

## ■ Original article

## Nursing developments in Iran during World Wars I & II: A historical study

Abbas Heydari<sup>1</sup>, Seyed Naser Lotfi Fatemi<sup>2,\*</sup>

(Received: 14 Jan 2015; Accepted: 25 Apr 2015)

### Abstract

**Background and Purpose:** Iran's nursing has witnessed remarkable changes in the period 1914 to 1945 that could be a turning point in the history of the nursing profession in Iran. This paper is a survey of modern nursing transformation history in the historical period of the World Wars and their impact on the development of the nursing profession in Iran.

**Methods:** In the present historical study, following the statement of the problem, by an aim to access to the relevant information resources, we studied primary and secondary sources relevant to the research topic. 107 documents including photos, letters, official reports, journal archives, websites, memories, autobiographies, articles and books were studied. To complete the social conditions in this period of the history, the oral tradition history was used, too. First, the social situation of Iran at these periods of history was briefly reviewed and collected data were analyzed. Finally, the causal relationships in the development of nursing-related incidents were investigated.

**Results:** The results of this study can be divided into three sections: socio-political situation in Iran during the World Wars, the beginning of modern nursing and the start of academic nursing training in Iran. Based on our findings, interactions of multiple factors such as war, famine, presence of foreign forces, and beginning the modern age have led to the onset of modern nursing and nursing education in Iran.

**Conclusions:** This study showed how the response to a social need, and at a critical juncture in the history of Iran, would lead to the quantitative and qualitative development of nursing as an academic discipline.

**Keywords:** Iran, Nursing, Historical research, World Wars

### Introduction

A historical approach to the past is a necessity of each growing population. Every researcher in each discipline has to respond to a part of the historical past, which is connected with his profession (1). Historical information helps us to better understand the scientific and artistic dimensions of nursing (2). Historical evolution of nursing shows that always a new generation of nurses has emerged from big battles (3-6). Iran's modern nursing was begun almost simultaneously with the beginning of military hostilities in the region. This type of

nursing, that was result of the practices of Florence Nightingale and her colleagues, is based on observation, experience and scientific methods (7-10).

The main objective of the present article is to investigate the development of modern nursing in Iran and also a review of the associated factors during World Wars I and II. Many available resources have considered the beginning of modern nursing in Iran to be as the establishment of a nursing school in Urmia in 1915 by a group of

<sup>1</sup>Department of Medical-Surgical Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.

<sup>2\*</sup>Corresponding author: Ph.D Student in Nursing, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran. Email: lotfifn1@mums.ac.ir

religious missionaries (11-13). This paper seeks to answer the following questions:

1. What were the influential factors in the early twentieth century in the development of modern nursing in Iran?
2. According to the existing evidences and reports, did really modern nursing begin from Urmia?
3. Historically, is it possible to make a distinction between the beginning of modern nursing and establishment of academic nursing in Iran?
4. Before the establishment of nursing school in Tehran, why were these schools founded at some cities such as Urmia and Rasht?
5. What were the characteristics of above cities that the nursing schools were opened there before starting of practices in Tehran?
6. What were the major figures who significantly contributed to the development of nursing in Iran?
7. In other words, this article seeks to examine the depth of the events that led to the beginning of modern nursing and academic nursing in Iran.

## Materials and Methods

In the current article, a historical research method was used due to the lack of the phenomenon of interest. To achieve the goal, some questions were raised including: who were involved in this process? What were the reasons and factors which contributed to the formation of this trend? Where and when did this happen? In other words, in what geographic area and what period did this process emerge? (1). In the present study, following the statements of the problems, by the aim to access to the relevant information resources relevant to the research topic, the authors referred to online and library-based materials including first hand resources (photographs, diaries, personal letters, and organizations' reports) and also second-hand sources. In this study, 107 documents, photographs, letters, official reports, archive of publications, websites, memories and autobiographies, essays and books related to the phenomenon of interest were studied. For the external validity, each document

was compared with other documents and historical evidences. After ensuring the accuracy of the document's relationship to the subject of the study, the content analysis was performed. In this study, narrative data as a form of oral tradition history was used (1). Finally, the causal relationships in the development of nursing-related incidents were investigated.

