



Resilience in Koreans With Cancer

Scoping Review

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Cancer is a major cause of mortality and morbidity in Korea. However, there has been no previous nursing literature review on the phenomenon of resilience among cancer patients in Korea. The purpose of this study was to identify information about theories, instruments, correlates, and outcomes of resilience in the cancer experiences of Korean adults. This was a scoping review that searched Ovid MEDLINE, CINAHL, Google Scholar, DBpia, and the Korean Studies Information Service System between 2000 and 2016 in order to identify English and Korean research reports. The review yielded 17 quantitative studies, including 2 resilience theories and 6 resilience-specific instruments. The factors self-efficacy, hope, social supports, self-esteem, anxiety, and depression were associated with resilience, regardless of the type of cancer. Quality of life and coping were commonly investigated outcome variables for resilience. This review suggests that a nursing theory reflecting Korean culture and qualitative research concerning the phenomenon of resilience should be conducted as research priorities as the foundation for developing culturally appropriate tools for resilience. This will lead to enhanced quality of life among Korean cancer patients, which is the core of palliative nursing care.

Cancer is the foremost life-threatening chronic illness in many countries.¹ In Korea, there were 217 057 new cancer patients and 76 611 cancer deaths, accounting for 28.6% of all deaths and making cancer the leading cause of all deaths in Korea.^{2,3} As a life-threatening illness, cancer poses many physical, psychological, social, economic, and spiritual challenges for the person with cancer, their family members, and health care providers. Despite experiencing all these challenges, many cancer patients manifest remarkable resilience.^{4,5}

Initially, research on resilience focused primarily on children with mental illness,⁶ although the research has expanded over time to encompass diverse populations and other clinical diagnoses.⁷ The frameworks, methods, and definitions used in research on resilience vary across countries, cultures, and disciplines.⁸⁻¹⁰ Because of the diversity of definitions of resilience,¹¹ even nursing researchers use different definitions of resilience. In nursing, resilience is defined as resistance, recovery, or rebound of mental and physical health after a challenge.¹² For adult cancer nursing, resilience is defined as a dynamic process of facing adversity related to a cancer experience.¹³ In the review of research on resilience in patients across the cancer continuum,¹⁴ resilience is summarized as a personal characteristic or trait that enables an individual to thrive in the face of adversity, a mechanism to promote positive adaptation or outcomes, or the positive psychological functioning or outcome itself as a consequence of a traumatic event.

Resilience is related to a patient's well-being. Specifically, a high level of resilience has been associated with favorable clinical outcomes, including fewer symptoms, less anxiety, less depression, and faster recovery, as well as greater self-efficacy and quality of life than a lower level of resilience.^{11,15-17} Such outcomes are consistent with palliative care goals, which focus on symptom management and relieving physical, psychosocial, and spiritual suffering to improve quality of life for patients with a terminal illness.¹⁸ Specifically, nurses in palliative care can help cancer patients in end-of-life care to promote resilience, which results in a better quality of life and psychosocial functioning.¹⁴

Nursing research on resilience in Korea has been conducted in the late 1990s,¹⁹ mainly with samples of Koreans with specific health problems.²⁰⁻²² Because of growing public awareness of cancer screening, treatment, and outcomes, nursing research on resilience among Korean cancer

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patients has increased over the last decade. However, reviews of that nursing research have not been published, and information about correlates and outcomes of resilience during the cancer experiences of Korean adults has not been systematically identified. Considering that the characteristics of resilience are influenced by diverse socio-cultural factors,⁴ an extensive review of Korean nursing research about resilience based on the uniqueness of a given illness may help identify, evaluate, and integrate the phenomenon of resilience from a cultural perspective.

THE REVIEW

Aims

The purpose of this article is to describe the results of a scoping review of the nursing literature addressing theories, instruments, correlates, and effects of resilience in Koreans with cancer. The questions for this scoping review were as follows:

1. What research theories are used to study resilience in Koreans with cancer?
2. What instruments are used to study resilience in Koreans with cancer?
3. What factors are associated with resilience in Koreans with cancer?

Design

The 5 scoping review steps proposed by Arksey and O'Malley (2005)^{23,24} were followed, including identification of research questions; finding or searching relevant studies; study selection; quality appraisal, data extraction, and organization; and summarizing and publishing the results.

