What made Lebanese emigrant nurses leave and what would bring them back? A cross-sectional survey

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ABSTRACT

Background: The nursing workforce is critical for the provision of quality health-care and positive patient outcomes. There is a global trend of migration of nurses from under-developed to developed countries due to attractive job offers in the host countries. Lebanon presents such a case where nurses are migrating abroad, leading to shortages in the nursing workforce in their home country.

Objectives: The aim of this study was to investigate reasons for the migration of Lebanese nurses, and incentives that would attract them back to their home country in order to enhance the nursing workforce in Lebanon.

Design: This study is a cross-sectional survey of emigrant Lebanese nurses.

Settings: Recipient countries where Lebanese nurses emigrated.

Participants: 440 Emigrant Lebanese nurses were identified through the registration database of the Order of Nurses in Lebanon. The survey was sent to all of them via email; 153 responses were received.

Methods: Data were collected from November 2017 to March 2018. Analysis included univariate and bivariate tests to present descriptive statistics of the respondents, and to examine region of residence and gender in relation to their current job satisfaction, reasons for leaving Lebanon, intention to return to Lebanon, and aspects that would attract them back to their home country. Logistic regression analysis was used to determine the socio-demographic and work-related characteristics associated with the odds of returning to practice nursing in Lebanon.

Results: A total 136 completed responses were considered. Emigrant Lebanese nurses were highly educated, with more years of work experience, and older than nurses remaining in their home country. Top reasons for nurses to leave Lebanon included unsatisfactory salary or benefits, better work opportunities in other countries, and lack of professional development or career advancement. The majority of surveyed nurses (59%) expressed willingness to return to practice nursing in Lebanon. Aspects that would attract emigrant Lebanese nurses back to their home country include attractive salary or better benefits and opportunities for professional development, career advancement, or continuing education. Emigrant Lebanese nurses residing in the Gulf, staff nurses, and nurses with more years of work experience were more likely to return to practice nursing in Lebanon.

Conclusion: Highly educated and experienced nurses are departing from Lebanon. This presents a challenge for the less experienced nurses remaining in the country, who could benefit from the mentorship and experience of their migrating peers. Creating an environment that could enhance the professional development of nurses in Lebanon, with financial incentives could retain the nursing workforce in the country.

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What is already known about the topic?

- There is a global shortage of nurses that negatively impacts the quality of health-care.
- Developing countries, similar to Lebanon, are experiencing this shortage more severely due to the active migration of their nurses into developed countries.

What this paper adds

- Bachelor's prepared Lebanese nurses with a couple of years of experience are at risk of migrating from the country.
- Incentives that could attract the Lebanese emigrant nurses back to their home country include increased salary or benefits and professional development opportunities.
- Lebanese nurses practicing in Arabian Gulf countries are more likely to return to practice nursing in their country compared with those practicing in other regions of the world.

1. Introduction

The shortage of skilled human resources for health, especially nurses, is a global phenomenon (Liu et al., 2017; Marć et al., 2019; World Health Organization, 2016). This has negatively affected the effectiveness and efficiency of health care systems and has jeopardized the quality and safety of patient care (Hongoro and McPake, 2004; Liang et al., 2012; Twigg et al., 2010). Being the largest care providers in any healthcare system, nurses constitute an essential component of 'front line' staff, without which safe and effective health care delivery may not be realized (Buchan and Aiken, 2008). In addition, investing in nurses is essential to ensuring universal health coverage since they play a central role in the delivery of quality healthcare (Kurth et al., 2016) and in ensuring equitable access to health services (International Council for Nurses, 2015). This has challenged policymakers to develop long-term sustainable solutions to alleviate the crippling impact of nursing shortages (Buchan and Aiken, 2008; Currie and Carr Hill, 2012).

