Science

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### INTRODUCTION

Nursing theorist and professor, Sister Callista Roy reviewed 50 years of the history of nursing research and prioritized the need to address potential gaps in nursing theory [1]. This would improve nursing outcomes and the health of individuals and society, as the knowledge development in the scientific spectrum stems from a strong theoretical foundation [1]. Roy emphasized that theory plays a pivotal role in knowledge development and advancing nursing science and the profession [2]. Nursing is a theory- and practice-based discipline [3] that involves the identification of phenomena and provision of a conceptual framework to connect the theoretical domains and nursing practice [4]. Nursing theory allows researchers to identify and evaluate their essential roles in a variety of nursing care environments [3]. Although the continuous evaluation of theory is an essential element in the development of nursing knowledge; recently, the number of studies that have applied nursing theory has decreased, leading practitioners to question its utility [2-6]. Nevertheless, in the 20th century, nursing theory contributed to the development of nursing science. Nursing science focuses on environmental integration to preserve health, and the development of many useful theories by examining the application of these in nursing research and practice [1]. Therefore, it is crucial to examine the status of theory utilization in nursing

research amidst rapid social changes and to assess future development.

### STATUS OF THEORY APPLICATION IN NURSING RESEARCH

For the purposes of our study, our review of existing literature included three journals that conducted quantitative analysis of studies that applied nursing theory. First, among the 847 papers published in the *Journal of Korean Academy of Nursing (JKAN)*, from 2010 to 2019, 13 studies applied nursing theory [4]. One used the grand theory of Roy's adaptation theory, while 12 studies used middle-range theories: Pender's health promotion model (n = 5), King's goal attainment theory (n = 3), Watson's human caring theory (n = 1), Reed's self-transcendence theory (n = 1), Mishel's uncertainty in illness theory (n = 1), and Kolcaba's comfort theory (n = 1). Of the 13 studies, 11 utilized the existing theories, while two were theoretical synthesis studies [4]. Second, among the 323 papers published in the *Korean Journal of Adult Nursing* from 2010 to 2014, only four applied nursing theory [7]. Among them, three studies used Pender's health promotion theory. Third, among the 485 papers published in the *Journal of Korean Academy of Nursing Administration* from 2007 to 2016, 24 were theoretical application studies [8]. Among them, nine applied nursing theory and four used

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a nursing competency model developed in Korea.

Evidently, only a small portion of nursing studies applied theory. Nevertheless, it is important to examine the application of the theory published in the *JKAN* because it can lead to ideas for future theoretical use in nursing research. Pender's health promotion theory is the most prevalent one in the reviewed journal. According to the World Health Organization, health promotion is the process of enabling people to increase control over their health and improve it accordingly [9]. Many facets of nursing focus on positive health outcomes or health promotion through the adoption of healthier lifestyles, availability of health services, and healthy environments [9]. Accordingly, theoretical approaches related to health promotion in the targeted population should be encouraged from the first step of the study design.

The next commonly used theory was King's goal attainment theory, which provided the theoretical basis for the development of intervention in the studies [10,11]. Nursing researchers have determined the suitability of this theory as it focuses on the achievement of desirable outcomes by forming therapeutic relationships and interactions between nurses and patients [10]. The therapeutic relationships between nurses and adolescents who did not feel the need for change had a positive effect on their self-respect, interpersonal relationships, and school adaptation [11].

One study applying Mishel's uncertainty theory developed a mobile navigation program by synthesizing Fillion's professional navigation framework to provide information to patients effectively and strengthen their coping strategies [12]. As the best way to reduce uncertainty is to provide information in accordance with Mishel's theory, the mobile navigation program that adopted the essential strategies from Fillion's model had positive effects on decreasing uncertainty and improving resilience in patients.

Roy [1] noted that nursing, like any other profession, incorporates transferable knowledge from other fields. Thus, increased efforts would allow the pursuit of a wider range of topics and periods that have a broader perspective than those of previous studies [2]. Nursing theory should also reflect the contingent context, and ultimately, should not only inform nursing practice but also add to the existing knowledge of

technology, explanation, and prediction of clinical problems [6].

## NECESSITY OF THE ONGOING APPLICATION OF THEORY

According to Younas and Quennell [3], the frequency of studies that evaluate interventions based on nursing theory has declined in recent years for two reasons. First, nursing researchers question the utility of nursing theory and second, the nursing curriculum is not enough to emphasize its importance. However, according to an integrative review published in 2019, nursing theory-guided practice was more useful than conventional daily routine practice [3]. Nursing researchers need to consider these reports while applying theories and reporting their findings to nursing journals. To accomplish this, nursing journals must lead the development of nursing knowledge at the academic level through focusing on research publication that applies relevant and diverse nursing theories.

Jairath et al. [13] enquired: *How can nursing theory remain relevant to the research enterprise for the next 50 years?* To this end, the theory needs to be continuously reviewed to clarify the nursing phenomenon, to guide nursing science and practice and to convey the unique and essential contributions of nursing science to a wide range of healthcare research and practice. Many nursing scholars emphasize the application and evaluation of existing theories accordingly [1-6,13]. In particular, Im [5] noted that continuous efforts to evaluate middle-range and situation-specific theories are essential for advancements of the body of nursing knowledge. Researchers should also continue to guide the field through the lens of nursing theory and continuously evaluate the effectiveness of nursing theory guidance practices [3]. Based on the accumulation of knowledge over the past 50 years through these efforts [1], we can expect such academic development to continue for the next 20 years.

## CONCLUSION

From the review papers published in the three journals,

the theoretical application in research studies was relatively low. Not all of the reviewed articles are recent, therefore it is necessary to be careful while interpreting the results. Nevertheless, nursing scholars should prioritize the application and evaluation of nursing theory, especially middle-range or situation-specific theories. Theories are an essential part of knowledge development in nursing science and the profession. To facilitate further development of the field of nursing as well as develop its identity as profession, researchers' theoretical application efforts must continue. Furthermore, considering the expansion of the scope and depth of nursing science, it will be necessary to publish studies providing compelling evidence and continuously apply various theories to nursing research.

### CONFLICTS OF INTEREST

Yu, Soyoun and Song, Ju-Eun has been Associate Editors with the journal since 2020. Except for that, there are no potential conflicts of interest relevant to this article to report.

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### DATA SHARING STATEMENT

Please contact the corresponding author for data availability.

### AUTHOR CONTRIBUTIONS

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