## Results

The results of this study can be divided into three sections: socio-political situation in Iran during the Word Wars, the beginning of modern nursing and the start of academic nursing training in Iran.

Socio-political situation of Iran in 1914 to 1945: The early years of the twentieth century coincided with the constitutional movement and the First World War. From October 1914 to January 1915, the Ottoman government captured strategic areas of the west such as Tabriz and Urmia. Later, Russian forces seized these regions. During the war, Uremia city was repeatedly exchanged between Russia and the Ottoman forces. On the other hand, an ethno-religious conflict between Muslim Kurds supported by the Ottomans and regional Armenians who were close to the Russian government started. In these wars, a great number of Armenians were killed or displaced. Thus, the northwest region of Iran was the battlefield between the troops of the involved countries, and a human tragedy was taking place (14-16). In the north, the situation was critical. Rasht was a battlefield between the forces of the revolution and counter-revolution and invading foreigner forces. Indigenous diseases such as tuberculosis, and malaria, and starvation, and malnutrition were endemic in the north, and lack of facilities had paralyzed the lives of the people (17).

In such circumstances, the religious missionaries groups, including Protestant Americans, English Catholics and Russian Orthodoxies who were present in Iran since previous years attempted to extend their cultural and spiritual influence on

Armenia and Jews of Iran, especially in northwest of country (16). Armenian massacre and displacement of many groups in Azerbaijan, which in some sources and religious studies, this period of history is considered as the darkest era of Iran Armenians, was as a good excuse to expand the activities of religious groups in such regions (18). We should not forget that religious missionaries not only as religious missionaries, but also as social reformists were active in Iran and made many people familiar with many of the concepts of modernism (19). Despite all social crises, public awareness within the community was growing rapidly. Social and political trends in country led to the more familiarity of the people with the modernity manifestations (20). Journals such as "Alam-e-Nesvan" were very effective in the enlightenment of ladies and also introduction of nursing practice (21).

Toward the modern nursing: There are numerous documents and reports that show, since long, people entitled as "nurse" or "Bimardar" in hospitals were responsible for taking care of people in governmental hospitals and Darolshafa'ha in a non-professional form (22-25). But there are no reliable documents to know the exact time and location of such type of the modern nursing in Iran. However, without any doubts, the presence of the European and American foreign nurses in country has played an important role in this regard. In Westminster Hospital in Urmia, some American nurses were employed, which one of them was Miss Eston (26,27).

The English mission extended its medical activities in southern Iran, as well (28). Dr. Donald Carr in collaboration with Miss Mary Bird nurse founded the first Women's Hospital in Julfa, Isfahan (28-31). Photos show the nurses in preparing the patients for surgery and radiology at this hospital. Speziale (2012) noted that, in 1901, use of nicely cleaned sheets, patient uniform, and methods of disinfection in hospitals with a high standard in Isfahan Hospital represented the

evolution of the nursing in Iran (32). At the same time, English nurses such as Mrs. White in Yazd hospitals, offered modern nursing (32). In Tehran, non-academic nursing education by the American Hospital religious mission was started for girls as well from 1893 (23). This was the first Institute of Nursing in Iran that provided Iranian women with nursing education (33-35).

With the establishment of the first hospital in Rasht in 1905 by the Presbyterian Group, the people also gradually became familiar with nursing (17, 30 & 36). This hospital was equipped with operating rooms and modern facilities with a capacity of 15 patients. In this hospital, two Russian nurses and a male nurse took care of patients (32). In 1914, Anglo-Persian Oil Company (APOC) opened the most modern hospital in the Middle East at the vicinity of oil field near Masjed Soleyman. A matron and 8 European nurses and 26 native nurses formed nursing staff of the hospital (32, 37). Mary Ann Brown is an English military nurse joined this hospital (38). In 1914, two Iranian Hospitals namely Darulshafa Haram-Motahhar or Montasariyeh Hospital, and a hospital of American missionaries were active in Mashhad. Correspondence of president of the American Hospital, doctor Hoffmann and American Presbyterian Church America showed the need of trained nursing workforce. An American nurse named "Florence Nelson" was sent to the hospital in 1922 (39).

