Nurses' Resilience and Effective Factors

Hemşirelerde Psikolojik Dayanıklılık ve Etkileyen Faktörler

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SUMMARY

Resilience can be described as the ability to recuperate after difficult life experiences or overcome change or disasters. In order to develop resilience, one has to encounter a stressor. Nurses encounter various traumatic situations particularly due to distressing and stressful work life. Therefore, it is important for nurses to strengthen their resilience in terms of coping with difficulties, adapting to new situations, having realistic and positive future expectations and protecting their work and daily life. If nurses have sufficient resilience, burnout and the rate of leaving work or resigning decrease, posttraumatic growth develops, and work satisfaction increases. In this review, we aim to emphasize the importance of the resilience for nurses, determine the factors which affect their resilience, and increase the resilience of nurses.

Keywords: Factors in resilience; nursing; resilience; resilience of nurses; resilience development.

ÖZET

Psikolojik dayanıklılık, zor yaşamsal tecrübeler karsısında kişinin kendisini toparlama gücü veya değişimin, felaketlerin başarılı biçimde üstesinden gelme yeteneği olarak tanımlanmaktadır. Psikolojik dayanıklılığın gelişmesi için bir stresörle karşılaşılması gerekir. Özellikle sıkıntılı, stresli iş yaşamında, birçok travmatik durumla karşılaşan hemşirelerde psikolojik dayanıklılığın geliştirilmesi; hemşirelerin zorlukların üstesinden gelebilmesi, yeni duruma uyum sağlayabilmesi, geleceğe yönelik olumlu ve gerçekçi beklentilerinin olması, iş ve yaşam dengesini koruyabilmesi gibi birçok durumu etkilemesi açısından önemlidir. Bunun sonucunda hemşirelerde duygusal tükenmenin ve işten ayrılmaların azaldığı, travmatik büyümenin geliştiği ve iş doyumunun arttığı belirtilmektedir. Bu derleme makale, hemşirelerde psikolojik dayanıklılığın önemini vurgulamak, hemşirelerin psikolojik dayanıklılığını etkileyen faktörleri belirlemek ve psikolojik dayanıklılığı artırmak için yapılabilecek stratejileri ortaya koymak amacıyla planlanmıştır.

Anahtar sözcükler: Etkileyen faktörler; hemşire; psikolojik dayanıklılık; hemşirelerde psikolojik dayanıklılık; psikolojik dayanıklılığı geliştirme.

Introduction

Resilience is defined as the ability to adapt to or collect oneself after a trauma, threat, tragedy, family or relationship problems, serious health problems, or business and financial problems or to cope with changes or disasters.[1-3] It also means the strength to quickly recover and deal with difficulties and to resist them with flexibility and strength.[1-3]

Studies in the international literature conducted to ensure a unity of language were reviewed[3] and the concept of resilience was found to have many Turkish equivalences such as kendini toparlama gücü (strength to collect oneself), toparlanma (collecting oneself), güçlülük (strength), psikolojik güçlülük (psychological strength), dirençlilik (resistance), yılmazlık (indomitableness), sağlamlık (robustness), psikolo-

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jik dayanıklılık (psychological endurance), dayanıklılık (endurance), and psikolojik sağlamlık (psychological stability). The Turkish phrase, psikolojik dayanıklılık, was deemed to best correspond to the concept of resilience.[3]

Individuals should encounter risk factors to develop resilience. Protective factors should be found to reduce or eliminate the negative effects of risk factors.[1-6] Risk means any event, situation or experience that increase the possibility of a problem to occur, continue or become worse. Protective factors are the factors that reduce or eliminate the negative effects of risks and adverse conditions.[1-6]

The risky situations that individuals encounter in their work life and the protective factors they have affect their resilience. Resilience is important for nurses, who encounter many risk factors in their work life and have to provide professional care for and relieve the patients under poor conditions in any case.[6-19] This review aims to determine the factors that affect nurses' resilience and the strategies that can be used to increase resilience.

