

A Comparative Study on the Role and Position of Nursing in World Select Health Systems and Iran

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ABSTRACT

The ever increasing changes in the world healthcare system has provided a new opportunity for nurses to be able to find their true position in this system and play their essential role in the reforms of the healthcare system. This study aimed to determine the role and position of nursing in select health systems of the world and to compare it with current situation in Iran. First, to determine a framework for comparison, a case study was performed on the health system of the United States of America, and then, based on that, 18 other countries were investigated. At the end, the findings were compared with the situation in Iran. The results showed that there is a large gap between Iran and the world select countries, with regard to the role and position of nursing.

Key words: Nursing, Occupational position, Health System, Education.

INTRODUCTION

The ever increasing changes in world healthcare system have provided a new opportunity for nurses to find their real position in this system and play their essential role in the reforms of the health system. In this regard, nurses need to know how they can be part of the solution for achieving better results and with a more affordable cost (Hassmiller, 2010a). Changes in the patients' age, nature of illnesses, people's financial condition, new treatment, and care methods, advance of technology, and shortage in human resource in all healthcare personnel groups, including nurses, all are among factors that necessitate the need for reforms in the healthcare system. Meanwhile, nurses should and can play a significant role in the reforms of the health system (University of Pittsburgh, 2006).

In a study by Shahshahani et al. (2010) on the position of nursing in the Iranian healthcare system, the findings showed that due to the extensive role of nurses defined for nurses globally, and according to the statistics from the Ministry of Health and Medical Education, nearly all nurses in Iran work in hospitals and their capabilities, especially in primary healthcare, are not used (Shahshahani et al., 2010). It seems that the role and position of nurses in Iran's healthcare system is still unclear, and therefore, the deserved attention has not been given to this profession in healthcare system reform programs. This study was aimed to determine the role and position of nursing in healthcare systems in world select countries and to compare it with current condition in Iran.

MATERIALS AND METHODS

In the first phase, in order to design a framework to study the role and position of nurses in health system, a case study on the health system of the United States of America was performed. The US offers one of the most diverse care services in the world (National Council of State Boards of Nursing, 2013), and American nurses are considered the most reliable people among all professions (Gallup, 2014). Following this case study, the framework was provided in nine sections, which in this paper its fifth chapter addressing the role and position of a nurse in primary health care, secondary health care, tertiary health care, pre-hospital emergency care, and rehabilitation & long term care are discussed.

In the second phase, the role and position of a nurse in the world selected health systems was studied based on this framework using a comparative study. Then, the findings were then compared with the present situation in Iran. The studied countries included America, Canada, Argentina, Brazil, Austria, Britain, Germany, France, Australia, New Zealand, Nigeria, South Africa, Pakistan, Malaysia, India, Turkey, Russia, and Japan, since complete or relatively complete information was available about them on the internet in English.

RESULTS

The role and position of nurse in primary health care

Studying the health system of the select countries, we concluded that the members of the primary health care team in the majority of the countries under study consist of general practitioners, nurse therapists, community health nurses, clinical nurse specialists or technicians, midwives, health visitors, physiotherapists, nutritionists, podiatrists, pharmacologists, counselors, therapists (such as homeopathy and acupuncture), psychotherapists, occupational therapists, and social workers (EICP, 2006). All primary health care team members share their information and skills together to make sure that patients with health needs receive the best services at the right time and with complete coordination

(Health Services Executive, 2013).

Out of the 13 countries in which specialist nurses (M.Sc. or PhD), whether nurse therapists or community health nurses, were involved in the primary health care team, in 39.2 percent of the cases nurses had operated independently, and in 33.6 percent of the cases they operated under the supervision of a physician. In all countries, the operation of undergraduate nurses was under the supervision of physicians.

In Iran, a primary health care team does not exist with the same concept that was seen in other countries. Primary health care provider centers in Iran include: health houses, rural health care centers, urban health stations, urban health care centers and university polyclinics, provincial hospitals, and teaching hospitals. With regard to the human resources who provide services in the above mentioned centers, except hospitals that are the usual service location of nurses, in no other section the use of their services is mentioned. The responsibility of providing primary care services is with the general practitioner. The most known personnel under his/her supervision are social workers (called Behvarz in Iran health care systems) (health-worker) and midwives (Ministry of Health and Medical Education, policymaking council, 1393).

