

Review Article

Occupational Health Nursing and Pioneer Leaders from Past to Present

Sevcan Topcu, PhD

Research Assistant, Ege University Faculty of Nursing, Public Health Nursing Department, Izmir, Turkey

Melek Ardahan, PhD

Professor, Izmir Katip Çelebi University Faculty of Health Sciences, Administration Nursing Department, Izmir, Turkey

Correspondence: Sevcan Topcu, Adress: Ege University, Nursing Faculty. 35030, Izmir-Turkey E-mail: sevcan.topcu@hotmail.com E-mail: sevcan.topcu@hotmail.com

Abstract

Occupational health which covers medicine, nursing, toxicology, industrial hygiene, epidemiology, social and behavioral sciences, environmental health and ergonomics, is a multidisciplinary field of application. When evaluated in the historical process, occupational health nursing has progressed in parallel with the developments in occupational health. Occupational health nursing, which was called as industrial nursing in the early periods, was born from public health nursing and for this reason, it is a nursing specialization which is more based on protection. The aim of this review is to evaluate the beginning and development process of occupational health nursing together with the leaders who lead this process.

Key Words: occupational health nursing, history, leaders

History of occupational health

Humans had to work to fulfill their basic needs since the first day of their existence (Güler, Akın, 2015). At early times, while supply of food and shelter, hunting and fishery had comprised the fundamental working areas, other working areas such as cultivation, stockbreeding and mining started to emerge in time through utilization of various equipments (Güler, Akın, 2015). In today's context, the concept of work was first started with mining (Güler, Akın, 2015). Emergence of occupations-related diseases has been investigated for centuries and first, being exposed to mining-related risks, was detected to be resulted in a number of diseases (Mellish, 1980; Institute of Medicine, 2000).

Agricola, one of the scientists of that period, has called the pulmonary diseases that are frequently seen in those working in mines as "The Miner Diseases" and recommended them to cover their mouths and noses and to ventilate the galleries in order to get protected from diseases (Bilir, Yıldız, 2004). Ramazzini (1633-1714), today he is known as the founder of occupational health, has

developed a systematical approach on workers' health problems and proposed asking their occupation (Mark &Kohn, 2014).

Percival Pott (1775) established that Scrotum cancer develops in Chimney sweepers due to soot and coal-tar. This finding has led both enacting law related to chimney sweepers and causing employers to get interested in employers' health more. Historically, in 18th and 19th centuries where remarkable developments have experienced in technology and industrial revolution, dangers related to health and safety, have started to increase gradually. Invention of mechanical textile machineries, casting furnaces and steam engines, has caused an increase in the need for man-power and production whereas has led establishment of a new and more dangerous working environment. People have started to be exposed to a number of stimuli such as smoke, toxic vapor, noise and heat. Through participation of women and children into workforce, problems related to health and safety increased. Longer working hours and unsanitary conditions caused injuries and infectious diseases

outbreak. Consequently, advances in technology and industrialization have led to many new occupational health problems and safety hazards instead of a more healthy and safe environment (Mark & Kohn, 2014). Because the deaths occurred due to infectious diseases and accidents have drawn public's attention in England, a legal regulation (Health and Moral of Apprentices Act) related to working life was made in 1802. These developments that occurred in England at the beginning continued in Europe and America in subsequent years (Bilir, Yıldız, 2004). At the same time "The Occupational Health Nursing" has improved and developed in parallel with the advances in the occupational health area (Mellish, 1980, Thornbory, 2009; Cahall, 1981).

From industrial nursing to occupational health nursing

When it was evaluated historically, "The Occupational Health Nursing" which progressed very slowly and was called as "Industrial Nursing" in early periods, is a field of specialization that originated from the public health nursing. Therefore, it was rather focused on protection (Parker-Conrad, 2002). It was first raised in England as the initiation of "Industrial Nursing". In city of Norwich, England Philippa Flowerday was hired by J&J Colman Co. in 1878. Flowerday who received one-year nursing education in Norfolk and Norwich Hospitals, started to work with a wage of 26 shillings-weekly to visit sick employees at home and to help "workplace Dispensaries" when she was 32 years old (Markolf, 1995). She has become doctor assistant by working in dispensary of the factory. Every afternoon, she filled her basket with the foods taken from the kitchen, visited the sick employees at their houses and provided training employees' families. Flowerday has achieved to put enough emphasis on the connection between factory and home, even not being put today. When she working at the factory she also evaluated the appropriateness of the employee outfits and the hazards they created. She found Crinolines that were the trend of that period, inappropriate for the factory and determined that walking around or working between electrical weaving looms would be very dangerous, almost impossible. At the mills outside the factory she noticed the importance of using personal protective outfit (American Journal of Public Health, 1945).

