

**INNOVATION IN NURSING AND INNOVATIVE ATTITUDES OF NURSES**Meryem YILDIZ AYVAZ<sup>1</sup> Yunus Emre AKYOL<sup>2</sup>, Melek DEMIRAL<sup>3</sup>**Abstract**

In today's world, where scientific studies are increasing and new scientific knowledge is produced almost every day, innovation activities have become extremely important. Adopting, developing and implementing the innovation process and innovative practices will increase the quality of patient care, improve the quality of life and contribute positively to the national economy. As a professional health discipline, it should develop innovative thinking skills in order to keep up with the rapidly changing and developing science in nursing, to manage global competition well, and to benefit from innovative methods especially in health care practices. Compared to other health care professionals, nurses who spend the most time with patients are more likely to recognize inadequacies and deficiencies in patient care and are more likely to develop innovative practices for them. In literature, it is stated that nurses should have creative, equipped, leadership role and risk-taking personality traits in order to produce innovative solutions. In addition, it has been determined that manager support has great importance in the development of innovation culture. It was emphasized that nurses supported and guided by managers were more successful in innovation. Increased workload is one of the leading factors that negatively affect the nurses' innovative attitudes. Although in recent years innovative ideas and innovation studies in Turkey has increased, a limited number of studies were found for the nursing profession. In this review, it is aimed to draw attention to the importance of nursing innovation and nurses' innovative attitudes.

**Keywords:**

Nursing, Innovation, Innovative Attitudes

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## INTRODUCTION

The word, innovation, means ‘making a change’ in Latin. According to Turkish Language Association (TLA), innovation is expressed as ‘yenileşim (renovation)’. This means that there is still no meaningful translation in Turkish. Today, innovation has become an important factor in handling competitive advantage and modernization (Kartal, 2018; TLA, 2019)

Innovation has social and economic benefits. A promising, useful, high quality and innovative product; occurs at the end of a complex path that demands such difficult and serious education as marketing, international market strategy and innovation (Sengun, 2016).

Nowadays, with the development of medicine; nursing practices and care have become more complex. In order to keep up with the rapidly developing knowledge and scientific era and to manage global competition well, innovation in nursing has become compulsory (Kartal, 2018). In addition, Investments in innovation and R & D activities have been increased as a result of the development of technology and the expectations of individuals receiving health services (Ozbey, 2018). In addition to innovation, it is essential to produce inexpensive, accessible and useful solutions developed with advanced technology and education for health services with limited resources. The growing population is getting older and the number of people with chronic diseases is increasing. Besides, the given care and needs are also changing. Not only the income level and the degree of disease change, but the demands and expectations of health care also change. It is thought that the innovative products and programs to be developed in health services will increase the quality of care and reduce the costs as well as provide socioeconomic contribution to the country (Arslanhan, 2012; Sengun, 2016).

According to Drucker, the factors that drive people and institutions to innovation are:

- \* Unexpected situations: In routine, situations faced by individuals and groups may differ in sudden and unexpected levels. In such cases, the creative thinking of people comes into play and leads to newness and innovation in order to keep up with these new problems.
- \* Mismatch between expectation and outcome: If a product, program or service falls below social expectations and is no longer useful, this feature comes into play and directs the individual (s) to innovation and restructuring.
- \* Process needs: The works carried out in the process of creating innovation and the order and policies applied to these works can lead people to design new products by pushing them to new ideas.
- \* Demographic changes: Individuals' perceptions, tolerance situations against uncertainties, risk-taking behaviors can lead people to innovation.
- \* New informations: With the development of technology and science, new products or programs can be developed in line with new needs (Drucker, 2007; Sarioglu, 2014).



## **INNOVATION IN NURSING**

In an article published in 2009, ICN described the innovative nurse as a salaried health professional who produces, develops and markets innovative programs / projects in the field of health care (ICN, 2004). In order for health organizations to act and to be modernized in accordance with the age, it is important to increase the culture of innovation and their innovative development (Yilmaz, 2014). ICN (International Council of Nurses) advocated that nurses should be pioneers in emerging care practices in order to provide qualified services to individuals, families and society. Thus, it stated that innovation and development in nursing is still on the agenda and should be (Herdman, 2009). In a globalizing world, qualified nurses should be educated to meet the deficiencies and needs (Dil, 2012).

Florence Nightingale, the founder of modern nursing, said in the 19th century, “A more livable world; such a world will not be granted us, so let's work without hesitation to create this world. We should change it instead of conforming life.” Saying that she emphasized the importance of innovation and modernization (Kartal, 2018).