* Role: In the study of the health system of the select countries of the world, in primary care team most nurses play an extensive role in the management of chronic diseases, health promotion, health assessment of elderly people, assessment of care needs, providing care package for patient, visiting families with newborns, children, and elderly members, prevention of illness, and education and research (table 1).

In Iran, in primary care system, there has been no discussion about the role of nurse in providing such care. It seems the only limited role of nurses at this level of healthcare is to admit patients and provide general care for them in urban health and treatment centers and university polyclinics, provincial hospitals, and teaching hospitals.

Considering that there has already been master's degree in community health nursing in Iran and these nurses have received adequate training with regard to primary cares, and can provide services along with or under the supervision of a physician as an active or expert member, it seems their role has been completely ignored by the policymakers of the health system in Iran. This way, Iranian health system invests on training nurses that does not benefit from properly and correctly. In addition, since 1991, a master's degree program in elderly (care) has been launched. But a specific plan for their role in providing care for the elderly in the society (and not in a nursing home as a nurse) has not yet been designed.

* Position: In the study of the health system of select countries of the world, the position of providing services of the majority of nurses in primary health care team included: home care, rest and nursing homes, mobile care centers, school-based health centers, and community health centers. In 28.1% of the cases nurses provided services in physicians' offices. The percentage of the presence of nurses in occupational therapy centers, rehabilitation centers, and drug rehabilitation centers was also between 52.9 and 41.2.

In relation to the occupational position defined for a nurse in the primary health care in Iran, it can be said that the nursing of the health of the society is not defined correctly in Iran and it seems that in the majority of cases the only defined position for a nurse in Iran is hospital (Zarea *et al.*, 2009).

The role and position of the nurse in secondary health care

From the 11 countries that clinical nurse specialists (M.Sc. or PhD) were present in secondary health care team, 44.9 percent of them had independent performance, and in 16.9 percent of cases they operated under supervision of a physician. In all countries, the operation of undergraduate nurses was under the supervision of physicians.

* Role: In the assessment of the health

system of the select countries of the world, in secondary health care team, all nurses had an extensive role in the direct care of the patient. In 44.9 percent of cases, nurses worked as a member of health care team. Also overall, in most countries nurses were playing an extensive role in leadership/management/an agent of change, patient education, care assessment/follow-up, prevention/rehabilitation, and research. In 44.9 percent of cases, nurses were responsible for counseling with patients. The education of nursing students in all countries was the responsibility of M.Sc. and PhD nurses.

Direct care for patients is one of the roles of nurses in Iran as well (table 2). But it is not counted on their role as a member of the health care team. In other words, the joint care by the health care team is not defined in Iran. Therefore, nurses only follow the prescriptions of physicians and are not their consulting partners in planning patient care plan. Nurses manage the method of the implementation of the care plan, but have no role on the condition of the patient as an agent of change. In other words, any change in the status and method of patient care takes place only by the prescription of a physician and not after consulting with a nurse. In hospitals, there is no defined plan for patient education during hospitalization or at discharge. Therefore, the educational role of the nurse is very insignificant (Neishabory *et al.*, 2011, Ghamari Zareh *et al.*, 1387).

In addition, there is no well defined mechanism to assess the progression or regression of the patient in relation to the process of care and treatment by the nurse and the quality of the nursing reports is not at a standard level (Jasemi *et al.*, 2012, Jafari Golestan *et al.*, 1389). Therefore, tracking the results of the cares from these reports is not practical. It should be noted that in nursing reports the measures taken are recorded, but in relation with the outcome of these measures (for example, the effect of the prescribed drug or the assessment of test results) no information is provided.

In Iran the concept of counseling with the nurse has not been defined in the health system. There is no mechanism for patients and their

families to contact nurses and consult them after discharge in case they encounter any health problems. This is while Iranian nurses, both at the undergraduate level or higher levels of education receive the appropriate training in counseling, patient education, and treatment follow-up. But here as well the health system does not take optimal advantage of the investment that makes on this enormous health force.

Regarding the preventive role in nursing in Iran, at the end of each teaching topic, the method of preventing that disorder is also discussed. A lot of researches have also been performed on the role of a nurse in preventing various disorders such as addiction, leg ulcers, heart disease, etc., that all reflect the positive impact of the performance of the nurse on incidence, recurrence or complications arising from a disorder. But in practice, preventive role of nursing in Iran is very insignificant and we can even say it is completely lost. Preventive interventions are always accompanied by educating the patient and his/her relatives and, as was said before, there is no defined and effective plan for patient education in Iran.