In the history of "The Occupational Health Nursing" highly important but less famous another nurse is Betty Moulder. The beginning of occupational health nursing in USA is considered the employment of Betty Moulder by coal-miners group in 1888 to care employees and their families. Very little is known about Moulder's duty, background and nursing skills, except the education she received in Philadelphia Blockley Hospital. Even, in many resources there is more information about Ada Mayo Stewart as the first industrial nurse (Ross, 1995; Stanhope & Lancaster, 2015).

Chaplain William H. (Rear Admiral) and Roline Mayo Stewart's daughter Ada Mayo Stewart is one of the four sisters graduated from Nursing School. She hired by Vermont Marble Co. in 1895 to provide care for employees and their relatives. Subsequently, when she was 24 years old she was appointed by president of the company to Vermont village where company employees resided as a "Local Nurse" (Markolf, 1995). Her duty was to concentrate on health and protection not the care of casualties, so she performed home visits and took care of pregnant women and individuals with hypoid fever and also provided training for school children. She failed to keep record for the activities carried out in first year, but the records available for two years (1896-1898) obviously demonstrate how she has been successful. During her working period when the medical events in factory were evaluated the obstetrical and medical events peaked whereas surgical events decreased (Ross, 1995; Stanhope & Lancaster, 2015). In the first year of Stewart in Vermont Marble Co. her sister Marriet was assigned to visit sick employees and their families residing in Vermont Village located at Western and Central Rutland (Haag, 1992). Free nursing services were provided to the families of company employees and other families unable to pay by local nurses. Stewart usually has worn the uniform of Waltham School where she graduated and a plain coat and a hat while providing nursing services. She generally used bicycle to visit families but sometimes she drove the horse and wagon provided by the company. Her salary was paid sometimes monthly, sometimes just to cover the expenses. She earned 900\$ in first year and 1000\$ in second year. During dispensary periods she cared for casualties but during home visits when she noticed an unreported disease or accident she cared for the patient and reported the situation to

the company and doctor. She had a two-year surgery and dispensary experience before she had entered into Waltham Training School (Massachusetts) where she had graduated in 1894. Therefore, in her second year in Vermont Marble Co., when company has founded a hospital, she become the first Head Nurse. In the field of occupational health nursing, the first person known as primary case manager is again Ada Mayo Stewart (Ross, 1995; Stanhope & Lancaster, 2015).

Through the acceptance of the health services provided in workplace lead to productive workforce, worker health services has started to grow up rapidly from the beginning of 1900s and occupational health nurses were hired in factories (Stanhope, Lancaster, 2012). Nurses were started to be hired by factories in order to prevent the spread of infectious diseases such as tuberculosis and to solve the problems related to health resulted from workforce shortage during World War I (AAOHN, 2009). During this period nurses started to work in large stores, hotels and insurance companies. This situation caused alterations in duties and responsibilities of industrial nurses. During early periods when industrial nursing has emerged, while nurses were expected to protect the health of community, employees and their families and to provide health training, but in this period they are expected to provide healthcare to injured employees in factory, to assist doctors within clinics and to visit sick or injured employees at their houses. Duties of an industrial nurse have been described as follows; to follow small injuries, to recommend corrective measures before employment, in case of necessity to handle small accidents at home, to organize health trainings, to inspect menus at the dining hall and to plan activities (such as picnics, stitchery, choruses etc.) for employees (Mattingly, 1978). So, along with growing and developing industry, occupational health nursing started to develop as well (AAOHN, 2009).