According to Buchan, 'shortage' does not only refer to a shortage in the number of nurses who are qualified but also to a shortage in the number of nurses willing to work as nurses in the existing circumstances (Buchan, 2006, 2000). Consequently, the lack of proper work opportunities or working conditions pushes many nurses to drop out of the nursing labor market, seek job in another sector of employment or even emigrate and seek a job outside their home country (Aiken et al., 2004, 2001; Dywili et al., 2013). The latter category is particularly important since emigrant nurses are relatively difficult to lure back into the nursing labor market in their home country. Thus, emigration make nurses a long-term or perhaps permanent loss of human capital to the local labor market (Delucas, 2014). Thus, it is pivotal to explore the reasons behind nurse emigration and find appropriate remedies, including incentives to recruit and retain nurses and encourage nurses who have left the labor market to return to their home country.

Literature has referred to numerous push factors that have contributed to job dissatisfaction among nurses and consequently led to the nursing shortages and emigration (Child and Mentes, 2010; Dywili et al., 2013; Marć et al., 2019; Roche et al., 2010; Sasso et al., 2019). These factors include: unattractive salaries, gender-based discrimination, undervaluation of the nursing profession, understaffing, performing non-nursing tasks, poor patient safety practices, emotional exhaustion, and the persistence of violence against health workers and more so against nurses (Child and Mentes, 2010; Dywili et al., 2013; Marć et al., 2019; Roche et al., 2010; Sasso et al., 2019). On the other hand, research has cited various pull factors contributing to nurses leaving the profession or seek-

ing a job outside their country. These factors include better salaries and working conditions, professional development opportunities, better quality of life, involvement in decision making, and flexible employment schedules (Aiken et al., 2004, 2008; Dywili et al., 2013; Kingma, 2001; Kline, 2003; Sasso et al., 2019).

International recruitment has made it more difficult for developing countries to retain their nurses, as job offers in developed countries have made it more attractive for nurses to leave their home country (Buchan, 2001; Dywili et al., 2013; World Health Organization, 2006). The focus of most research has been on efforts to retain nurses working in institutions of their home country; yet, more attention needs to be directed towards investigating the career trends of emigrant nurses and the means to attract them back to their home country. Such investigations are essential for evidence-based policy-making, since increased levels of nurse emigration may be a result of systemic issues that lie within the nursing workforce at the source country. Brewer and Kovner (2014) compared the relationship between theories of organizational turnover of nurses and theories of their international migration. They discussed how the individual factors of organizational turnover of a nurse relate to the "push and pull" factors of migration. They suggested that several factors related to individual decisions to change jobs such as the level of autonomy, relationship with peers, workload, job satisfaction, organizational commitment, and organizational culture, are related to pull factors of nurse migration. Such pull factors include better working conditions, better practice and educational opportunities, and higher wages. The authors emphasized that individual reasons for organizational turnover of nurses at the country level are important predictors of nurse migration, and thus must be examined to retain nurses within their home country (Brewer and Kovner, 2014).

2. Lebanese context

The attrition of nurses from local labor markets is a global phenomenon exacerbated in developing countries, and Lebanon is no exception. According to the United Nations World Economic Situation and Prospects Report, Lebanon is a developing country belonging to the upper-middle-income category (United Nations, 2019). This classification reflects the basic economic conditions of the country (United Nations, 2019). It is a small country in the Middle East known as an important commercial hub for the region due to its traditional mercantile culture and high literacy rate (Lebanon country profile, 2018; Lebanese Global Information Center). However, it has also been at the center of the region's conflicts, resulting in the country hosting large numbers of refugees (Lebanon country profile, 2018; Lebanon profile - Timeline, 2018). As of 2016, the population numbered at approximately 6,000,000 persons (World Health Organization). In 2014, the country's total expenditure on health accounted for 6.4% of the country's gross domestic products (GDP) (World Health Organization). It is considered one of the primary exporters of nurses to Gulf countries, in addition to countries in Europe and North America. Previous studies from Lebanon reveal that a fifth of nurses migrate out of the country within two years of graduation (El-Jardali et al., 2008). The records of the Order of Nurses in Lebanon (ONL) reveal a growing number of Lebanese nurses working abroad (Alameddine et al., 2017). Moreover, the nurse density in Lebanon has been reported to be 27.2 nurses per 10,000 population, which is a bit lower than the global nurse density (29.2 nurses/10,000 population), yet considerably lower than the average densities of Europe (80.5) or the Americas (48.8) (World Health Organization, 2014). The nursing profession in Lebanon also suffers from low enrolment in its programs and low retention rates (El-Jardali et al., 2009). Motivating factors for the high migration rates relate to poor supportive work environment, high workload, limited autonomy, and poor

commitment to good nursing care (El-Jardali et al., 2008). Challenging aspects of the work environment that have been documented include poor control over practice, lack of career development opportunities (El-Jardali et al., 2009), and exposure to verbal and physical abuse at the workplace (Alameddine et al., 2015).