Two of the nurses who attended Iran at the era of the war, Sarah Macnaughton as a Scottish nurse and a member of the Red Cross, did a great service during the First World War (40, 41). Between 1922 and 1924 more British nurses, including Alice Werrindor moved to Iran (32). In 1921 in Tabriz hospital with 30 beds for adults and 5 beds for children, four female nurses under the supervision of Miss Wales received nursing education (32,42). With the onset of World War II, more nurses in the form of military units and military hospitals arrived in Iran. Anna Connelly Wilson is an American military nurse dispatched

to Iran. In his memories, she mentions common diseases of the time such as typhoid and malaria (43). 34 Combined General Hospital of the British Army were stationed near Tehran in 1942. G. Cocking as a British military nurse gives a detailed description of this hospital in his memories. In this hospital, a matron and nine nurses with few Polish nurses served (44). Teodozja Musialowicz was one of these nurses who attended Iran in 1942 as a military nurse and a year and half was in the service of Iranian hospitals (45). Also, in line with the mission of health groups "President Truman's Point 4 program" some of the American nurses came to Iran (46). Helen Bakhtiar as an Iranian-American nurse who married an Iranian doctor named doctor Bakhtiar played a very important role in health education to mothers and women of Iran (47). The presence of such foreign nurses was gradually led to people familiarity with the modern nursing.

The onset of academic nursing training: What can be inferred from the available evidence is that the first official School of Nursing in 1915 was founded in Urmia by religious Presbyterian missionaries under the supervision of Miss Wales. Another school was founded in 1916 in Tabriz. Tabriz nursing school head was Miss Frances Wooding (11). This school taught nursing courses in English language. The first students of this nursing school were four who were graduated in 1920. These included two Armenian women, one Assyrian, and a girl who came from Georgia, Russia (42, 48). Two or three of these graduates went to study in London or Paris (11). Considering the dominance of religion on Iran's society, and the fact that nurses should serve at night shifts at hospitals, Iranian families were not satisfied with the night work of their children in the centers which took care of patients (39, 49). This issue remained a taboo until many years later (11, 26, 50, 51). For this reason, in the early years of nursing training, most participants were either

students or from non-muslim families. However, such attitudes toward nursing profession were dominant in other countries including Turkey (52).

Rasht Nursing Education Center was also one of the most successful nurse training school centers belonging to the American mission. As some of the sources explain, the first Muslim graduated girl of Nursing in Iran was Mrs. Fatemeh Tavanaei, who was graduated in 1939 from Rasht Nursing School (53). Hamedan Nursing School directed by Miss Jones graduated 5 nurses of religious minorities from 1928 to 1932 (11).

The newspaper "Alam-e-Nesvan" played significant roles in introducing and creating information on nursing profession in society of Iran. In addition, the policies of the government on the employment of women out of houses created an opportunity to develop nursing profession. Emancipation of women brought many changes and opportunities for the Iranian women (21, 45). In 1932, Iranian Comprehensive Health and Sanitation Plan was approved. In the tenth section of the plan, nursing education and necessity of dispatching volunteers to Europe were highlighted (39). In 1936, The Ministry of Culture decided to initiate nursing training in Tehran, Mashhad and Shiraz with the presence of American Nurses, Lorraine Setzler, Emma Degener, Miss Fulton, Jean Wills, Miss Taillie, and Miss Peace. Some of the graduates of Mashhad Nursing School included Ghodseye Shenasaee Yazdi, Mrs. Seyedi, Tahereh Akhlaghi, Mokhadereh Amoozgar, Margaret Stepanian and Ezzat Samirad (39). Mrs. Setzler and Dr. Zabihullah Ghorban initiated nursing education with seven ladies, the holder of first degree in high school education (cycle), who registered in nursing education course in November 1937 (50). Keyhan Ghorban was the first Iranian educated nurse outside the country. He was graduated from American University of Beyroot, and at the same time he returned to Iran and

worked in Shiraz (21). In 1937, the nursing school courses were approved by the Supreme Council of Education (11, 23, 39). With the approval of sending students abroad, some of the ladies were sent to a number of European countries and the US, which after returning to Iran the later years, helped nursing education in Iran (11). Miss Mokhadereh Amouzegar is one of them who were sent to Winchester in England after graduation from Mashhad Nursing School accompanied by a group of 11 people. Mrs. Setezler held the management of Shiraz School of Nursing since 1937 to 1940 (33). The length of education course in Mashhad and Shiraz was 2 years (11). Also, another school was opened in Mashhad hospital by American Christian woman Miss Mary Harvey in 1941. One of the graduates of this lady was Fatemeh Sarbaz Rezaei who served as a nursing instructor for years (39).

