Reflections of Innovative Approaches on Psychiatric Nursing

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ABSTRACT

Due to the change and increase in the types of diseases, the increase in the expectations of the society and technological developments, new needs have emerged in the field of health as well as in the cultural, social and educational fields of individuals, and these needs have made change and innovations necessary.The word innovation is derived from the Latin root "Innovare" and means "to do something new and different".Although innovative practices in nursing have a long history, they have begun to develop rapidly in our country, especially in recent years.The roles of mental health psychiatric nurses are changing along with socioeconomic conditions, political processes and technological developments and require innovation in order tointeract with patients.Telepsychiatry applications are among the most innovative methods used by mental health and psychiatric nursesin psychiatric practices, while sensor technologies, online therapy, remote video examination and applications are other methods used.The rapid development of technology and the changing living conditions have made it necessary to make innovations in the health services provided. Nurses who provide uninterrupted service to patients must follow innovations and integrate the innovation process into their own work units in order to be efficient in providing health services and to achieve the expected results.To all mental health and psychiatric nurses ıt is recommended that they be encouraged toadopt innovative approaches and actively use them in order to improve their qualityof life and toprovide better quality care.This review was conducted to examine the reflections of innovative approaches on psychiatric nursing.

1. INTRODUCTION

Due to the change and increase in the types of diseases, the increase in the expectations of the society and technological developments, new needs have emerged in the field of health as well as in the cultural, social and educational fields of individuals, and these needs have made change and innovations necessary. In line with all these needs, the concept of innovation has emerged and has become a more important concept over time. The word innovation is derived from the Latin root "Innovare" and means "to do something new and different [1]. Innovation, as a concept, refers to both a process (renewal) and a result (innovation) [2]. The meanings of innovation are not limited to technology alone, but also include innovations in individual, managerial, production and marketing areas [3]. Innovation, is the research, discovery, testing, development, monitoring and adoption of new products by developing the old or presenting a new idea to create the new. As a result of innovation, science and technology are renewed in a way that provides economic and social benefit, an invention is introduced, and a different situation is experienced [4].

The concept of innovation is becoming increasingly important in every aspect of life, and nurses, who play important roles in protecting and improving health, must fall into step with innovative developments in order to achieve effective and desired results in their service delivery. Innovation is vital to improving and maintaining quality in nursing care [1]. Innovation in nursing, a professional profession, has existed not only today but also since the existence of nursing. Florence Nightingale, the founder of modern nursing, demonstrated in the 1800s that

puerperal fever, which occurs in women after birth, is related to the environment and that it can be prevented by regulating the environment, which is one of the first examples of innovation in nursing [5]. Florence Nightingale emphasized the necessity and inevitability of change in the 19th century by saying, "A more livable world; such a world will not be granted to us, so let us work to create this world without pause. We must change life instead of conforming to it."[6]. Although innovative practices in nursing have a long history, they have begun to develop rapidly in our country, especially in recent years.

The first studies on innovation in nursing in our country were conducted by Perihan Velioğlu one of the nursing leaders. The has made significant innovations in nursing, such as the use of green operating room textiles, the need for higher education in nursing, and emphasizing the importance of teamwork in nursing. Developed by Nurse Özlem Oktay in 2006, "Stomakit" is the first innovative product developed in nursing [5]. In order to adapt to change in the rapidly developing age of information and technology and to keep up with global competition in a shrinking world, it has become compulsory for nurses and executive nurses to constantly renew themselves and make innovation a behavior. Innovation in nursing includes applications that enable the development of new ideas, methods and tools to meet patient needs, reduce service costs and increase efficiency in nursing. Innovative applications shorten the length of hospital stay, ensure that patients experience less pain, and ensure that patients have a comfortable recovery period during their hospital stay [6].

The roles of mental health psychiatric nurses are changing along with socioeconomic conditions, political processes and technological developments and require innovation in order tointeract with patients. In line with today's conditions, the use of innovation can make social and business life easier for both psychiatric nurses and psychiatric patients and their relatives, and appropriate in the face of the situationcommunication or interventions can be determined by recognizing exacerbations and precursor symptoms at an early stage [3].