* Position: In studying the health system of select world countries, the position of service delivery of all nurses in secondary health care team included hospital and clinical centers. In 56.1 percent of countries, nurses also delivered services at patient's home. In five countries, there existed travel nursing agencies. In addition, in all countries nurses had the responsibility of training nursing students in nursing faculties and colleges. Also in 56.2 percent of cases, nurses worked in research centers.

In Iran the main position of providing the services of nurses are hospital and clinical centers. Care at home is performed by private firms. But it is not considered as part of the typical and defined tasks of nursing. In Iran travel nursing agencies do not exist. Also nursing faculties are responsible for training nursing students at all levels. Given the fact that there were only two registered nursing research centers in Iran, the presence of these people in research centers is very limited. Especially that the name of nurses has not been mentioned in other research centers such as

emergency medicine, addiction, and cancer.

In the study of select health systems of the world, from 12 countries that specialist nurse (M.Sc. or PhD) was present in tertiary health care team, in 44.9 percent of cases nurses had independent operation, and in 22.5 percents of cases they operated under the supervision of a physician. In all countries the operation of undergraduate nurses was under the supervision of physicians.

In Iran, nurses play an extensive role in delivering tertiary health care. However, their role is merely to provide hospital services. Also nurses with M.Sc. degree in intensive care, internal surgery, pediatrics, neonatal intensive care, and mental health, who all provide services under the supervision of a physician in hospitals and in specialized wards, do not exist in Iran.

* Role: In the study of the world select health systems, in tertiary care team, all nurses had an extensive role in the direct care of a patient. In 44.9 percent of cases, nurses worked as a member of the health care team. Also overall, in the majority of countries nurses played an extensive role in leadership/management/ agent of change, education of the patient, assessment/follow-up of care, prevention/rehabilitation, and research. In 44.9 percent of cases, nurses had the responsibility of patient counseling. Also the role of training nursing students in all countries was the responsibility of nurses with M.Sc. and PhD degrees.

In Iran nurse's role in secondary and tertiary health care team is completely similar. At this level nurses have the role of direct care of patients in hospitals as well. But it is not counted on their role as a member of the health care team (Table 3).

* Position: In the study of the health care system of the world select countries, the position of providing service of all nurses in tertiary health care team included hospital centers. Also in 56.1 percent of countries, nurses provided service in palliative care centers. In addition, in all countries nurses were responsible for training nursing students in

Table 1: Role and position of the nurse in primary car team in the select health system of the world and Iran

Defined roles for nurses in primary health care team in the world	Defined roles of nurses in Iran			Defined position of nurses in primary health care team in the world	Defined position of nurses in Iran	
	Extensive role	Limited role	Without role		Yes	No
Management of chronic diseases			T	Care at home		T
Promotion of health		T		Nursing homes	T	
Assessing the health status of the elderly			T	Physician's office		T
Providing care at patient's home			T	Mobile care centers		T
Assessing care requirements			T	Drug rehabilitation centers		T
Presenting care package to patients			T	Rehabilitation centers		T
Visits to families with infants, young children and elderly			T	School health centers		T
				Occupational health centers		T
Disease prevention		T		Community health centers	T	
Education and research	T			Genetic counselling centers		T

Table 2: Role and position of the nurse in secondary cares team in select health systems of the world

Defined roles for nurses in secondary health care team in the world	Defined roles of nurses in Iran			Defined position of nurses in secondary health care team in the world	Defined position of nurses in Iran	
	Extensive role	Limited role	Without role		Extensive role	Limited role
Direct care for patient	T			Hospital centers	T	
Joint care as a member of the health team			T	Clinical centers	T	
Leadership/management/agent of change		T		Patient's home		T
Patient education		T		Nursing travel agency		T
Assessment/follow-up of the care			T	Nursing faculty	T	
Patient counseling			T	Nursing colleges		T
Prevention/rehabilitation			T	Research centers	T	
Nursing students training	T					
Research	T					

Table 3: Role and position of the nurse in tertiary cares team in select health systems of the world

Defined roles for nurses in tertiary health care team in the world	Defined roles of nurses in Iran			Defined position of nurses in tertiary health care team in the world	Defined position of nurses in Iran	
	Extensive role	Limited role	Without role		Extensive role	Limited role
Direct care for patient	T			Hospital centers	T	
Joint care as a member of the health team			T	Palliative care	T	
Leadership/management/agent of change		T		Nursing faculty	T	
Patient education		T		Nursing colleges		T
Assessment/follow-up of the care			T	Research centers	T	
Patient counseling			T			
Prevention/rehabilitation		T				
Nursing students training	T					
Research	T					