Expansion of nursing education since the end of World War II saw further growth. In 1942, the first private Institute of Nursing in Iran was established in Abadan oil companies, which would graduate 15 nursing students annually (23,55). According to the Article XII of the Statute Reform Act of 1943, the population of the Iranian Red Lion and Sun, approved in 1943, was committed to educating nurses to meet requirements of medical centers and hospitals. Thus the Iranian Red lion and the Sun society was the largest organization that assumed the responsibility of nursing training (56). In accordance with Article 219 of the Iranian Red lion and the Sun society, Iran Higher School of Nursing was established in 1947 (57).

Peter Avery, English historian, in the book "History of Contemporary Iran" wrote that Ashraf Pahlavi, sister of the Shah, took great measures for educating Iranian nurses. In terms of nursing training method, the British model was chosen. With the help of Miss Palmer Smith who had lived for years in Tehran, a number of Iranian girls were sent to hospitals in Great Britain to receive Nursing Education (46). In fact, in this period, nursing schools were developed quantitatively and

qualitatively. Over the years, nurses of World Health Organization (WHO) such as Margarret M. Jackson were involved in the training of Iranian nurses (58). Since these years, nursing profession was gradually changed under the influence of English teachers from the American pattern to British pattern nursing (59).

## Discussion

In the early twentieth century, some factors such as war, famine and drought, and the presence of foreign forces in Iran led to a critical condition and the spread of diseases. The inability of Iran therapeutic system to meet all demands led to the entrance of different groups into Iran including religious groups and foreign troops in therapeutic affairs. Nursing Education in Urmia (earlier than Tehran) was begun based on the same principle of helping the Armenian population by the Christian communities. Unlike many documents that have considered the beginning of nursing practice in Iran to be the establishment of a nursing school in Uremia by a religious missionaries in 1915 (11-13), the modern nursing in Iran and even non-academic nursing education had begun in some cities including Isfahan, Yazd and Tehran since earlier years. However, the establishment of Urmia School can be considered the beginning of the academic nursing in Iran. Therefore, historically, there is lots of differences between the beginning of Iran modern nursing and academic nursing education in Iran. Although Iranian community firstly reacted against the employment of girls in nursing practice, other factors such as Iran Modernization, people's familiarity with the manifestations of modernity and enlightenment created by publications played facilitating roles in this process. Therefore, it can be deduced that the emergence of "modern nursing" in Iran is a multi-factor phenomenon at a historical juncture. Although the World Wars were facilitators of this movement, the role of the social evolutions that were taking shape in the community cannot be

ignored. Iran modern nursing and academic nursing training were established more deeply through the presence of some foreign nurses in Iran. Although the role of political figures in the development of Iran nursing cannot be overlooked, there are strong reasons and historical documents that indicated the start of Iran nursing training was not a state program, and therefore the capital of Iran delayed several years to initiate nursing education.

## Conclusion

Iran modern nursing emerged under the situation that Iran was the field of great social and political developments. A review of the Iran contemporary history shows how the response to a social need, and at a critical juncture in the history of the country, would lead to the quantitative and qualitative development of nursing as an academic discipline.