2. INNOVATIVE APPROACHES ON PSYCHIATRIC NURSING

It is reported that the implementation of nurses' innovative thinking and development processes in an integrated manner with the clinic will bring positive results such as providing quality care, early diagnosis of diseases, determining and preventing risk factors, reducing hospital returns and improving patient outcome [5].Psychiatric nursing plays an active role not only in the individual but also in the development of mental health of the individual's family and society, in preventing mental illness and related problems, in coping with illness and, when necessary, in finding meaning in the lives of individuals [3].The roles of psychiatric nursing are constantly changing and developing in line with the rapid changes parallel to the rapid changes in medicine and technology, in line with the fields of practice and the needs of society [7].Today, the frequency of mental disorders is increasing, and individuals with mental disorders may experience problems such as not being able to access treatment and not being able to follow up during follow-up processes due to problems such as social phobia, stigmatization, and lack of information [8]. New care models are compulsory to address these issues that arise in the care of individuals with mental illness. In this context, the use of innovation can enable mental health and disease nurses to easily apply all their skills. With the use of innovation, community-based mental health services are also increasing.

When we look at the innovation studies in the field of mental health, health services are provided electronically over the internet through various devices with different features, including mobile phones. Thus can greatly increase access to mental health and treatment by allowing services to be provided more flexibly and adapted to individual patient needs. Sensor technology, online therapy and remote video examinations and applications (apps) are emerging as alternative and effective force for patient participation. Innovative developments offer real opportunities to create new approaches to both assessment and intervention for mental health problems [3]. Telepsychiatry applications are at the forefront of innovative methods used by mental health and psychiatric nurses in psychiatric practices. Telepsychiatry applications are an approach that facilitates access to mental health care, especially for individuals living in isolation, and reduces gaps in their treatment. Telehealth services for serious mental illnesses are used to provide disease self-management and relapse prevention, encourage medication adherence and treatment, provide psychoeducation, and monitor symptoms for the purpose of [9].Telepsychiatry applications reduce costs for both doctors and nurses working in the hospital and patients receiving treatment, enable them to use their time more effectively, and talks can be held whenever appropriate without time constraints [3].Telepsychiatry encompasses

communication systems that connect via video conferencing telephone, Internet devices, and home telehealth phones. In addition, two-way, real-time, interactive, and video-based services are used over the Internet to provide psychiatric Care [8].

Videoconferencing is one of the commonly used methods in telepsychiatry, and mental health and psychiatric nurses can monitor their remote patients with secure video and audio streaming systems and provide clinical mental care remotely [3]. There are studies in the literature showing that telepsychiatry applications are effective in attention deficit and hyperactivity disorder, depression, dementia, schizophrenia, suicide prevention, post-traumatic stress disorder, panic disorder, substance addiction, eating disorders and smoking prevention. In a study examining tele nursing applications in the care of patients diagnosed with schizophrenia, it was determined that the Telephone Intervention Problem Solving (TIPS) application extended the time schizophrenia patients spent in the community, reduced the number of days spent in the hospital after each hospitalization and the number of re-hospitalization applications. It was also concluded that it increased compliance with psychiatric medications and social functioning, reduced the level of psychiatric symptoms after discharge, and that face-to-face interviews with the intervention method improved the verbal communication skills of the patients [10].