Search Methods

Several electronic databases were searched, including Ovid MEDLINE, CINAHL, Google Scholar, DBpia, and the Korean Studies Information Service System. English and Korean language literature were searched from 2000 to 2016 to obtain recent data using the keywords “cancer,” “resilience,” and/or “Korean” from studies written in English or Korean. Inclusion criteria were as follows: (a) articles published in only nursing journals and (b) articles that involved Koreans in Korea. Studies that focused on concept analysis or involved children, family, or oncology nurses as target populations were excluded from this review.

Search Outcomes

A total of 151 articles were found in Ovid MEDLINE, 237 in CINAHL, 47 in DBpia, 20 in the Korean Studies Information Service System database, and 2230 in Google Scholar (Figure). After duplicated articles among databases were removed, the researchers independently conducted an initial

screening with titles and article abstracts using our inclusion/exclusion criteria. Based on the exclusion criteria, we excluded 2581 articles. After full-text articles were screened for eligibility, 3 articles were excluded, and a total of 17 articles written in Korean were reviewed in this study.

Data Extraction and Synthesis

In keeping with scoping review methodology,^{23,24} the quality of individual studies was not appraised. Korean researchers who have a doctoral degree in nursing disciplines and who are experts in Korean culture and/or cancer-related research reviewed literature to ensure validity of the resilience studies. Two of the researchers (J.-H.P., S.-Y.L.) recorded information about design, sample, theoretical framework, and variables in a data extraction matrix (see Supplemental Digital Content 1, <http://links.lww.com/JHPN/A27>). The other 2 researchers (H.L., J.F.) confirmed accuracy of the data. All 4 researchers collaborated on the synthesis of results.

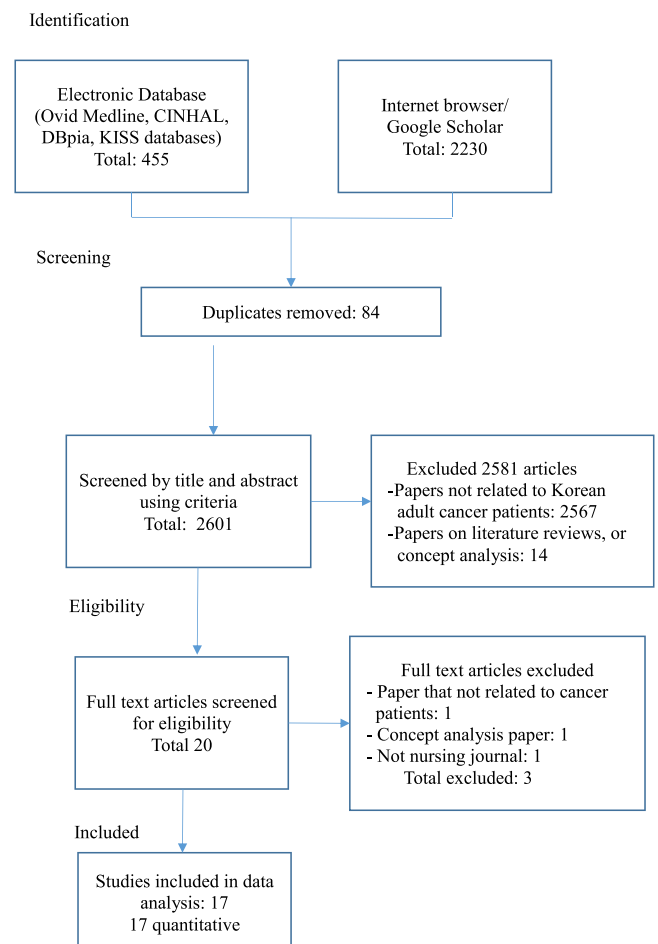


FIGURE. Review flow diagram.



RESULTS

The research theories, instruments for resilience, and factors associated with resilience in Koreans with cancer were analyzed. As can be seen in Supplemental Digital Content 1 (see Supplemental Digital Content 1, <http://links.lww.com/JHPN/A27>), all 17 journal articles were reports of quantitative studies, of which 14 were cross-sectional designs.^{16,20,25-36} Samples included survivors of breast cancer ($n = 7$ studies), colorectal cancer ($n = 4$ studies), hematological cancer ($n = 1$ study), and various types of cancer ($n = 5$ studies). Sample sizes ranged from 36 to 205 participants.