**Table 1.** Summary of significant events and their influence on Iran nursing based on the date of occurrence

| Row | Occurrence Date | Significant Event   |
|-----|-----------------|---|
| 1   | August 1914     | Onset of World War I  |
| 2   | October 1914    | The occupation of the west region of the country by the Ottoman   |
| 3   | 1914            | Establishment of the most modern Middle East Hospital in Masjed Soleyman by Anglo-Persian Oil Company (APOC)                                |
| 4   | 1914            | The commencement of the conflict between Armenians and Kurds stimulated by the Ottomans in the northwest of the country and a human tragedy |
| 5   | 1915            | The opening of nursing school by religious group of Presbyterian in Uremia  |
| 6   | 1915            | The establishment of a Russian hospital in Tehran and the attendance of Russian Nurses  |
| 7   | 1916            | The establishment of a nursing school by religious group of Presbyterian in Tabriz  |
| 8   | 1917            | Intensification of the conflicts in Urmia   |
| 9   | 1917            | Establishment of French Army Hospital in Uremia and the presence of French nurses   |
| 10  | 1918            | Occupation of Tabriz by Ottoman forces and the transition of the nursing school to Hamedan  |
| 11  | 1919            | Change of The Hospitals of the Russians in Tehran to Hospital of Great Britain  |
| 12  | 1920            | The occupation of cities Rasht and Anzali by the RED Army   |
| 13  | 1920            | Graduation of the first nursing students of Tabriz Nursing Training Center  |
| 14  | 1921            | Formulation the Comprehensive Health Plan in which nursing education was considered   |
| 15  | 1923            | Establishment of Presbyterian American Hospital in Rasht by Dr. Frame   |
| 16  | 1924            | Establishment of the Iranian Red lion and the Sun society   |
| 17  | 1931            | Start of nursing education in Rasht   |
| 18  | 1932            | Start of nursing education school in Kermanshah   |
| 19  | 1935            | Graduation of the first Iranian woman from Nursing Education Center   |
| 20  | 1936            | Approval of the Statute of Nursing Schools  |
| 21  | 1936            | Establishment of nursing schools in Tehran, Mashhad, Tabriz by the Iranian State  |
| 22  | 1936            | Recognition of nursing graduates by the Ministry of Culture and approval of Nurse Employment Law  |
| 23  | 1937            | Establishment of nursing school in Shiraz by the State  |
| 24  | 1937            | Approval of the study course program by the Council of Higher Education   |
| 25  | 1938            | Approval of nursing school examination procedure by the Supreme Council of Education  |
| 26  | 1939            | Onset of World War II   |
| 27  | 1941            | The start of the activity of Red Lion and Sun to deal with refugees from the Soviet war   |
| 28  | 1941            | The establishment of Soviet Midwifery and medical assistance school by Russian nurses in Tehran   |
| 29  | 1941            | American Christian School of Nursing was established in Mashhad   |
| 30  | 1942            | The establishment of the first private school of nursing by the Abadan Oil Company  |
| 31  | 1942            | The establishment of Military Hospital No. 34 by the British army on the Tehran Doshan Tappeh with the presence of English nurses           |
| 32  | 1943            | The approval of amendment statute by the Population of Lion and Sun built on nursing training by this population                            |
| 33  | 1947            | Change of Tehran old nursing school into nursing school by Ashraf Pahlavi by offering nursing diploma degree                                |
| 34  | 1948            | Participation of Iran nursing representatives at the Seventeenth International Congress of the Red Cross                                    |
| 35  | 1948            | Establishment of Reza Shah nursing school affiliated with the Iranian Red lion and the Sun society  |
| 36  | 1950            | Upgrade of nursing certificate to the nursing bachelor degree   |

## Conflict of interest

The Authors declare that they have no competing interests.

## Author's contributions

S. Lotfi Fatemi collected and analyzed the data and prepared the draft of the paper. A. Heydari evaluated and supervised the entire process of study.

## Acknowledgments

Researchers need to appreciate the sincere cooperation of the respected staff of the Documentation Center of Astan-Quds-Razavi in providing access and retrieval of documents related to the history of nursing.