For this purpose, the studies conducted between 2006 and 2016 were screened using the databases of Microsoft Academic Research, Wiley Online Library, PubMed, ResearchGate, Science Direct, Google Scholar, Ulakbim and the National Thesis Center. The screening was performed in Turkish and English using the keywords: psikolojik dayanıklılık (re-

silence), hemşirelerde psikolojik dayanıklılık (resilience in nurses) and hemşirelerde psikolojik dayanıklılığı geliştirme (building resilience in nurses). The studies that show the factors that affect nurses' resilience and the strategies to improve nurses' resilience were included in this review. Table 1 shows the samples, methods, objectives and results of these studies.

Nurses' Resilience

Nurses have many problems such as stressful work life, problems that occur during caregiving and the problems that exist in the healthcare system.[6-20] However, the studies indicated that protective factors (personal, social, professional) help nurses improve their resilience,[19-26] and that nurses positively affect the improvement of skills such as self-confidence, autonomy, coping and adapting to situations, and creating a motivational life force and posttraumatic growth.[6-8,11-20,27-29] In addition, resilience was found to positively affect personal and organizational outputs, nurses' professional skills improve, job and life satisfaction increase, and the rates of leaving or considering leaving the job, the sense of exhaustion and psychological problems such as depression reduce.[6-13,27-34] Figure 1 shows the improvement of nurses' resilience and its affects.

The Factors That Affect Nurses' Resilience

The Risk Factors That Affect Nurses' Resilience

Nurses encounter many risk factors that call for resilience.[6-20] Insufficient professional skills and knowledge, ability to cope with stress and utilize emotions, and support from colleagues and team, and a lack of positive expectations about the future and emotional preparation for the job, are among the many direct or indirect difficult situations nurses encounter. These are all risk factors. They can have negative effects on nurses' physical and psychological well-being and cause exhaustion, psychological problems, decreased job and life satisfaction,[6-10,30-34] and lead to leaving or considering leaving the job.[11-13,31-34] Larrabee et al. (2010) conducted a study with 454 nurses and reported that nurses' job satisfaction, psychological strength, resistance to stress were positively related to their intention to stay in their job.[33]

The Protective Factors That Affect Nurses' Psychological Resilience

Although nurses encounter many risk factors, their per-

sonal, familial, social and professional protective factors increase their resilience.[19-26] The protective factors that affect nurses' resilience are reported to be similar even in different cultures.[6,7,12,17,19] Protective factors can be categorized as internal and external factors.

1-Internal Factors

Studies have shown that resilience is directly related to personal protective factors such as secure attachment,[2-4] self-respect,[4-6,25,36] focus of internal control,[4-6,25,35] positive emotions,[27-25] hope,[6,7,19,21,35-42] humor,[36-40] cognitive flexibility,[6,7,19,21,35-42] self-efficacy,[16-18,21,31,25] coping skills[16-37] and emotional intelligence skills, including awareness of feelings, and expression and management of feelings.[21-24,35-44] Other personal protective factors include optimism, having ethical and moral values as an individual, altruism, autonomy, taking resilient people as role models, accepting oneself and life, extroversion, being clear, believing in others, conscientiousness, creativity, self-appreciation, and positive and realistic thinking.[5-8,11-24,30-44] The future protective factors include adaptation to the future and seeking for innovations and having goals and positive expectations for the future.[6-8,21,22,35-42]

2-External Factors

Important social protective factors include support from peers, positive family relationships, and having supportive social communication networks and social resources,[5-8,11-15,19,23,25,35] and professional protective factors include experience, job satisfaction level, having a positive attitude towards the job, sharing knowledge, skills, experience and problems and establishing intimate relationships with colleagues, having a sense of confidence, celebrating colleagues' successes and appreciating them, identifying the stressors and having counselor and team support for implementing appropriate solution strategies, and establishing a balance between work and life.[6-8,16-26]