In a study conducted with individuals experiencing depression and substance use problems, it was determined that a tele-nursing-based program increased participation in psychiatric treatment [11]. Tele-psychiatry applications are one of the most effective tools for providing quality psychiatric care and services [8]. Another innovative method used by mental health and psychiatric nurses in their practice is sensor technologies. Since it emerged their inception, sensor technologies have significantly improved healthcare services [12] A sensor device is a device that detects changes in the environment and obtains data by sending these changes to electronic devices such as computers. Sensors consist of a molecular recognition system (receptor), a physicochemical transducer, and a signal processor [13]. Sensors have been successfully integrated with smartphones, smart wearable devices, and the Internet of medical things (IoMT) with the necessary capabilities to remotely capture and process health data [14]. Health data such as heart rate, blood sugar level, stress rate, oxygen saturation rate, temperature, weight, and blood pressure are usually captured by sensory smart devices and transmitted as electrical impulses for further processing [12]. Wearable sensors have become popular in recent years for monitoring and managing mental health. These devices allow patients to be monitored and assessed in real-time and in an unobtrusive manner. Wearable sensors monitor physiological parameters related to mental health, such as heart rate and breathing patterns, and behavioral parameters, such as sleep quality, physical activity, and social interactions, and can provide important information about an individual's mental health. For example, changes in heart rate may indicate stress or anxiety, and changes in sleep patterns or social interactions may indicate depression or anxiety. Wearable sensors can also be used to implement individualized interventions based on the data they collect [15]. A in the study made using Psymate, a "personal digital assistant"-based system for mood assessment, found that personalized feedback interventions helped patients improve their depressive symptoms and prevent maladaptive behaviors that could worsen their mood, wearable devices suggesting that providing such feedback via would have similar effects [16]. It has been shown that if patients are given frequent notifications about their mood, this can help them manage their own depression. Wearable sensors can also be used to improve applications such as therapy or medication by providing up-to-date data that can help inform treatment decisions [15]. When the receptor in the sensor is a biological component, the device is called a "biosensor" [17]. Biosensors are frequently used in therapeutic psychotherapy, allowing the prevention and early diagnosis of diseases related to human health, as well as preventing or minimizing relapses and hospitalizations. Wearable biosensors (WBSs) are a rapidly growing healthcare technology sector that provide bidirectional feedback between mental health and psychiatric nurses and patients. Wearable biosensors (WBSs) are devices that can be attached to the human body in the form of wearable systems or devices such as smart shirts, smart watches, thin bandages, shoes, socks, gloves, glasses, clothing, implants, smart helmets, etc. There are many applications in the literature where wearable biosensors are used. One of the wearable biosensor applications is the tiny sensors, in digital clothing that examine mental states, they can be placed inside the clothing and measure vital sings. The collected data is sent to a database via a mobile phone. Here, the appropriate response is sent, taking into account the current situation and general benefit. Theclothing has a screenequipped with light-emitting diode (LED) lamps that respond according to these expressions

when people are upset or panicking. In a wearable biosensor application that treats depression using a helmet, Danish researchers have developed a helmet that provides comfort to patients by sending mild electrical pulses to the brain to activate parts of the body related to depression. These electrical pulsesmimic the body's therapeutic process of creating new blood vessels in the blood vessels. According to researchers at the University of Copenhagen, these electrical pulses relieved depression symptoms in many patients after seven days and showed excellent results in depression test [18].These smart helmets could be developed as new treatment method for various diseases such as post-traumatic stress disorder (PTSD) that live far from healthcare [19]. In an application performed at home using light therapy glasses has shown that 60 minutes of light therapy every morning can improve depressive symptoms. If this technology can be implemented in regular glasses with light sensors that monitor patients' daily light exposure, daily use could help monitor and treat depression [20]. Canadian researchers have designed a T-shirt with sensors that can measure stress levels and sleep patterns, sending data to a smartphone and then to an online account. The device measures activity and stress levels throughout the day. The device measures activity and stress levels throughout the day [18]. The potential for wearable biosensor applications to improve mental health outcomes is significant. According to the World Health Organization (WHO), interest in such applications will increase due to the increasing prevalence of anxiety and depression [15].

One of the innovative methods used by mental health and psychiatric nurses in their practices is Smartphone Health Applications (applications). With the increasing health literacy, smart applications within the scope of mobile health applications have become an important part of healthy life. Smartphone health applications are used to improve the health outcomes of the individual and to live a healthy life [21]. The fast development and use of smartphone applications related to health offers an alternative and supportive option in reducing the symptoms of mental illness [22]. Smartphone health applications facilitate the provision of quality services in situations where access to basic mental health services is difficult, the number of staff is low, the number of beds is insufficient, and the cost of health services is increasing [23]. Such applications generally include therapy components such as psychoeducation, conscious awareness, behavioral activation, and meditation [22]. It is argued that health-related smartphone applications have the potential to become an important part of the health system by making mental health services more accessible and reducing barriers to help-seeking behavior [24]. The use of smartphone health applications in mental health and psychiatric nursing care services is often in the form of assessing the patient's care needs, planning and implementing interventions for the patient, making recommendations, assigning homework, and providing follow-up [25]. Applications provide the opportunity to quickly access detailed patient data and spend more time with patients; they can increase the quality of mental health nursing care by facilitating individual care, treatment and follow-up management. On the other hand, applications presents opportunities such as providing patients with skills training, developing awareness and social skills, providing social support, and improving symptom monitoring and management skills. In addition, smartphone health applications facilitate access to mental health care for patients who live alone or cannot come to the institution due to their limitations, allowing individuals to receive services in any environment without feeling stigmatized [26]. In this respect, it is stated that its use in the field of community mental health services is important [27]. There are many examples of smartphone health applications in the literature that have been proven to be effective and used by psychiatric nurses in their practices.