The shortage of nurses has been a limiting factor in the achievement of optimal healthcare delivery in various countries, including those in the Middle East (AbuAlRub, 2007). In Lebanon, the loss of nurses through emigration presents a significant problem for many reasons. First, it worsens the already existing shortage of nurses. Second, the shortage inflicts major economic costs, as health systems will not be fully equipped to address the health needs of the population, resulting in increased sick time on the level of patients and increased work overload on the level of staffed nurses; both of which jeopardize patient outcomes. Third, with the fresh graduates leaving the country, Lebanon has less access to young, well-educated nurses, which ultimately affects the quality of care.

The main purpose of this study is to gain insight into the reasons behind the emigration of Lebanese nurses and understand whether an emigration is temporary versus permanent and/or reversible versus irreversible. Furthermore, the aim is to learn whether emigrant nurses are satisfied working abroad and whether their level of satisfaction differs from that previously reported for nurses working in Lebanon. The satisfaction levels of emigrant Lebanese nurses will be compared between those living in the Gulf Cooperation Countries (GCC) and non-Gulf regions. The GCC countries include Saudi Arabia, Kuwait, the United Arab Emirates (UAE), Qatar, Bahrain, and Oman; whereas when we mention the non-Gulf regions, we are referring to North America, Europe, and Australia.

The previous lack of an accurate reporting and surveillance system on the supply and distribution of nurses has made it difficult to understand the status of nurses in Lebanon. Over the last few years, however, the ONL have achieved significant progress with clean up and modernization of its nursing registration database. This has helped with developing a better understanding of the labor force dynamics of nurses, the current active workforce and the degree of workforce attrition (Alameddine et al., 2017). Therefore, with an updated registration database, it becomes more relevant and timely to investigate the status of Lebanese emigrant nurses and accordingly undergo a strategic health human resources planning process.

Evidence from this study will support policymakers in developing interventions to deal with the current attrition of nurses from the Lebanese labor market. Such interventions would focus on enhancing retention and offering incentives to emigrant nurses to return to Lebanon and be integrated into the local labor market. Moreover, knowing that nurses' migration is a global trend, this study may inform other countries that face similar challenges related to migration of their nurses to developed countries due to attractive job offers.

3. Methods

3.1. Research design and methods

This project couples the analysis of the nursing registration database of the ONL with a non-experimental cross-sectional design to survey Lebanese emigrant nurses on the reasons for their migration, current job satisfaction, intention to leave job abroad and the probability of them returning to practice nursing in Lebanon. Prior to the initiation of the study, ethical approval was obtained from the Institutional Review Board at the American University of Beirut for research involving human subjects.

3.2. Data collection

As part of a database update project carried out in years 2015–2016, the ONL updated the contacts of most nurses working abroad (Alameddine et al., 2017). In addition to the profile update, the ONL also asked nurses living abroad whether they would agree to be contacted in the future for research purposes, and about their preferred means of contact. Accordingly, an updated list of emigrant nurses was generated along with their respective contact information.

All nurses with an email address, who agreed to be contacted, received via email a link to an electronic questionnaire on LimeSurvey (LimeSurvey GmbH, 2003). The email included an overview of the study and its objectives. The first page of the electronic questionnaire included a consent form for the study that all participants must read and approve prior to answering the questionnaire. Nurses receiving the e-mail had the choice to participate in the study or not, and all responses were anonymous. Data collection took place from November 2017 to March 2018. Multiple reminders were sent out during this time of data collection.