Theory-Guided Studies

The reports of most of the reviewed studies did not include information about a conceptual or theoretical framework that guided the study. However, the adolescent resilience model³⁷ was used by Yang and Kim,¹⁶ and the resilience in illness model³⁷ was used by Jun et al.^{16,28} Yang and Kim¹⁶ studied the relations of social support, depression and symptom experience, self-efficacy, hope, and infection prevention to resilience. On the other hand, Jun and colleagues²⁸ tested a conceptual model grounded on the resilience in illness model.³⁸ Concepts included in their study were adverse effects, social support, self-esteem, depression, uncertainty, resilience, and quality of life. Both studies on resilience in Koreans with cancer^{16,28} adopted common concepts such as illness-related or individual risk, individual and social protective factors, and resilience from Hasse and colleagues.^{37,38} resilience models.

Measurements of Resilience

Descriptions of the 6 instruments used to measure resilience are provided in Supplemental Digital Content 2 (see Supplemental Digital Content 2, <http://links.lww.com/JHPN/A28>). The original Resilience Scale (RS), developed by Wagnild and Young,³⁹ was used in 9^{25-29,32,34,35,40} of the 17 studies. It was designed to identify the degree of individual resilience, which is a positive personality characteristic that promotes individual adaptation.⁹ A short version of the RS (RS-14) was developed to ease the burden on participants by providing a shorter instrument, with 14 items selected from the original RS.⁴¹ In Korea, Song⁴² went through a forward-backward translation process and tested only content validity and reliability of the Korean version of the RS without evaluating construct validity. A study with colorectal cancer patients showed that the Korean version of the RS selected 22 items from the original RS through exploratory factor analysis.³⁵ Psychometric evaluation supported construct validity for the short version RS-14 with Korean stroke patients,⁴³ and 3 nursing studies with Korean cancer patients employed the short version RS-14.^{21,31,36}

The Connor-Davidson Resilience Scale (CD-RISC) was used in 2 studies.^{20,30} It was developed for clinical practice

to measure resilience as a proxy for stress coping ability with the general population, primary care outpatients, and psychiatric patients.⁴⁴ Because of issues with an unstable factor structure of the original CD-RISC, a short version of the 10-item CD-RISC was developed to capture the core resilience feature with a sample of undergraduate students.⁴⁵ The short Korean version of the 10-item CD-RISC demonstrated unidimensional factor with a community sample of older adults in Korea⁴⁶ and 1 Korean study with cancer patients used this scale.¹⁶

The Korean version of the Resilience Quotient Test (KRQ-53)⁴⁷ was used in 1 study.⁴⁸ It was a modified scale developed from the original version of the Resilience Quotient Test (RQT), which has 56 items developed by Reivich and Shatté,⁴⁹ and it did not provide detailed information regarding the process of instrument development. Consequently, Kim⁴⁷ modified the original version of the RQT in accordance with Korean culture, tested the original RQT with more than 2000 Korean adolescents and adults, and finally selected 53 items of the KRQ-53.

A nursing study with Korean cancer patients³³ used the RS developed by Korean researchers.⁵⁰ It contains 27 items with a 5-point rating scale and was designed to measure the multidimensional aspects of resilience, including control, positivity, and sociality rather than personal characteristics of resilience and was used with Korean adolescents. As shown in Supplemental Digital Content 2 (see Supplemental Digital Content 2, <http://links.lww.com/JHPN/A28>), internal consistency reliability of each dimension in this scale was 0.66 to 0.89, which did not exceed the minimum criterion of 0.8.⁵¹

Factors Associated With Resilience in Koreans With Cancer

Of 17 Korean research studies, 7 studies investigated resilience as an outcome itself^{20,25,29-32,35} (see Supplemental Digital Content 3, <http://links.lww.com/JHPN/A29>), whereas 3 studies examined it as a mechanism or process to promote positive outcomes.^{26,27,33} Furthermore, 4 studies tested resilience as both an outcome and a mechanism or process.^{16,28,34,36} Regardless of the type of cancer, the factors self-efficacy, hope, time since diagnosis or surgery, social supports from family and friends, and self-esteem were positively associated with resilience, whereas anxiety and depression were negatively associated with resilience.^{16,20,28,30,32,34,36} Resilience also worked as a mechanism to promote positive outcomes in nursing studies with Korean cancer patients^{16,26-29,34,36} (see Supplemental Digital Content 4, <http://links.lww.com/JHPN/A30>). Quality of life and coping were commonly investigated outcome variables, and resilience influenced those outcomes.^{26-29,34,36}