## References

- Nouraei M. A short guide to writing about history. Mashhad: Jahad-e-Daneshgahi. 2008.
- Lusk B. Historical methodology for nursing research. *J Nurs Scholarsh*. 1997; 29(4): 355-360.
- Egenes J, Roux G, Halstead J. History of nursing. In: *Issues and Trends in Nursing: Essential knowledge for today and tomorrow*. 2009:1-26.
- Klainberg M. An historical overview of nursing. *Today's Nursing Leader: Managing, Succeeding, Excelling*. 2010; 21: 21-40.
- Santy J, Knight CH. Nurses in war. *J Ortho Nursing*. 2008;12(1): 50-53.
- LeVasseur JJ. The proving grounds: Combat nursing in Vietnam. *Nurs Outlook*. 2003;51(1): 31-6.
- Boge J, Kristoffersen K, Martinsen K. Bodily cleanliness in modern nursing. *Nurs Philos*. 2013;14(2): 78-85.
- Kruse MH. Modern nursing: the order of care. *Rev Bras Enferm*. 2006; 59 Spec No: 403-10.
- Winkelstein W Jr. Florence Nightingale: Founder of Modern Nursing and Hospital Epidemiology. *Epidemiology*. 2009; 20(2): 311.
- Birchall P. The history of nursing education—ancient or modern? *Nurse Educ Today*. 2003; 23(5): 323-4.
- Riahi A. history of nursing. 4th, editor. tehran: entesharate dabirkhaneh amoozeshghahhaye parastari va behyari jameiyate shir-o-khorshid sorkh iran; 1976.
- Azarmi s, Farsi z. History of nursing. *J Army Univ Med Sci I.R. Iran*. 2010; 11(1): 37-43 (Persian).
- Hazrati M, Mirzabeigy G, Nejatian A. The History of Nursing in the Islamic Republic of Iran. *Nurs Hist Rev*. 2011; 19: 171-4.
- Hooshang Mahdavi A. History of Iran foreign relationship. Tehran: entesharat Amir Kabir, 1985.
- Kjeilen T. Orumiyeh: Looklex Encyclopaedia.; 1996.
- Kavianpoor a. Tarikhe Rezaeye. Enteshrat Asia; 1965.
- Taeb h. Hospitals of Rasht (Since Mashrooteh to 1357). Rasht: farhanghe ilia; 2005.
- Metropolitan MM. The history of the Assyrian church of the east in the twentieth century with special reference to the Syriac literature in Kerala. 2010.
- Zirinsky M. American presbyterian missionaries at Urmia during the Great War. *J Assyr Acad Stud*. 1998; 6: 12-27.
- Roshan A. Mashrooteh newspapers: Shargh Newspaper; 2006. Available from: <http://www.magiran.com/article.asp?AID=2183>.
- Stephanie C. Reza Shah and the creation of new1921-1941. 2 ed. Tehran: Entesharat Jami; 2003.
- Safari R. Introduction of handwritten manuscript "favayed marizkhaneh dowlati" 2013. Available from:[http://www.ical.ir/index.php?option=com\\_k2&view=item&id=16082](http://www.ical.ir/index.php?option=com_k2&view=item&id=16082).
- Farhangi S. Nurse/Nursing. Available from: <http://www.encyclopaediaislamica.com/madkhal2.php?sid=2707>.
- Fazelhashemi M. Daralshfa' hospital in Razavi Holy shrine in the mirror of history. *Documents of Astan Quds Razavi Library*. 2010; 2(7&8); 1-23
- Loloyee K, Ahmadi SH. Hospitals and medical condition of the Safavid era. *Quarterly Journal of History Department at Imam Khomeini Specialized University*. 2012; 6 (17): 3-20.
- Khoshnevis M, Noghani F. Ethics and laws and regulations on the evolution of nursing. Tehran: Anjoman Ghalam Iran; 1998.