3.3. Survey instrument

The survey questionnaire used in the data collection for this study was drafted based on a thorough literature review of similar questionnaires (El-Jardali et al., 2013, 2009, 2008; Mueller and McCloskey, 1990; Thomas, 2006) as well as feedback from the research team. An expert panel reviewed the questionnaire to ensure its content validity, comprehensiveness, and contextualization. The panel consisted of an ONL board member, a practicing nurse, a researcher, a policy analyst, and a statistician. The questionnaire was originally written in English, before being translated to the Arabic language, and then back-translated by a different professional translator to English. The original and back-translated English versions of the questionnaire were examined to ensure parallel form reliability. Any discrepancies in the back-translated version were addressed to ensure an accurate translation. Afterward, the questionnaire was pilot tested on 10 emigrant nurses who were excluded from the study. Questions within the survey were intended to explore five sections:

1. Section one included questions related to emigrant nurses' demographics, such as age, sex, marital status, whether the nurse has children and the year they left have Lebanon.
2. Section two addressed the professional background. Specific questions were included tackling their highest nursing educational credential; the year of graduation from their highest nursing credential; their current position and employment status if they are currently employed; and the total number of years of work experience in the field of nursing if they are currently working in the nursing field. Other questions covered type of institution and the total number of years working in such institution, the country they are residing in and whether they have been in another country, the total number of years of work experience in the field of nursing and their reasons to leave Lebanon and work abroad.
3. Section three included questions, assessing the current job satisfaction, such as flexibility in scheduling their hours, the freedom to choose their own method of working, salary, opportunities for career advancement, job security, etc. For this dimension, the survey instrument used a 5-point Likert rating scale in which 1 represented very dissatisfied and 5 represented very satisfied.
4. Section four assessed the nurse's intention to quit current position over the next 1–3 years, such as quit and move to another institution, quit and move to work in a non-health related job,

quit and leave the country they currently reside in and quit and return to Lebanon. In this section also, the survey instrument used a 5-point Likert rating scale in which 1 represented very likely and 5 represented very unlikely.

5. Section five examined the nurse's intention to return to practice nursing in Lebanon, and factors and initiatives that could facilitate nurses' return to practice in Lebanon.

3.4. Statistical analysis

Data entry and analysis were conducted using the IBM SPSS statistics software version 24 for Windows (IBM SPSS Statistics n.d.). Descriptive statistics were performed and presented as means and standard deviations (SD) for continuous variables or as frequencies and proportions for categorical variables. Differences in socio-demographic and work-related characteristics of emigrant Lebanese nurses by region of residence (Gulf vs. non-Gulf) were conducted using Independent *t*-test for continuous variables and Chi-square test for categorical ones. Comparisons of reasons behind emigration of Lebanese nurses, nurses overall satisfaction with current work, nurses likelihood for returning to practice nursing in Lebanon, aspects that attract nurses to return to Lebanon by region of residence and gender were all performed using Chi-square analysis. Simple and multiple logistic regression analyses were applied to determine which socio-demographic and work-related characteristics of the study sample are associated with the odds to return to practice nursing in Lebanon. In the regression model, socio-demographic and work-related variables, including age, gender, highest nursing educational credential, current work position, employment sector, work experience, region of residence and number of countries previously worked in were all used as in-

dependent variables. The likelihood to return to practice nursing in Lebanon, which was recoded into two categories: 0= Unlikely and 1= Likely (combined not sure and likely) was used as the dependent variable. All socio-demographic and work-related variables that showed statistical significance in the simple logistic model were included in the final multiple logistic regression model as independent variables. Odds ratios and their respective 95% confidence intervals were calculated. A *p*-value of 0.05 was used to detect significance in all analyses used in the present study.

3.5. IRB approval

The Institutional Review Board- Social and Behavioral Committee approved this study prior to data collection; Protocol number FHS.MA.22.

4. Results

The invitation to participate in this study was sent to 440 email addresses of emigrant Lebanese nurses extracted from ONL database. At the end of the data collection phase 153 responses were received, resulting in a response rate of 35%. Of these responses, three participants reported returning to Lebanon at the time of the survey and so they have been excluded from the study. A further 14 participants were excluded for having incomplete responses to the survey. This resulted in 136 responses that formed the data set reported and analyzed below.