DISCUSSION

This is the first scoping review of Korean nursing research to examine resilience in Koreans with cancer. We found



that (a) resilience models developed for adolescent and young adults with cancer were used in 2 studies in Koreans with cancer; (b) original versions of resilience scales³⁹ were commonly used in studies in Koreans with cancer; (c) self-efficacy, hope, social supports, and self-esteem were positively related to resilience in Korean cancer patients. Anxiety and depression were inversely correlated with resilience in colorectal and hematological cancer patients; quality of life was a commonly investigated outcome variable for resilience.

There are also some important issues to address regarding theoretical frameworks. First, a few studies^{16,28} were conducted based on Hasse and colleagues^{37,38} resilience models—but those models were developed for and tested with adolescents and young adults. The average age of the patients in Korean research studies, however, ranged between 50 and 55 years.^{16,28} As a result, Hasse and colleagues^{37,38} model could be problematic for studies conducted with middle-aged and older Korean cancer patients.^{16,28} In cancer nursing research, much of the theory development on resilience is limited to pediatric oncology patients; resilience in adults with cancer has not been closely examined in studies.¹³ Resilience in pediatric cancer research also needs to use broader concepts because resilience may be a lifelong process lasting through adulthood.⁵² Resilience in different age groups may need to take into account other concepts that are more appropriate for the target population.

In addition, resilience theories^{37,38} were developed from a Western cultural perspective, particularly in the United States. As a result, Korean cultural concepts were not included in the theoretical frameworks used in Korean cancer patient studies.^{16,28} Because an individual's resilience capacity results from interactions with societal, community, and family factors across the individual's life span,¹² and because traditional Korean philosophies such as Confucianism emphasize that collectivism, particularly family-centered values, is the cornerstone of Korean culture,⁵³ cancer resilience in Koreans may not align with resilience theories developed in other cultures. Finally, because concepts and components associated with resilience may differ according to the types of cancer, illness-related risks, protective factors, and resilience, mechanisms should be developed for specific types of cancer.

The resilience instruments used in nursing research with Korean cancer patients in this study included 6 measures. Two of them, the RS-14⁴¹ and the short version of the 10-item CD-RISC,⁴⁵ were refinements of the original measures. Most of the resilience scales, including the CD-RISC, the short version of the 10-item CD-RISC, RS, the short version of RS-14, and the original version of RQT, were initially developed and evaluated largely with whites in the United States.^{10,39,41,44,45,49} The number of items in these resilience scales ranges from 10 to 53 items. Most of the scales had good reliability (Cronbach α coefficients =

.83–.97) except the RS developed by Shin and colleagues,⁵⁰ which ranged from .66 to .89.³³

The findings in this review raise serious concerns about psychometric issues of the 6 resilience scales in terms of construct validity. First, the most frequently used resilience measure in Korean cancer studies was the original RS³⁹ and the short version of RS-14.⁴¹ Psychometric issues with the Korean version of the original RS³⁹ are consistent with studies conducted in other countries and cultures that showed different factor structures compared with those of the original RS.^{35,54} In addition, we do not know whether the short version of RS-14 is culturally appropriate to measure the phenomenon of resilience for Korean cancer patients because it has never been tested with that population. Second, the Korean version of CD-RISC demonstrated nonequivalent factor structures even between the Korean studies.^{55,56} The short Korean version of the 10-item CD-RISC makes it difficult to capture multidimensional aspects of resilience because it measures the unidimensional construct of resilience.⁴⁵ In addition, because of the lack of psychometric information regarding the short Korean version of the 10-item CD-RISC, further validity testing of the 10-item CD-RISC with Korea cancer patients is needed. Third, although the KRQ-53⁴⁷ can measure diverse aspects of resilience, it is questionable whether KRQ-53 is an appropriate instrument to examine resilience in Korean cancer patients because of a lack of psychometric information about the scale. Furthermore, the scale presents practical challenges in clinical settings, where it is often not feasible for cancer patients to complete all 53 items. Finally, the RS developed by Shin and colleagues⁵⁰ is the only scale designed by Korean researchers. However, little psychometric information is available regarding the use of this scale with cancer populations. Furthermore, considering that the characteristics of resilience are influenced by the developmental stages of the patients, this scale may not be appropriate to measure resilience in Korean adults with chronic illnesses such as cancer. Taken together, our findings suggest that culturally appropriate instruments to capture the phenomenon of resilience in Korean cancer patients should be developed.