Strategies to Improve Nurses' Resilience

Resilience is a multidisciplinary characteristic that concretizes the personal characteristics that enable improvement when individuals encounter problems. It is also a dynamic process and a personal skill that can be learned and improved in life.[13,15,19-20,23-29,25,35,45,46] Table 1 shows the studies of the
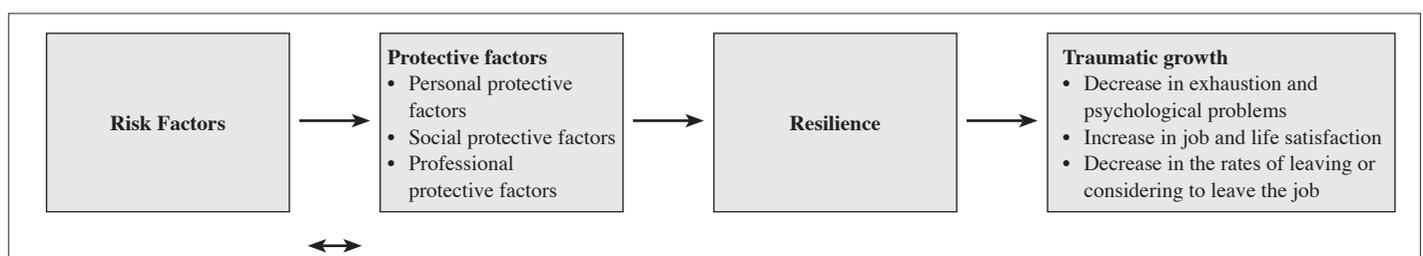

Figure 1. Improvement of nurses' resilience and its affects.

Table 1. Studies of the Factors That Affect Nurses' Resilience and Strategies to Improve Resilience

The Factors that Affect Nurses' Resilience			
Study	**Sample Method**	**Objective**	**Results**
Gillespie, Chaboyer, Wallis, Grımbeek (2009)	Operating room nurses (n=772) Australia Quantitative study - Correlational Descriptive	An analysis of the relationship between operating room nurses' cooperation, control, self-efficacy, hope, coping ability, age, experience and education level and their resilience	The study indicated that hope, self-efficacy, control and success best explained nurses' resilience, and that: - Resilience was strongly related with hope, - Resilience was moderately related with coping ability, - Resilience was strongly related with self-efficacy, and - Resilience was moderately related with success and control.
Zander, Hutton, King (2010)	Previous studies (n=119) Qualitative study - Thematic analysis	To determine the factors that affect the knowledge of pediatric oncologic nurses on coping with work stress as well as their resilience.	Three common themes were determined in the studies conducted on the pediatric oncologic nurses' resilience and coping skills: - The negative situations that affect nurses' coping skills; Insufficient support from teams and organizations, negative social environment, inexperience, negative thoughts, attitudes and behaviors and stressors. - The factors that affect nurses' effective coping skills; * Coping process, being aware of personal and professional responsibilities. * Various coping skills; such as spirituality, belief, social support, expressing and reflecting feelings, problem solving/escape, avoiding and substance addiction. * Actions to establish balance during coping process; personal success, awareness of personal and professional limits, and protecting the balance between life and work. - The factors that help nurses cope with negative situations; Resilience, positive attitudes, experience.
Larrabee, Wu, Persily, Simoni et al. (2010)	Nurses working in five different hospitals (n=464) Virginia Quantitative study - Correlational Descriptive	An analysis of the relationship of the intent to stay in job with resistance to stress, work satisfaction, work stress and psychological strength	The study results show that: - Nurses' work stress, work satisfaction and psychological strength positively affect their resistance to stress, - Nurses' low level of work stress and psychological strength positively affect their work satisfaction, and - Nurses' work satisfaction, low level of work and situational stress and longer times of professional experience positively affect their intent to continue to work as nurses.
Mealer, Jones, Newman et al. (2012)	Nurses working in an intensive care unit (n=744) America Quantitative study - Correlational Descriptive	An analysis of the relationship of resilience with exhaustion, post-traumatic stress disorder (PTSD) and mental disorders in intensive care nurses	The study results show that: - Of the nurses with high level of resilience, * 61% showed the symptoms of exhaustion, * 8% showed the symptoms of PTSD, * 8% showed the symptoms of anxiety, and * 2% showed the symptoms of depression. - Of the nurses with lower levels of resilience, * 86% showed the symptoms of exhaustion, * 25% showed the symptoms of PTSD, * 21% showed the symptoms of anxiety, and * 14% showed the symptoms of depression. - A negative significant relationship was found between resilience and mental disorders.
Gito, Ihara, Ogata (2013)	Nurses working in a psychiatric hospital (n=313) Japan Quantitative study - Correlational Descriptive	An analysis of the relationship of resilience with depression, exhaustion, self-respect and endurance in the nurses working in a psychiatry hospital in Japan	The study results show that; - Self-respect and endurance (controllability and positive thinking) had positive significant relationships with resilience, and - Nurses with high level of resilience had lower levels of depression and exhaustion (emotional exhaustion and desensitization)
Seo, Kim, Park (2014)	Korean-American nurses living in New York and New Jersey (n=203) New York Quantitative study - Correlational Descriptive	An analysis of the effect of work satisfaction and resilience on Korean-American nurses' organizational commitment	The study results show that: - Nurses had a higher mean score on organizational commitment than the medium level (3.34±0.59/min-max:0-5), and - Work satisfaction and resilience positively affected nurses' organizational commitment.