4.1. General characteristics of study population

Table 1 shows the socio-demographic and work-related characteristics of emigrant Lebanese nurses participating in the survey.

Table 1
Socio-demographic and work-related characteristics of emigrant Lebanese nurses participating in the survey.

	Total sample (<i>n</i> = 136)	Gulf <i>n</i> = 77	Non-Gulf <i>n</i> = 59	Significance
Age (years), <i>n</i> (%)				
25–34	39(28.7)	22(28.6)	17(28.8)	<i>P</i> = 0.480
35–44	75(55.1)	45(58.4)	30(50.8)	$\chi^2=1.466$
≥45	22(16.2)	10(13.0)	12(20.3)	
Gender, <i>n</i> (%)				
Males	58(42.6)	32(41.6)	26(44.1)	<i>P</i> = 0.769
Females	78(57.4)	45(58.4)	33(55.9)	$\chi^2=0.086$
Marital status, <i>n</i> (%)				
Single or divorced	39(28.7)	14(18.2)	25(42.4)	<i>P</i>=0.002
Married	97(71.3)	63(81.8)	34(57.6)	$\chi^2=9.558$
Highest nursing educational credential, <i>n</i> (%)				
Diploma	24(17.6)	15(19.5)	9(15.3)	<i>P</i>=0.001
Bachelor degree	74(54.4)	50(64.9)	24(40.7)	$\chi^2=13.650$
Graduate and post-graduate degree	38(27.9)	12(15.6)	26(44.1)	
Employment status, <i>n</i> (%)				
Permanent-full time	125(91.9)	76(98.7)	49(83.1)	<i>P</i>=0.001
Permanent-part time	9(6.6)	1(1.3)	8(13.6)	$\chi^2=11.088$
Temporary/casual	2(1.5)	–	2(3.4)	
Current work position, <i>n</i> (%)				
Research and training	23(16.9)	11(14.3)	12(20.3)	<i>P</i>=0.003
Nurse manager	40(29.4)	32(41.6)	8(13.6)	$\chi^2=15.404$
Staff nurse	55(40.4)	23(29.9)	32(54.2)	
Quality-related position	10(7.4)	7(9.1)	12(20.3)	
Other	8(5.9)	4(5.2)	4(6.8)	
Employment sector, <i>n</i> (%)				
Hospital	96(70.6)	56(72.7)	40(67.8)	<i>P</i> = 0.551
Community	11(8.1)	6(7.8)	5(8.5)	$\chi^2=18.995$
Academic	13(9.6)	5(6.5)	8(13.6)	
Private/government	16(11.8)	10(13.0)	6(10.2)	
Work experience (years), Mean ±SD				
Current institution	6.61±5.06	8.16±5.74	4.59±3.01	<0.001
Nursing field abroad	10.04±7.32	11.16±8.24	8.58±5.66	<i>P</i>=0.041
Nursing field	14.26±7.08	14.21±7.64	14.34±6.35	<i>P</i> = 0.915
Number of countries previously worked in, <i>n</i> (%)				
1 country	81(59.6)	55(71.4)	25(42.4)	<i>P</i>=0.001
>1 country	55(40.4)	22(28.6)	34(57.6)	$\chi^2=11.643$

Fig. 1. Reasons behind the emigration of Lebanese nurses (%).

Concerning gender distribution, 43% of nurses were males, similar to the percentage in the registration database for nurses living abroad as per the ONL database. Although the percentage of male nurses registered with LON is approximately 20% of all registered nurses (Order of Nurses in Lebanon, 2018), male nurses constitute 40% of Lebanese emigrant nurses and accounted for 43% of the responses received in this study. A little over half of the nurses were between 35 and 44 years old, with none of the participants being in the youngest category of 18–24 years. The participants were highly educated with half having a bachelor's degree in nursing and 28% having a post-graduate degree. All nurses were employed (100%) and working on a full-time basis (91.9%). Most nurses worked in the hospital sector (71%) and 10% worked in academic settings. A third of nurses had managerial roles and 17% worked in research and training. Nurses were highly experienced, having worked an average of 14.3 years in nursing in general and 10.0 years abroad.