Table 4: Role and position of the nurse in pre-hospital emergency services team in select health systems of the world

Defined roles for nurses in pre-hospital emergency services team in the world	Defined roles of nurses in Iran			Defined position of nurses in pre-hospital emergency services team in the world	Defined position of nurses in Iran	
	Extensive role	Limited role	Without role		Extensive role	Limited role
Patient assessment		T		Telephone triage center	T	
Patient's condition management		T		Ambulance	T	
Patient treatment		T		Mobile assistance units	T	
Patient transfer and dispatch		T				
Specialized phone counseling and advising	T					

nursing faculties and colleges. Also in 61.7 percent of cases, nurses served in research centers.

In Iran as well the main position of the delivery of services of nurses are hospitals and clinical centers. Nursing faculties are also responsible for training nursing students at all levels of education.

Role and position of the nurse in pre-hospital emergency services team

In the study of the health system of select countries of the world, there was no information about Austria, Nigeria, and South Africa regarding the composition of pre-hospital emergency service team members. Among seven countries that specialist nurses (M.Sc. or PhD) were present in the pre-hospital emergency services team, in 33.7 percent of cases nurses had independent operation, and in 5.6 percent of cases they operated under the supervision of a physician. In all countries, the operation of undergraduate nurses was under the supervision of physicians.

In Iran, the members of pre-hospital emergency services team are mainly paramedics that many of them do not have university education and have only received some training in this field. Only seven thousand out of fourteen thousand

personnel working in pre-hospital emergencies have university education. Seven thousands of forces of the emergency department are high school graduates who received emergency health response training after getting hired (Salamat News, 1390).

The graduates of medical emergencies, nursing, and operation room disciplines can enter this job. In recent years associate degree and then undergraduate degree of medical emergencies programs have been launched. The level of training considered for this discipline in Iran is at EMT intermediate level (Emergency Medical Services, 1393). In addition, medical emergencies and nursing undergraduate students can continue their education towards master's degree in medical emergencies and emergency nursing disciplines.

One of the special cases that is evident in the pre-hospital emergency services system in Iran is banning female nurses from participating in the rescue team and ambulances. The only women that can be sent on a mission by ambulances are the personnel that their husbands also serve in this team and are with them in the ambulance. Due to the presence of Islamic culture in Iran, the case than women have no role in helping sick or injured women is very thought-provoking.

Table 5: Role and position of the nurse in rehabilitation and long-term care team in select health systems of the world

Defined roles for nurses in rehabilitation and long-term care team in the world	Defined roles of nurses in Iran			Defined position of nurses in rehabilitation and long-term care team in the world	Defined position of nurses in Iran	
	Extensive role	Limited role	Without role		Extensive role	Limited role
Providing hospital services at home		T		Home care	T	
Rehabilitation at home			T	Sanatorium	T	
Support after discharge			T	Nursing homes	T	
Daily rehabilitation care		T		Rehabilitation units		T
Providing long-term care		T		Outpatients clinic	T	

* Role: In the study of the health system of world select countries, in most countries, due to the presence of paramedic forces, nurses had no role in the assessment of the patient, managing the condition of the patient, performing primary treatment measures, transfer, and dispatch of the patient, and telephone counseling and professional advice. However, in four countries leading in the regard to nursing, i.e. the US, Canada, England, Australia, and also Argentina, nurses played an extensive role in the pre-hospital health care and emergency teams.

In Iran, pre-hospital emergency (Emergency Medical Services) is a subset of the center for incidents management and medical emergencies and nurses have an ever-increasing role in all the cases (Table 4).

* Position: In the study of the health system of the select countries of the world, in most countries nurses had no role in telephone triage centers, ambulance, and mobile rescue units. But in four prominent countries regarding nursing, i.e. the US, Canada, England and Australia, nurses provided services in the abovementioned centers. In Iran, majority of nurses are stationed at telephone triage centers and have a growing role in two other positions.

Role and position of the nurse in long term rehabilitation and care team

In the study of the health system of select systems of the world, from 12 countries that the specialist nurse (M.Sc. or PhD) had a role in rehabilitation and long term care team, in 44.9 percent of cases nurses had independent operation, and in 22.4 percent of cases they operated under the supervision of a physician. In all countries, the operation of undergraduate nurses was under the supervision of physicians.