Table 1. Studies of the Factors That Affect Nurses' Resilience and Strategies to Improve Resilience (cont.)

The Factors that Affect Nurses' Resilience			
Study	Sample Method	Objective	Results
Ju, Oh (2016)	Nurses registered in the Hospital Nurses' Association (n=382) A national study India Quantitative study - Correlational Descriptive	An analysis of the relationship of resilience with emotional labor, intent to leave the job, exhaustion, continuing the job and organizational commitment, and the factors that affect resilience	The study results show that: - Commitment to work and organizational commitment had positive significant relationships with nurses' resilience, - Exhaustion, emotional labor and intent to leave the job had negative significant relationships, - Nurses' resilience was significantly affected by emotional labor, exhaustion, continuing to work and organizational commitment, and - Nurses' resilience had no effect on their intent to leave the job.
Ablett, Jones (2007)	Nurses working in a palliative care unit (n=10) England Qualitative study - Thematic analysis	Determination of the factors that assist in reducing the workplace stress and resilience of nurses working in palliative care centers	Ten themes were determined based on the study results: - The factors that affect work satisfaction - The factors that affect work stress - Personal attitude towards caregiving - Personal attitude towards life and death - Personal attitude towards the workplace - Willingness to work as palliative care nurses - Previous caregiving to a cancer patient in the nurses' immediate environment - Awareness of their spirituality - Utilization of coping methods - Awareness of personal-professional issues and limits
Cameron, Brownie (2010)	Nurses working in an elderly care center (n=9) Australia Qualitative study - Thematic analysis	Determination of the factors that affect the development of resilience in elderly care nurses	The study shows that the factors that affect the development of nurses' resilience are: - Nurses' age, clinical knowledge, skills and experience, holistic care skills, - Nurses' optimism against negative feelings and use of positive thinking, humor and relaxation techniques, - Nurses' receiving support from colleagues and counselors, exercising and having a rest to reveal opportunities and provide physical and psychological support, and - Nurses' protecting their personal interests and create a strong support system to ensure balance between work and life.
Kornhaber, Wilson (2011)	Nurses working in a burn unit with six beds (n=7) Australia Qualitative study - Thematic analysis	Determination of the strategies that improve burn unit nurses' resilience in the difficult situations they have	The study shows six themes that improve the development of nurses' resilience: - Being cool-headed - Choosing to be a burn unit nurse - Being emotionally stable enough to perform painful interventions - Using effective coping skills against changes - Ability to collect oneself - Emotional compartmentalization
Studies of Strategies to Improve Resilience			
McAllister, McKinnon (2009)	Analysis of the studies of nursing education on the use of resilience by nurses . Review .	Analysis of the importance of learning and teaching resilience in improving nurses' resilience	The study indicates that: - Nurses' resilience can be improved by evidence-based education programs created to develop personal values, professional characteristics and increase social prestige. The study made three recommendations: - Including the subject of resilience in undergraduate nursing education (identity formation, coping skills, leadership skills, etc.) - Providing nurses with the opportunity to learn from their colleagues (taking positive role-models, listening to others' experiences) - Helping nurses to adopt professional culture (being a good example, guiding, directing, coaching and motivating and motivating novice nurses)