27. Bryce V. The treatment of armenians in the ottoman empires 1915-16. New York: G.P. Putnam Sons; 1916.
28. Sajadi S. Hospital. Available from: <http://www.encyclopaediaislamica.com/madkhal2.php?sid=2525>.
29. Alchojeyan a. History of Boghozkhani Hospital 1956.
30. Salimian k. Foreign hospitals in medical history. *Pezeshky emrooz (medicine today journal)*. 2012; 890.
31. Wright D. Great Britain vii. *British Travelers to Persia*. 2012; XI, 3, 246-252
32. Speziale F. *Hospitals in Iran and India, 1500-1950s*. Leiden: Brill; 2012.
33. Schayegh C. Who is Knowledgeable is Strong: Science, Class, and the Formation of Modern Iranian society: 1900-1950. Univ of California Press; 2009
34. Armajani Y. Christianity viii. *Christian Missions in Persia*. In *Encyclopædia Iranica*. 1991; V(Fasc. 5): 544-547. [updated October 18, 2011]. Available from: <http://www.iranicaonline.org/articles/christianity-viii>.
35. Ishaya A. From Contributions to Diaspora: Assyrians in the History of Urmia, Iran *JAAS*. 2002; 20(1).
36. Littlewood W. The task-based approach: Some questions and suggestions. *ELT J*. 2004; 58(4):319-26.
37. Afkhami AA. Health in persia iii .Qajar period 2003 [updated March 20, 2012]. Available from: <http://www.iranicaonline.org/articles/health-in-persia-iii>.
38. *Nurses in the British Army: Imperial War Museum*. Available from: [http://www.nationalarchives.gov.uk/womeninuniform/army\\_nurses\\_profile.htm](http://www.nationalarchives.gov.uk/womeninuniform/army_nurses_profile.htm).
39. Raminejad R. *History of khorasan nursing*. first ed. Mashhad: Ahangehghalam; 2012.
40. Chisholm H. Sarah Broom Macnaughtan. Available from: [http://en.wikipedia.org/wiki/Sarah\\_Broom\\_Macnaughtan](http://en.wikipedia.org/wiki/Sarah_Broom_Macnaughtan).
41. Powell A. *Women in the War Zone: Hospital Service in the First World War*: Amazon Kindle 2013.
42. Anonymous. *The eighty-fifth annual report of the board of foreign missions of the presbyterian church in the united states of american*. USA: 1922.
43. Fulton Y. Nurses' views on empowerment: a critical social theory perspective. *J Adv Nurs*. 1997; 26(3): 529-36.
44. Cocking G. *Personal accounts by members of queen Alexandra's imperial military nursing service and territorial army nursing*. Available from: <http://www.scarletfinders.co.uk/17.html>.
45. Jablonska J. *The nurse 2009*. Available from: <http://news.medill.northwestern.edu/chicago/news.aspx?id=151785>.
46. Avery p. *Contemporary history of Iran*. Tehran: entesharat ataei; 1998.
47. Bakhtiar L, Bakhtiar R. *Helen of Tus: Her Odyssey from Idaho to Iran*. Kazi Publications 2002.
48. Webster JCB. *Presbyterian missionaries and gandhian politics, 1919-1922*. *J Presbyt Hist* .1984; 62(3): 246-57.
49. Nasrabadi AN, Lipson JG, Emami A. *Professional nursing in Iran: an overview of its historical and sociocultural framework*. *J Prof Nurs*. 2004; 20(6): 396-402.
50. Setzler L. *In Iran: The development of a nursing school in Shiraz*. *Am J Nurs*. 1941; 41(5): 520-5.
51. Pompian I. *Where are the nurses? the Rotarian - an international magazine*. 1969 december: 15-18.
52. Bahgecik N, Alpar SE. *Nursing education in Turkey: From past to present*. *Nurse Educ Today*. 2009; 29(7): 698-703.
53. Wood G, Haber J. *Nursing Research. Methods, critical appraisal and utilization*. 1995; St. Louis: Mosby Pub.Co.
54. Setzler L. *Nursing in Iran. the british journal of nursing*. 1939 september:242. Available from: <http://rcnarchive.rcn.org/data/Volume087-1939/page242-volume87-september1939.pdf>
55. Ziaeenasab M. *Nursing, from ancient to now*. Available from: <http://ino.ir/tabid/40/ctl/ArticleView/mid/384/articleId/7210/language/fa-IR/-aspx>
56. Fayyazie E. *History and practice "Lion and red sun society" in the era Reza Shah with relying on documents*. *faslnameh elmi pajooeshitarikh*. 2009; 4 (12): 65-89.
57. Alamouti M. Kasemi, Nosrat-Allah 2012. Available from: <http://www.iranicaonline.org/article>.
58. Margaret Murray Jackson. Available from: <http://www.bcnursinghistory.ca/jackson-margaret-campbell>.
59. Tabari Khomeiran R, Deans C. *Nursing education in Iran: Past, present, and future*. *Nurse Educ Today*. 2007; 27(7): 708-14.