Industrial nursing has grown up very rapidly in the first part of 20th century. Training courses were organized for the first time in this period by professional organizations (Stanhope, Lancaster, 2012). The books "Occupational health nursing" and "Industrial nursing" written by Florence Swift Wright were published in 1919 (Wright, 1919). In the second book, industrial nursing's development, characteristics and the responsibilities to employees and society are

explained. Also followings were included; first aid nursing which is considered one of the fundamental duties of the industrial nurses, characteristics of the first aid room, materials should be available in first aid room and industrial nurse's duties as visiting nurse and information related to daily activities (Wright, 1919).

"American Industrial Nurses Association" was founded in 1942, to develop application and training of industrial nursing, to increase cooperation between disciplines and to be the occupational representative of industrial health nurses (Brown, 1988). Association replaced the term "industrial nurse" with "occupational health nurse" to reflect their larger application field in 1977 and also it changed its title into "American Association of Occupational Health Nurses (AAOHN)". Until 1960s occupational health nursing has not been separated from nursing as a specialty but when the diseases and accidents that employees experienced due to being exposed to dangers in workplace and working conditions, turned into a social problem, need for a specialty called occupational health nursing recognized. Upon this requirement, AAOHN established a committee to investigate and to determine the certification route for occupational health nursing. In the directions of this committee "American Board of Occupational Health Nursing" which was a certification organization was established in 1971. Thus, first time in history the occupational health nursing certification program has been initiated by "American Board of Occupational Health Nurses (ABOHN)" in 1972 (Stanhope & Lancaster, 2015). During these periods occupational health nursing continued to develop depending on knowledge and skills of public health nursing (Felton, 1985).

The need for occupational health nursing started to increase along with the laws enacted to protect employees' health and safety. Along with Occupational Safety and Health Administration (OSHA) that focuses on protection of employees from job-related hazards and establishment of The National Institute for Occupational Safety and Health (NIOSH) in 1970, the need for occupational health nurses in meeting recommended standards, even further increased. The first occupational health nurse was hired by OSHA in 1988 to give technical support, provide field consultancy and specialty of occupational health nursing and then an Occupational Health

Nursing Office was established within OSHA in 1993. AAOHN adopted the environmental health concept in 1998, as an important component of occupational health nurses' application areas and as such, the statement of "occupational and environmental health nurse" started being used in all publications (Stanhope, Lancaster, 2012). For the first time, standards that formed the present basis of "occupational and environmental health nursing" were developed and published by AAOHN in 1999 (Stanhope, Lancaster, 2012).

Conclusion

Today, occupational health practices in developed countries have gone into great change by affecting from scientific, technologic and social developments and consequently, nurses' roles and place in the protection and improvement of employee health were accepted (Esin, 2016). Occupational health nurses take place within "individually coordinated care center" by collaborating with employees, employers, members of the occupational health and safety team and other professionals in order to identify health and safety requirements. Their fundamental responsibilities can be defined as follows; developing a safe and healthy workforce and job environment; identifying the hazards and health problems within job environment; establishing new health and safety programs; forming initiatives that will reduce risks and hazards, ensuring the appropriateness of health and safety programs to laws and regulations and assessing the health status of employing (Rogers, 1998). But according to AAOHN their responsibilities are; case management, consultancy and crisis response operation, improving health and reducing risk, compliance with laws and regulations and detecting hazard for employees and workplaces (AAOHN, 2018).

The specialty of occupational health nursing that started employment of Phillippa Flowerday 140 years ago and emerged from public health nursing is a special field of application that focuses on protection, improvement and restoration of health within a safe and healthy occupational health environment; and prevention of negative effects of occupational and environmental risks on health. Although occupational health nursing is known and applied for a long time, it has completed its standards as a profession within last 30-40 years. In order to have more voice in health system, occupational health nurses should use their knowledge and

experience and try to have voice on all political and legal initiatives concerning employees, workplaces and communities without getting away from their present roles.

Occupational health nursing courses must be integrated into the curriculum of undergraduate programs. Occupational health nurses must base their occupational health and safety programs and initiatives on evidence-based applications and make occupational health nursing visible by evaluating the effects of their initiatives on health and safety.

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