Table 1. Studies of the Factors That Affect Nurses' Resilience and Strategies to Improve Resilience (cont.)

	Studies of Strategies to Improve Resilience		
Study	Sample Method	Objective	Results
McDonald, Jackson, Wilkes, Vickers (2012)	Midwives and nurses working in the women's and children's health services in a metropolitan region. (n=14) Australia Qualitative - Case study (For six months)	Analysis of the effect of a business-oriented educational program developed to support the personal resilience of the midwives and nurses working in a negative clinical environment	The business-oriented education program includes subjects such as the improvement of relationships between participants, formation of psychological solidity, improvement of cognitive flexibility, ensuring a balance in life, reflective and critical thinking, making plans for the future and taking action. The study results show that: - Many personal characteristics of nurses which affect resilience such as self-expression, enterprisingness, ability to establish positive communication, and critical and flexible thinking showed improvement after the workshop practice carried out within the scope of business-oriented education program using the techniques such as dialog, information, role-play, group interaction, peer feedback, reflective activities and use of creative self-expression.
Chesak (2013)	Nurses working in a medical center (27 in the experimental and 39 in the control group) United States of America - Wisconsin Qualitative study - Mixed method	Analysis of the practicability and effect of Stress Management and Resilience Education on improving novice nurses	According to the quantitative data assessment after the Stress Management and Resilience Education: - The level of stress reduced, level of resilience increased, and awareness skills improved in the experimental group. - Three themes were identified during focus group interviews: * Ensuring personal and professional development * Being sensitive to the needs of learners * Developing awareness principles. After the Stress Management and Resilience Education, nurses reported that: * Their relationship with their family, friends and patients positively improved, and * Their point of view on their roles and themselves as nurses showed a positive change.
Tarantino, Earley, Audia, Adamo et al. (2013)	Nurses working in a health center (n=84) United States of America - Maryland Qualitative study	Analysis of the effect of the coping skills development program carried out to increase nurses' resilience through a pilot study	The coping skills development program carried out to increase resilience is an eight-week holistic self-care program and includes techniques such as reiki, yoga, intonation, meditation, imagination and using creative self-expression. The study indicates that: - Nurses reported at the eighth week that their confidence in coping skills and their stress level significantly reduced, and - After 12 months, nurses reported that their stress level reduced, coping skills improved, general health status became better, and resilience level increased.
Foureur, Maralyn, Besley, Karyn, Burton et al. (2013)	Midwives and nurses working in a metropolitan training hospital (20 midwives and 20 nurses) Australia Qualitative study - Mixed method	Analysis of the effectiveness of the Awareness-Stress Reduction-Oriented Program carried out to improve midwives' and nurses' resilience	The Awareness-Stress Reduction-Oriented Program include subjects such as feeling relaxed, being calm and focusing on emotions, understanding the value of time, being aware of other people, trying to help more, controlling thoughts, and stress management. The study indicates that: - Quantitative data assessment indicated that * The physical and mental symptoms of midwives' and nurses' depression and anxiety, signs of stress and sleep disorders reduced, and * Adaptation to life (sense of understandability and manageability) and participation in social activities showed a positive change. - Midwives and nurses stated the importance of the workshop program, the positive effect of higher levels of awareness on life, and the importance of including awareness practices in daily domestic and work life.

