



An Overview of Prescription in the Nursing

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Abstract

Introduction: The role which nurses are playing in medication management is seriously changing over time. Nurses are authorized to prescribe medications in an ever-increasing number of countries. The main objective of the present review study is to introduce nurse prescribing as well as different types of prescriptions and their corresponding advantages, disadvantages, and barriers in the leading countries of nursing.

Methods: The present study was performed by searching over the articles in information databases such as “PubMed”, “Google Scholar”, “Embase”, “Proquest”, “Ovid”, “Web of Science” and “Science Direct” using the English keywords such as “independent prescribing”, “supplementary nurse prescribing” and “prescribing”. As a result, 250 relevant papers were collected, out of which 38 ones were used in the present study.

Results: The results of searching the sources and articles related to nurse prescribing were presented as the definition of nurse prescribing as well as different types of prescribing and their advantages and obstacles in the leading countries in nurse medication prescribing.

Conclusions: Although there are many advantages for nurse prescribing such as cost-effectiveness of this method, the official prescribing by nurses is not authorized in many Asian countries such as Iran. Considering the positive role of nurse prescribing in the nursing professional improvement and the patient's satisfaction, it is also hoped to be applied in all countries.

INTRODUCTION

Having access to suitable healthcare services and medications is among the main elements in the strategies followed by countries toward the social health of their communities [1]. Some countries authorize their nurses to prescribe medications as a part of their national strategies for improving healthcare services [2]. The role played by nurses in medication management of patients have been seriously changed over time [3] and considered as one of liberty and flexibility approaches in health system management [4]. In the past, medication prescription was among the authorities of medicines [5] and the task was constantly a challenging issue for nurses [6].

Historically, nurse prescribing initiated in 1965 in America [7], followed by countries such as Britain, Canada, New Zealand, Australia, and Sweden (by the

order of their appearance). The number of countries with authorized prescribing nurses is increasing [8] especially in developed countries [9]. Presently, nurses are authorized to prescribe medications in countries such as Israel, the United States, Canada, and Netherlands [10]. But, no official evidence exists about the authorized nurse prescribing in Asian countries, which might be due to either inaccessibility to the published reports or the particular healthcare, cultural, economic, political, and social conditions of these countries [11]. Although prescription in nursing is a rather new phenomenon in the world, it is expanding increasingly because of its benefits, including more appropriate prescribing of medication, improved relations and communication with patients and cost effectiveness [12]. However, few studies in this area

have been carried out in Iran. So Nurses' information in this regard is low. Hence, the researchers decided to conduct this study with a view to review nursing prescription with the aim of helping to increase the knowledge of nurses and Creating Opportunities for the Development of Nurses' Pharmaceutical Responsibilities in Iran.

METHODS

The present review study was performed by searching over the articles in information databases such as "PubMed", "Google Scholar", "Embase", "Proquest", "Ovid", "Web of science", "Science Direct" and WHO website using the English keywords such as "independent prescribing", "supplementary prescribing nurse" and "prescribing". Articles were searched in the period 2000 to 2016. The inclusion criterion for choosing the articles was their relevance to nurse prescribing. Hence, materials related to medicine or other non-nursing courses were excluded. First, all titles and abstracts of the chosen files were examined and the irrelevant topics were removed. Next, all the manuscript of all selected files were included in the study. As a result, 250 relevant articles were selected and, after deleting the duplicate files and selecting more authentic review papers, 38 of them that have inclusion criteria were used in the final work. Inclusion criteria was peer reviewed articles from 2000-2016, English language and focus on prescription.

RESULTS

As mentioned earlier, the present study was performed to review nursing prescription. The results of the search for articles related to nursing prescription have been presented below in the form of Definitions of nursing prescribing, Types of nurse prescribing Skills required for prescribing, Effects of prescribing on nurses and patients, Barriers of prescribing in Iran and A review on nurse prescribing in some leading countries.

Definitions of Nursing Prescribing

There are several definitions about nursing prescribing such as: Nurses after attaining an advanced qualification in prescribing, are legally permitted to prescribe medicines, dressings and appliances [13], Nurse Prescribers would be able to prescribe some licensed medicine and some specified controlled drugs for specified medical conditions [14]. Although different definitions have been proposed for nurse prescribing so far, the most comprehensive one in this regard was proposed by the Oregon State Board of Nursing Administrative Rules: "Prescription is a set of procedures about medication treatment or medication preparation for human uses. These procedures are for an individual guide for selection, preparation, and use

of medications supplied in oral or written forms or both" [15].