The "Depression CBT Self-Help Guide" application, which has features such as screening tests for depression symptoms and stress management breathing exercises designed for, concentration, motivation, awareness training, and cognitive diary keeping, and is recommended for use with AppScript (a system that evaluates the reliability and functionality of M-Health applications by users and experts), [22] the "Conemo" application, which has features such as recognizing for chronic diseases depressive symptoms for, providing reminder notifications to patients about their activities and nurse appointments, and requesting help from a nurse, [28] the game-based "Project: Evo" application for providing cognitive control, [29] the "IPST" application based on problem-solving therapy, [30] the "Oiva" application, which is also stated by nurses to be suitable, reliable, and applicable for use in the prevention and treatment of depression and other mental problems, [31] and the "Priori" application for mood detection in bipolar disorder are examples of smartphone health applications for mood disorders [32].To provide gain self-management skills, The "Oiva" application, designed based on acceptance and commitment

therapy [31] the "Sam" application, which helps panic attack patients manage daily functions and symptoms through education, [33] the "Stress Free" application, which includes relaxation techniques, and the "Agoraphobia Free" application for agoraphobia are some of the examples of smartphone health applications for anxiety disorders and stress management [34].The "SBIRT" application, which has proven effects on knowledge, skills and motivation, such as screening, brief intervention and referral to treatment to prevent alcohol and substance use, [35] and the "SAMSHA" application for substance abuse and mental health services management are among the applications for alcohol and substance use [32]. Applications such as "Clintouch", "Actissist", "Focus", "Mindframe", "Wellwave", and "PsyLOG" are used for psychotic disorder [22].

In addition, the "Peerfit" application, which has been found to be highly effective, clinically useful and usable, which provides weight control, [36] the "Wellwave" application, which includes planning and evaluation forms and medication reminders, [37] the "Prime" application on social functioning, [38] the "Mindframe" application for motivation, [39] the "PsyLOG" application designed for monitoring side effects related to antipsychotic use and psychoeducation are among the smartphone health applications for psychotic disorders. [26] The PeCoach application, one of the smartphone health application examples for post-traumatic stress disorder (PTSD), is an example of an application that allows individuals with PTSD symptoms to normalize their symptoms, evaluate their symptoms without being labeled, and increase their self-awareness [40]. In Turkey, smartphone health applications have started to be actively used in the field of mental health with the Covid-19 pandemic; the "Mental Health Support System" application has been developed to provide psychological support to healthcare professionals and their families. In addition, the "Special Children Support System" application has been developed to provide psychological support to children with special needs such as autism and their families. With the application, children with increasing behavioral problems and their families are provided with 24/7 support based on applied behavioral analysis by mental health workers [26].

2. CONCLUSION

The rapid development of technology and the changing living conditions have made it necessary to make innovations in the health services provided [3]. Nurses who provide uninterrupted service to patients must follow innovations and integrate the innovation process into their own work units in order to be efficient in providing health services and to achieve the expected results. Developing innovative practices and increasing studies in this field are necessary to reduce the burden of mental illness, increase the effectiveness of treatment and care practices, and effectively use the increasing need for healthcare personnel [8]. To all mental health and psychiatric nurses ıt is recommended that they be encouraged toadopt innovative approaches and actively use them in order to improve their qualityof life and toprovide better quality care [3].

Conflict of Interest

No conflict of interest is declared by tehe authors. In addition, no financial support was received.

Author Contributions

Study Design, GA, DG; Data Collection, GA; Manuscript Preparation, GA, DG; Literature Search, GA. All authors have read and agreed to the published version of the manuscript.

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