Table 1. Studies of the Factors That Affect Nurses' Resilience and Strategies to Improve Resilience (cont.)

Studies of Strategies to Improve Resilience			
Study	Sample Method	Objective	Results
Mealer, Conrad, Evans, Jooste et al. (2014)	Intensive care unit nurses (n=33) Randomized controlled study	A pilot study of the implementation and practicability of multi-model resilience education program prepared for intensive care unit (ICU) nurses and its effect on mental disorders	The multi-model resilience education program includes the Awareness-Stress Reduction-Oriented Program, the Written Exposure Therapy, Exercise, Counseling Session on a Triggering Event. The study indicates that, of the ICU nurses: * 100% met the criteria for anxiety, * 77% met the criteria for depression, and * 44% met the criteria for PTSD * experience exhaustion (81% emotional exhaustion, 77% desensitization, and reduction in personal success of 77% of them) * Nurses' mean resilience score was 73 (67-77). - After the twelve-week interview program: * Nurses' depression, anxiety and PTSD symptoms reduced, Nurses' resilience scores increased, and * the multi-model resilience education program was indicated to be a practicable and effective program.
Chesak, Bhagra, Schroeder, Foy et al. (2015)	Nurses who newly began to work in a clinic (27 in the experimental and 28 in the control group) United States of America - Minnesota Randomized controlled study	Analysis of the effect of a Stress Management and Resilience Education program carried out within the scope of the orientation program for newly-hired nurses on stress, awareness, anxiety and resilience and determination of its practicability	According to the quantitative data assessment after the Stress Management and Resilience Education: - No statistically significant relationship was found between the experimental and control groups in terms of awareness, anxiety and resilience; - However, the stress and anxiety scores reduced, and awareness resilience scores increased in the experimental group. According to the qualitative data assessment after the Stress Management and Resilience Education: - Nurses had positive approaches towards the effect and practicability of the Stress Management and Resilience Education.
Cusack, Smith, Hegney Rees et al. (2016)	Studies that analyzed the environmental factors that affect resilience (n=22) Australia Review	Determination of the environmental factors in workplace that affect resilience and development of the Health Services Workplace Environmental Resilience Model	According to the Health Services Workplace Environmental Resilience Model, the environmental factors that affect resilience were: counseling, clinical supervision, education and training, personnel's positions, personal security and self-care. The study indicates that: - This model revealed two organizational concepts: * Support means the resistance of nurses against the problems they encounter in workplace * Development means that nurses develop their professional service and skills as well as their personal characteristics and their strength. - The steps that should be taken for personal performance and professional purposes were indicated within the scope of Support and Development.

factors that affect resilience and strategies to improve resilience. These studies indicate that the following should be done to improve nurses' resilience:

- Undergraduate and postgraduate education programs should include subjects to improve personal skills such as "establishing positive interpersonal relationships, flexible, critical and creative thinking, self-efficacy, altruism, use of humor, protecting personal and professional ethical borders, emotional intelligence, problem solving and coping skills."[6-8,19,27,42,47-49]

In institutions, administrators should organize courses, seminars, conferences, panels, workshops and structured educational programs (such as Stress Management and Resiliency Training-SMART),[24,45] (Mindfulness-Based Stress Reduction–MBSR)[30] and ensure their continuity.[19,38-42] Focus group works,[18-21,24-26,45] cognitive behavioral therapy[18-20,24,26,30,45] and art therapy[38-41,43] are reported to effectively improve the personal skills that affect resilience.