Different Types of Nurse Prescribing

- Independent prescribing: In this prescribing, the nurses themselves examine the patients and recognize their illness and issue a prescription for their medications and illness. Through this procedure, the nurses themselves are responsible for all their decisions [16]. This prescription is also called as "autonomous", "substitution", and "open".

- Supplementary prescribing: In this kind of prescribing, one patient is examined by medicine and his illness is diagnosed, the nurse can prescribe some medications by consulting the medicine; however, he/she does not need the direct supervision of the medicine [17]. Other names for this prescribing are "collaborative", "semi-autonomous", "dependent", and "supplementary" prescribing [18].

- Patient group direction (PGD) prescribing: This procedure, which is also known as group protocol, provides some guides for prescribing medications used by a certain group of patients. This prescription is the outcome of a multidisciplinary team work specifically designed for a particular group of patients with a specific condition (diabetes, stroke, etc.) and is not merely an individualized instruction. Group protocols are not considered as independent prescribing since nurses or other health care professionals are only allowed to supply and administer medications within the strict terms of a predetermined protocol [18].

Skills Required for Prescribing

To be able to prescribe, the nurses are required to take the illness history of the patients and have necessary diagnosis and decision-making capabilities [19]. Furthermore, they should take adequate training about prescribing and its important aspect such as the effect and psychology of prescribing, consultation, decision making, treatment, health maintenance, teamwork prescribing, clinical pharmacology and its consequences, performance based on evidence and clinical observations, the legal, political, and ethical issues of prescribing, and professional accountability [20].

Effects of Prescribing on Nurses and Patients

Prescribing has positive effects for both patients and nurses. The positive aspects of prescribing for patients are the ease of access to medications; encourage to continue medications, making patients independent of medicines, and enhancing the self-confidence and decision-making ability of patients. On the other hand, these advantages for nurses are enhancing the authorities of nurses and their independence, continuing the medications of patients, promoting self-confidence of nurses, nurse job satisfaction and improve professional relationship [21].

Nurse prescribing has many advantages mentioned in the above lines. In a research conducted on 148 patients, the patients believe that nurses are even better than doctors in prescribing. This result might be attributed to the higher perception of nurses about the medication products, their closer wider relationship with and ease of accessibility to patients, providing more information to patients, and their relaxed communication with nurses. In this way, the nurse can holistically treat their patients and reduce treatment period [3, 21].

Barriers of Prescribing

Even nurses themselves are reluctant to collaborate in prescribing. At individual levels, unfamiliarity and the low knowledge of nurses as well as their lack of encouraging and fear of legal issues and responsibilities, lack of required pharmaceutical knowledge, and fear of rejection by colleagues and the society, unwilling to teamwork and professional development are among the barriers to nurse prescribing. At academic levels, these barriers can be summarized as: Reluctance of academics, lack of any effort for defining an appropriate curriculum, inattention to the experiences of other countries, lack of an effort to learn the legal issues of prescribing, and lack of a determination and interest in educational authorities. Finally, at the society level, the low confidence of society to nurses, unacquaintance of society about the nurse, lack of necessary grounds, the unfamiliarity of society with the role of nurses and overconfidence of the society over doctors are among the main barriers of nurse prescribing [22].

Nevertheless, some concerns are constantly expressed about the nurses' qualifications in prescribing. For instance, according to Lewis-Evans and Jester [23], participants complain about their low knowledge about pharmacology and herbal treatments and state that they are not provided with the required training programs about prescribing and their learning needs.

Another problem about nurse prescribing is the role obscurity; doctors due to their unawareness about nurse prescribing consider it as a transcendence to their territory [24]. The short length of nurse prescribing courses and the inefficacy of such programs is another issue put forward by the critics [25]. Lack of support offered by nurses and other members of healthcare team [26] and the associated institutes toward the nurse prescribing role [27] and lack of governmental supports and sufficient budgeting are among the obstacles in different countries. Existence of legal barriers for the legitimate prescribing in many countries [28], financial problems and insurance coverage [29], financial costs for taking nurse prescribing courses, lack of adequate decision-making abilities, and lack of suitable data for analysis, accounting, and the involved costs are among other issues in nurse prescribing [22].