Innovation is extremely important for the improvement of nursing profession and nursing care quality (Herdman, 2009). Determining the needs and searching for the answers in the providing of health care is possible with the strong use of the profession and professionalization. Professional development is sustained by encouraging nurses who follow scientific developments and innovations and perform innovative activities (Arslan, 2012). In addition, nurses should have an innovative culture of thought, risk-taking, and be aware of opportunities and deficiencies (Yilmaz, 2014). In the health sector, innovation is experienced intensively.

In order to be caregivers, decision makers and managers, nurses who are professional in health care, need to develop innovative products and practices and deliver them to society and the health of society (Atasoy, 2014). Because nurses spend more time with patients and healthy individuals compared to other health care professional groups and they are primarily responsible for health care. Innovative ideas, together with holistic care given to patients, have been asked and emerged from nurses. Especially in the 21st Century, There is a significant progress in nurse's development of innovative values and designing innovative products / programs. (Karagozlu, 2008; Merih, 2018).

## **INNOVATIVE ACHIEVEMENTS OF NURSES**

Nurses, in recent years, have made many innovations both in Turkey and worldwide (Merih, 2018). Innovative studies in Turkish nursing were first performed by Perihan Velioğlu, a doyenne of the nursing profession. She has made many innovations from the use of green dressing in the operating rooms to university education. Nurse Ozlem Oktay's 'Stomakit' is the first product developed in nursing (Merih, 2018; Ozbey, 2018).

In our country, there is the Innovative Nursing Association (INA) which supports and guides innovative activities in nursing. Many innovative achievements have been achieved within this association (INA, 2019). Some of the innovative achievements of our country; Meltem Kaya and Nursen Ulke's 'Portlet' (2012), which rescues chemotherapy patients from infusion devices, Uterus Massage Belt (UMKEM) (2015), designed by Ikbal Engin and Meltem Soydan, which can detect uterine atony early, Arzu Erkuç

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Hut's medical ampoule opener (2018), Esra Sen's 'Patient Washing System' (2014) and Yeliz Dogan Merih's 'Wearable Serum Hanger' (Merih, 2018; Ozbey, 2018).

In 2009, while Jamie Rutherford was responsible nurse of the renal transplantation unit, she developed a filtration plasma exchange device for dialysis patients, which is accelerating more the dialysis process (Herdman, 2009). Designed and programmed in collaboration with the Boston Medical School and Northeastern University in the United States, the virtual clinical nurse has been very successful in collecting and providing information to patients (Abbott, 2016). Again, In the United States, the academic nurse of Philadelphia Pennsylvania University Assoc. Dr. Martha A. Curley has developed the 'Intensive Care Synergy Model with a donation of \$ 15 million and with the support of the American Society of Intensive Care Nurses. This model is being used in many magnet hospitals and school curricula throughout the country (Herdman, 2009). Another non-technological innovative achievement is the Program Orientation Program developed by Chan and colleagues with a multidisciplinary structure (nurse, psychologist, social worker, other support specialists). This 90-minute program facilitates compliance and participation in patients (Herdman, 2009). Ruggiero and colleagues who realized that the return to hospitals increased due to incorrect or incomplete medical treatment of patients after discharge, developed a protocol in 2015 that reduced the use of wrong medication and regulated the medical follow-up of patients after discharge. Thanks to this protocol, they have managed to avoid the problem (Kartal, 2018). A high level of urinary infection can be seen in patients with a permanent catheter, which increases the length of hospital stay. In 2012, Adams and her colleagues developed a protocol called HOUDINI. HOUDINI is named after the initials of health problems such as hematuria, stenosis, urinary surgery, decubitus ulcer, end-of-life care, and immobility where the catheter is indicated. With this protocol, only cases where the permanent catheter is indicated are identified and thus, the situations in which the urinary catheter is inserted are reduced and the urinary infection problems caused by this condition are prevented (Kartal, 2018). Another problem with the permanent catheter is that the patients get away from people and socially isolate themselves because of this catheter. Ya-Lie Ku and colleagues from Fooyin University in Taiwan, looking for a solution to this problem, have developed a specially designed trouser with legs. The leg area of the trousers can be opened with a zipper and a permanent catheter can be fixed in it. In this way, the permanent catheters of the patients do not appear from the outside and shame is tried to be prevented. At the same time, thanks to the product design, patients cannot raise the catheter above the bladder level. Thus, reflux was prevented (Ku et al, 2017).