- Nurses should be aware of their and others' moral values and respect others' lifestyles or personal and social

values to improve moral values.[11-13,19,21-26]

- Nurses should spare time for exercise, yoga and meditation, listening to music, reading, or photography to improve coping skills. These programs should also be organized in institutions and nurses should be encourage to attend them.[11-13,19,22-25,35,44]

- Nurses should identify problems in a realistic manner, believe in solutions to problems and feel confident about obtaining the resources to resolve problems.[21,39-42] Programs should be organized in institutions to enable nurses to clearly express their problems, feelings and thoughts, share experiences with the other nurses experiencing similar problems and develop common methods to solve the problems.[18-21,24,25,30,45] In addition, nurses with resilience should be provided with opportunity to share their previous experiences and the conclusions they drew from these experiences through creative practices such as making presentations in seminars and conferences, writing poems and autobiographies or shooting short films.[6-8,11-15,21,22,35,42] Nurses should be informed that they can use guidebooks based on knowledge and skills on the subject when they frequently encounter a problem.[18-20,32,35]

- Nurses should be supported by their colleagues, establish positive relationships with their colleagues, celebrate the success of their colleagues who show resilience, appreciate their colleagues and take them as role models to improve positive beliefs and behaviors against negative events or situations in the workplace.[6-8,21,22,35,41,42]

It is important and necessary to implement an administration model that allow team decisions and share of responsibilities,[11,14,17,19] regularly carry out practices such as clinic supervision or counseling[6-8,13,19,31,32,35] and provide support by mentor and supervisor nurses for new nurses in the clinic.[6-8,13,19,31,32,35]

- Nurses should be aware of support resources such as family, friends and colleagues, and social support networks such as associations, foundations and non-governmental organizations.[5-8,11-15,25,35] In addition, they should be able to ask for help, to help people in need and take active roles in social groups.[6-8,11-15,19,35,45]

The strategies indicated by the American Psychology Association (APA) to improve resilience are:[50]

- To have good relationships with family and relatives, play active roles in social groups, accept help when needed and support people in difficult situations.

- Not to avoid problems that seem insolvable, to have realistic expectations about problem solving and pre-

evaluate possible problems.

- To accept unexpected situations as a natural part of life and set short-term achievable goals for them.

- To take action to achieve these goals, and ask "What can help me achieve what I want?" and "What can I achieve?" in negative situations.

- To solve as many problems as can be solved instead of trying to solve all the problematic situations or waiting for them situations to end.

- Individuals' self-respect, interpersonal relationships, moral satisfaction, and perception of the value of life may be positively affected as they experience problems. Individuals should be aware of the opportunities to know and improve themselves.

- To be self-confident and have a positive approach about problem solving.

- Not to exaggerate painful events beyond reality and to approach them with a broad perspective.

- To increase positive expectations about life.

- Not to skip self-care and to engage in relaxing activities one likes.

- To find new ways to strengthen resilience. For example, writing down feelings and thoughts about a traumatic or stressful situation, meditation or yoga may increase individuals' hope.

Conclusion

High resilience positively affects nurses' attitudes towards the profession, the future, life, and their work and life outputs. This positively affects the healthcare services provided by nurses to individuals, families and society, despite many problems that arise from individuals, professionals and the health system. The ICN's 2014 theme, "Nurses: A Force for Change and a Vital Resource for Life," and its 2016 theme, "Nurses: A Force for Change and Increasing the endurance of Health Systems," indicate the importance of increasing nurses' resilience to improve health services and solve the problems that exist in the health system. Individual and institutional works should be carried out to increase nurses' resilience based on these themes in order to reveal the forces and resources needed by nursing in Turkey.

In addition, it can be seen that most of the studies conducted in other countries to analyze the factors that affect nurses' resilience and indicate strategies to improve resilience were qualitative, practice-oriented and experimental studies, and they carried out structured educational programs to improve resilience in schools and workplaces. In Turkey, on the other hand, most of the studies were descriptive studies con-

ducted with nursing students. No experimental studies were found about improving the nurses' resilience. Therefore, it is important and necessary to conduct studies to analyze and improve nurses' resilience.

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