A Review on Nurse Prescribing in some Leading Countries

All around the world, nurses provided with high-quality training about nursing skills and knowledge are authorized to prescribe medications. Countries with authorized nurse prescribing are different in their policies; e.g., all nurses in South Africa can prescribe a limited number of medications while in Australia the specialized clinical nurses are allowed to prescribe medications authorized by their government [1]. Nurses in Sweden are allowed to independently prescribe a limited number of medications. However, they have many limitations in terms of care setting and illness type of patients [3].

In the United States, nurses have been performing illness diagnosis and medications since 1970 [30]. It should be noted that the standards and medication authority levels are different in the United States and the nurse apply different medication administration models including independent and supplementary forms. The main difference of nurse prescribing in this country might be associated with their different level of medical staffs [3].

In England, prior to 1990, only doctors and dentists were authorized to prescribe. Later on, followed by the report of Cumberlege (1986) about the capability of the nurses in prescribing, the nurses were authorized for drug prescription. According to this report, if nurses are able to prescribe a specific list of medications, the healthcare staffs and sources would be used more efficiently [30]. After the studies conducted on 1992, the nurses' prescription became legal for a limited list of medications and in 1994 the act was put in operation as a pilot study in eight regions of England [31]. Ever since, the registered nurses with a minimum three years of trial work who had been certified by the Nursing and Midwifery Council (NMC) and had passed the 26-day program of this course (in the form of either a separate training or a part of their master of sciences program) were authorized to prescribe [32]. The clinical experience and educational level of nurses are both important in prescription as they are required to have at least three years of clinical work experience and a master of sciences degree in nursing [16]. The community practitioner health nurse prescriber (CPNP) or the registered nurses working in primary care or community with an NMC approved course are authorized to prescribe a limited list of medications such as emollients, laxatives, anti-fungal preparations, some analgesics (e.g. paracetamol, aspirin, ibuprofen), nicotine replacement products, parasitical preparations, and wound management products, and catheters. It is noticed that these prescriptions have been increased in England since 2006 for all nurses and all authorized medications in every health center [9].

In Netherlands, for the first time, nurses working with diabetes patients were authorized in 2010 to prescribe medications [33]. Ever since, pulmonary nurses and oncology nurses started prescribing since 2013 and

2014, respectively. These nurses were permitted to prescribe a limited list of medications according to the defined standards and protocols after the illness diagnosis is proved by doctors [34]. In Netherlands, the nurses working in intensive care unit (ICU) and chronic patient cares, preventive care, and mental patient care units are authorized to prescribe for a 5-year experimental period and are permitted to continue it after their positive performance is approved [35]. Nevertheless, nurses still are not authorized to prescribe in many countries. although the Chief of Staff of Ministry of Health and Medical Education of Iran stated that “Nurses are permitted to prescribe specific medications in ICU and we have made a list of medications for nurses to subscribe in the absence of doctors in critical situations to save patients’ lives”, the nurse prescribing has not evolved ever since despite the 100-year history of nursing in Iran. However, this process can be accelerated through the support of the managers of Ministry of Health and Medical Education of Iran by providing some facilitators such as the required equipment, information, training, rewards, and even some symbolic incentive behaviors [20]. Toward this aim, the doctors’ support at the beginning and during the process might be of a great contribution [36]. Besides, making supplementary prescriptions at the start can be appropriate for the nurses [37].

DISCUSSION

The role played by nurses in drug management has been drastically changed over time. In this regard, nurses in some countries have been authorized to prescribe, which is rare of even lacking in Asian countries such as Iran. Considering the positive effect of prescribing in the growth and promotion of nursing profession, health promotion, satisfaction of patients and changing the attitude of people towards nursing as a dependent job, it is hoped nurse prescribing is also applied in all countries.

CONCLUSION

Given the many benefits of nursing prescribing, it is recommended that necessary steps be taken to remove the barriers of prescribing.

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CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

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AUTHORS’ CONTRIBUTION

All stages of the research have been completed in collaboration with all authors.

ETHICAL CONSIDERATIONS

The manuscript has not been and is not under other consideration in another journal. Only literature review has been used as a method therefore no ethical committee has been involved in the study.

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