In this review, factors including self-efficacy, hope, time since diagnosis or surgery, social supports from family and friends, and self-esteem were positively related to resilience in Korean cancer patients.^{16,20,30,32,34,36} In particular, self-efficacy, social support, and self-esteem were significantly correlated with resilience in cancer patients with diverse cultural backgrounds.^{38,57} On the other hand, anxiety and depression were inversely correlated with resilience in colorectal and hematological cancer patients in Korea,^{20,30} which is consistent with the results of other cancer studies.^{58,59} Quality of life is a commonly investigated outcome variable for resilience,^{26-28,36} and higher resilience was related to a higher quality of life and lower symptom experience in



cancer populations.^{15,17} Most research in this review involved cross-sectional studies with breast and colorectal cancer patients.

Practice Implications

The findings of this study have important implications for resilience in patients across the cancer continuum. First, resilience theories were used without considering the characteristics of the target population, cultural factors, and differences in types of cancer. Korean cancer resilience theories should be developed by examining important concepts and contexts that are most appropriate for Koreans. A situation-specific theory can explain a population's unique health or illness experience by providing a close, comprehensive view of a phenomenon despite a limited scope of generalizability.⁶⁰ Situation-specific theories may be able to explain and predict Korean cancer patients' resilience mechanisms better than grand and middle-ranged theories. This literature review has demonstrated that there is an urgent need to develop a situation-specific theory for resilience among Korean patients across the cancer continuum.

Despite the importance of resilience for health outcomes among cancer patients in Korea, there is still a gap in the literature regarding the definition of resilience and development of instruments for its assessment. Most instruments require additional psychometric research to better establish their reliability and validity in a Korean cultural setting. A careful assessment needs to be carried out to assess conceptual-theoretical-empirical structures for the proposed theory among patients across the cancer continuum in their sociocultural settings.

More importantly, resilience positively impacts patient treatment response, which in turn predicts better clinical outcomes.^{17,61} In addition, the timing of resilience interventions is an important factor to consider to improve clinical outcomes.⁶² Patients with newly diagnosed cancer in early palliative care had better quality of life and less depressive symptoms than patients in standard oncology care.⁶³ Therefore, nursing interventions in palliative care to promote resilience in cancer patients should be provided at the time of diagnosis and treatment in order to facilitate favorable long-term physical and psychological health outcomes.

Limitations

This review emphasized a number of limitations in Korean nursing studies on resilience. First, we limited the review to only studies addressing resilience in Korean patients across the cancer continuum in nursing journals. Second, most studies in this review investigated the relationship between psychosocial variables and resilience with a cross-sectional design. More research should be conducted to examine the long-term effects of resilience on clinical outcomes, including physiological factors, in the diverse cancer populations of Korea. Lastly, although a scoping review is an increasingly prevalent methodology in reviewing health research evidence,

the authors did not typically appraise the quality of the studies in the scoping review,⁶⁴ which can be a limitation of this study. However, the scoping review enables researchers to map the literature on a topic to identify the key concepts, theories, sources of evidence, and gaps in the research.⁶⁴

CONCLUSION

Promoting resilience is critical to promote quality of life in patients in end-of-life care. Resilience is a significant phenomenon that can improve clinical outcomes. Situation-specific conceptual and methodological approaches take into account the uniqueness of individuals living with cancer in Korea. Understanding the sociocultural context can allow us to identify factors that shape resilience experiences and health consequences. Korean nursing research on resilience in cancer patients is still new. All 17 studies selected in this review are written in Korean and were excluded in international resilience review studies^{8,9,14} because they were not written in English. This study is the first time these Korean and English language studies on resilience in nursing literature were included in a review study. This review suggests that because there is no consensus regarding definitions of resilience in Korean cancer populations, qualitative research concerning the phenomenon of resilience and concept analysis should be research priorities. Based on the findings from such qualitative studies, Korean nursing researchers should be able to develop culturally appropriate tools and nursing interventions to measure and promote resilience in patients across the cancer care continuum. This will lead to enhanced social, physical, and psychological well-being among Korean cancer patients and their families because it is the core of palliative nursing care.

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