### **FACTORS AFFECTING THE INNOVATIVE ATTITUDES OF NURSES**

Nowadays, health care nurses are expected to be intertwined with technology, think critically, identify problems and become leaders. It is necessary for the nurses to recognize the points that are missing or need to be developed in the system for care applications and to approach these points in an innovative way and to develop individual innovation features (Erol, 2018). Yuan and Woodman described individual innovation as the development and implementation of an existing innovation (Yuan, 2010). According to Kilicer; It is defined as an individual should be willing to innovation, adopt and have a



positive perspective towards innovation and be able to use and benefit from it (Kilicer, 2010; Ozpulat, 2018).

In a study conducted by Ozpulat and Karakuzu in 2018 with 200 health workers, the factors affecting the innovative behaviors of hospital employees were examined. According to this study, 30.1% of the participants answered yes to the question 'Is there an innovation in your professional practices?' and this innovation was found to be mostly technological innovations. In the same study, 58.5% of the respondents stated that management support is very important when it is considered that the effective factors in developing the innovative behaviors determined. According to the participants, workload was found to be very important in innovation and innovative thinking (Ozpulat, 2018).

It has been stated that reducing the feeling of burnout in hospitals and other healthcare institutions, directing and supporting managers to innovation, increasing personal development programs, equipping employees with up-to-date information, and providing more innovative activities both within and outside the organization (Derin, 2012). According to a survey conducted by Iscan and Karacabey in 2007 with other occupational groups, increasing workload has been found to reduce innovation support (Iscan, 2007). In Akkoc and colleagues' study, conducted with 426 people in 2011, it was found that the support of a manager is very important in innovation and innovative thinking and gained a significant positivity. According to a study conducted by Sonmez and Yildirim in 2014 with nurses, autonomy was found to be an important factor in innovative thinking and orientation towards innovation. In the same study, other factors affecting the innovative behaviors of nurses were; it has been found that the high quality of education increases individual behaviors in individual factors and the freedom to make individual decisions in professional factors (Yildirim, 2014). When the researches are examined, it is determined that the most important factors affecting innovative attitudes are executive support and increased workload (Derin, 2012; Yildirim, 2014).

There is an opinion in the literature that nurses are successful in diagnosing problems and being creative (Gillmartin, 1999). In a study conducted by Kerler-Baumann on the creativity scale in 2011, it was found that nurses scored higher and were more prone to innovation (Kerler Baumann, 2011).

In order to follow innovations, identify changing or differentiating needs and initiate changes, executive nurses need to have innovative thinking skills, risk taking, perceiving problems, creative and entrepreneurial characteristics (Kalkan, 2010). In a study conducted by Yilmaz and colleagues, in 2014, risk taking and innovative behaviors of executive nurses were studied. According to the results of the research, it is determined that health care managers are innovative and risk-taking individuals; risk taking capacity increased with the age. In a similar study by Dobre and colleagues, a significant relationship was found between innovation and educational level and professional position (Dobre, 2009). According to a study conducted by Basim and Sesen in 2009, nurses' risk taking and innovation levels were also good (Basim, 2009; Yilmaz, 2014). Health care managers, who play a major role in shaping nurses' innovative attitudes, should be innovative and able to take risks. These skills are important in terms of increasing their personal and professional competencies and professional strength (Yilmaz, 2014).

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## CONCLUSION

Innovation and innovative achievements are the dynamic processes that contribute to increasing the quality of patient care to the national economy. Innovative initiatives to increase productivity and reduce costs in healthcare institutions have increased in recent years. It was found that nurses who spend more time with patients in health sciences are more susceptible to innovation. The adaptation of nurses to the innovation process and their attitudes towards this adaptation is very important for the development of an innovative culture whether their attitudes are motivated or not. In our study, it was emphasized that nurses with an innovation culture should have a risk-taking and entrepreneurial structure.

The increase in the number of individuals receiving health care in recent years, global competition, the development of technology and science and the expectations of patients or individuals who apply to institutions for health services as a result of the increase in hospitals and health institutions paves the way for innovation. It was determined that nurses' innovative attitudes should be supported by managers in order to meet patient needs and increase the quality of care. It was emphasized that nurses supported and guided by managers were more successful in innovation. The lack of executive support and increasing workload are the factors that negatively affect the nurses' innovative attitudes.

As a result, nurses' participation in innovation and their innovative attitudes; is dependent on the features such as; manager's attitude, workload, quality of education and risk taking, entrepreneurship. In order to direct nurses to innovation and to develop their innovative attitudes positively, nurses should be supported in terms of increasing in-association education, reducing the workload, having administrative support and supporting the transformation of the innovative element to commercial products. The rewarding of the products / projects by the managers will be an incentive. In our study, it is recommended that more research can be made on the factors that affect the nurses' innovative attitudes.

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