In Iran no team is defined as the long term care team in the health system. It seems that the activities of such team are described as part of the primary cares composition. Rehabilitation teams are mostly described in terms of the rehabilitation of mentally disabled.

* Role: In the study of the health system of

select countries of the world, in rehabilitation and long-term care team, overall, in most countries nurses played an extensive role in providing hospital services at home, rehabilitation at home, support after discharge, daily rehabilitation and care, and providing long-term care.

However, in Iran no role is defined with this role for nurses. Their only role is merely in caring for the elderly and addressing their situation in nursing homes (Table 5).

Position: In the study of the health system of select countries of the world, overall in most countries nurses served in patient's home, nursing homes, rehabilitation units, and outpatient clinic. In Iran no team has been defined in the health system as the long term care team. Only in nursing homes nurses have the role of just caring for these patients.

Tables 1 to 5 show the role and position of nurses in the select health systems of the world and Iran. Criteria related to the role of nurses, are defined as follows:

- | | |
|------------------|--|
| Extensive role: | - both has executive agenda from the ministry and is executed |
| Limited role: | - has executive agenda from the ministry, but is not executed |
| | - does not have executive agenda from the ministry but is executed unofficially and locally. |
| Without any role | - Neither has executive agenda from the ministry, nor is executed unofficially and locally |

CONCLUSION

The role and position of nursing in the health system of Iran, in contrast to the select health system of the world, have a much lower status. In fact, it could be stated that the health system of Iran spends a huge budget for nurses training at different levels; however, this occupation does not properly benefit from their role and position. So that nurses work mainly in hospitals and have a small and insignificant role in other caring areas, including

primary cares. In fact, it can be said that nurses do not play any role in the primary care.

Even the role and position of nurses in hospitals, compared with the existing situation in other countries of the world, is not as should be. Regarding their very small numbers, many of the hospital roles of nurses, including patient education, follow-up care, patient counseling, and patient assessment have been ignored.

Although educational steps have been taken on specializing nursing in Iran, after graduation the role of these nurses in the promotion of health system has not been elaborated. In fact, they continue their work in the hospital like other undergraduate nurses and are probably promoted to a higher rank. However, no significant actions have been performed on the influence of their role on the primary, secondary, tertiary, or long-term health care and the utilization of their specialty. It can be concluded that the budget that is spent on training these people remains fruitless and in some cases ends up in their immigration to other countries and in some cases they end up in immigrating to other countries.

One of the issues affecting the quality of the work of nurses is no compulsory requirement for having a license for employment (Registered Nurse) for nursing in Iran. This license and the requirement for its periodic renewal can be a factor for the knowledge and skills of nurses remaining up-to-date. Iranian Nursing Organization should put some attempts in this regard on its agenda. And the Iranian Nurses Association should also devise extensive measures with regard to updating the knowledge and skills of nurses. In other words, nurses should feel the need for updating their knowledge and skills, and this is possible only if their actual role and position in the health system is properly defined and taken into account. Currently the three roles that nurses are extensively engaged in are the direct care of patient, training of nursing students, and research. In other roles, such as leadership / management / agents of change, patient education, assessment / follow-up care, and prevention / rehabilitation, they either operate on a limited basis or are not involved at all.

In Iran, there is no role or duty for nurses as a member of the health care team. In other words, in Iran joint care by the health care team is not defined. Therefore, nurses only follow the prescription of physicians and are not their consulting partners in planning patient care program. Nurses manage the implementation of the care plan, but as an agent of change, do not have a role in the patient's condition. In other words, any change in the status and method of patient care takes place only by the prescription of a physician and not after consulting with a nurse. In hospitals, there is no defined planning for patient education during hospitalization or at discharge. Therefore, the educational role of the nurse (without discussion on its factors) is very insignificant. Also there is no well defined mechanism to assess the progression or regression of the patient in relation to the process of care and treatment by the nurse and the quality of the nursing reports is not at a standard level. Therefore, the tracking of the results of the cares from these reports is not practical.

In Iran the concept of consultation with the nurse has not been defined in the health system. There is no mechanism for patients and their families to contact nurses and consult them after discharge in case they encounter health problems. This is while Iranian nurses, both at the undergraduate level or higher levels of education receive the appropriate training in counseling, patient education and follow-up treatment. But here as well the health system does not take optimal advantage of the investment that makes on this enormous health force. The preventive role of nursing in Iran is very insignificant and we can even say it is completely lost. Preventive interventions are always accompanied by educating the patient and his/her relatives and, as was said before, there is no defined and effective plan for patient education in Iran. Rehabilitation is also among the tasks that is only mentioned in nursing literature in Iran, and of course it is one of the trainings (training subjects) approved for nursing students. But in practice, such a role is not considered for the nurse.

Overall, it can be concluded that in Iran nurses, despite receiving up-to-date training and achieving specialized degrees in nursing, are not placed in their deserving role and position.

Limitation of the research

Limited or no available relevant literature in English was one of the most important limitations of this research and the author made an effort to avoid missing any of the available references. However, it might be possible that many of the cases are not complete due to the unavailability of sources of information in English, or the author's conclusions are not consistent with the existing realities in that country.

Many of the references are related to the years 2009 to 2012, and it is not possible to make any changes in them for the period of 2014 to 2015. Furthermore, the relevant information of the recent years was not available either.

Regarding Iranian health system, the information and statistics were very limited and sometimes even unreliable. The author's effort was to perceive this information without personal judgment and exactly based on the available references.

REFERENCES

- EICP. *Primary Healthcare Team, a framework that fits*, [Online]. Available at: <http://www.eicp.ca/en/toolkit/hhr/team-roles.asp> (2006).
- Emergency Medical Services. Medical emergencies discipline : <http://fouriyat.ir/ems>. Copyright (1393).
- [fouriyat.ir](http://fouriyat.ir/ems)[Online]. Available: <http://fouriyat.ir/ems>.
- GALLUP. *Honesty/Ethics in Professions* [Online]. Available: <http://www.gallup.com/poll/1654/honesty-ethics-professions.aspx> (2014).
- Ghamari Zareh, Z., Anoosheh , M., Vanaki, Z. & Hagi Zadeh, E. Quality of Nurse's Performance and Patients' Satisfaction in Cardiac Care Units *Tabib e Shargh*, **10**: 27-36 (1387).
- Hassmiller, S. Nursing's role in healthcare reform. *American Nurse Today* **5**: 68-69 (2010a).
- Health services executive. *Primary Care Teams* [Online]. Available: <http://www.hse.ie/eng/services/list/2/PrimaryCare/pcteams/> (2013).
- Jafari Golestan, N., Dadgari, F., Azarmi, S. & Jaber, Z., Improving the recording and report writing of nurses: The strategy for the improvement of quality of the nursing services. *The Journal of the IRI Army Nursing Faculty*, **10**: 48-51 (1389).
- Jasemi , M., Mohajal Aghdam, A., Rahmani, A., Abdollahzadeh, F. & Zamanzadeh, V. Assessing quality of nursing documentations and effective factors on it in medical-surgical units. *Nursing Management*, **1**: 37-45 (2012).
- National council of state boards of nursing A. *The 2013-14 NCSBN Environmental Scan* [Online]. Available: https://www.ncsbn.org/NCSBN_2013-14_Environmental_Scan.pdf (2013).
- Neishabory, M., Raeisdana, N., Ghorbani, R. & Sadeghi, T. Nurses' and patients' viewpoints regarding quality of nursing care in the teaching hospitals of Semnan University of Medical Sciences, *koomesh*, **12**: 134-143 (2011).
- Salamat news. 1390.
- Shahshahani, M. S., Salehi, S., Rastegari, M. & Rezayi, A., The study of optimal nursing position in health care delivery system in Iran. *Iran J Nurs Midwifery Res.* , **15**: 150-154 (2010).
- The World Bank. *Nurses and midwives (per 1,000 people)* [Online]. Available: <http://data.worldbank.org/indicator/SH.MED.NUMW.P3> (2015).
- University Of Pittsburgh. *Addressing the healthcare crisis* [Online]. Available: http://www2.nursing.pitt.edu/pitt_nurse/archive/feature_article/feature_fall06.pdf
- Zarea, K., Negarandeh, R., Dehghan-nayeri, N. & Rezaei-adaryani, M., Nursing staff shortages and job satisfaction in Iran: Issues and challenges. *Nursing and Health Sciences* 326-331 (2009).
- Ministry of Health and Medical Education, The Policy Making Council., The Care Improvement Policy Document (1393).