Table 1 also describes the socio-demographic and work-related characteristics of emigrant Lebanese nurses participating in the survey in the Gulf region and non-Gulf regions. A little over half of the nurses worked in the Gulf region (57%) and the rest worked in non-Gulf regions. Analysis revealed statistical significance for marital status, highest nursing educational credential, employment status, current work position, work experience and number of countries previously worked in, between the Gulf region and non-Gulf regions (Table 1). There were no statistical significance for age, gender and Employment sector for the groups compared.

4.2. Reasons for leaving

Reasons behind the emigration of Lebanese nurses are displayed in Fig. 1. The top three reasons for leaving Lebanon for both non-Gulf and Gulf regions were unsatisfactory salary/benefits (72.8%), better work opportunities in other countries (60.3%), and lack of professional development/career advancement (55.9%). Despite Lebanon's political instability, only around a third of nurses indicated that this was a major reason for emigration (35.3%).

Analysis revealed statistically significant association between gender and the majority of reasons behind the emigration of Lebanese nurses (Please refer to Supplementary Table S1). In particular, male emigrant nurses most common reasons for emigration were unsatisfactory salary/benefits (93.1 vs 57.7%, $p < 0.001$); better work opportunities in other countries (70.7 vs 52.6%, $p = 0.033$); lack of professional development/career advancement (69.0 vs 46.2%, $p = 0.008$); poor work conditions (46.6 vs 28.2%,

$p = 0.028$); lack of security (50.0 vs 24.4%, $p = 0.002$); and lack of job stability (31.0 vs 14.1%, $p = 0.017$). Moving with the family was a more common reason for female emigrant nurses (29.5% vs 3.4%, $p < 0.001$).

4.3. Current job satisfaction

Nurses' overall satisfaction with the various aspects of their current work is shown in Fig. 2. The level of satisfaction was overall high for most aspects of their work. The top reasons for the nurses' overall dissatisfaction with their current work in both non-Gulf, and Gulf regions include working hours (19.1%), opportunities for career advancement (18.4%), opportunities for staff development (17.6%), job security (15.4%), participation in decision making (15.4%), and the way the institution is managed (15.4%). The overall satisfaction with work, however, was relatively high, with only around 10% of emigrant nurses dissatisfied with their current job and was similar for both Gulf and non-Gulf regions.

4.4. Intention to return to practice nursing in Lebanon

Results showed that emigrant Lebanese nurses in the non-Gulf were satisfied with more aspects of their work compared to those in the Gulf, except with freedom in method of working, nursing peers (relationship among nurses), flexibility in scheduling hours, relationship with their head nurse, the amount of responsibility given to them, and relationship with management. Analysis also revealed a statistically significant association between region of residence and one aspect of job satisfaction. Nurses in the non-Gulf regions, were significantly more dissatisfied with the freedom in choosing method of working (10.2 vs 1.3%, $p = 0.004$).

Nurses' likelihood of returning to practice nursing in Lebanon is demonstrated in Fig. 3. Overall, a considerable proportion of nurses of the study sample indicated they are likely to return to Lebanon to practice nursing (58.8% vs 41.2%; $p = 0.04$). More nurses in the Gulf region (71.4%) are likely to return to Lebanon to practice nursing compared with 42.4% of nurses in the non-Gulf regions ($p = 0.001$).

Aspects that would attract emigrant nurses to return to Lebanon are presented in Fig. 4. In the overall sample, the top two reasons are more attractive salary/better benefits and opportunities for professional development/career advancement/continuing education. While the Gulf nurses put greater emphasis on more attractive salary/better benefits, opportunities for professional development/career advancement/continuing education, and better job

Fig. 2. Nurses satisfaction with their current work and aspects of their work (%).

Fig. 3. Nurses' likelihood for returning to practice nursing in Lebanon (%).

stability, nurses working in the non-Gulf countries put greater emphasis on political security and more autonomy in work/decision making (Fig. 4). The analysis also revealed a statistically significant association ($p = 0.004$) between the region that nurses are currently residing in and political security as the reason for the return (46.8% vs 67.8%; $p = 0.014$).

The analysis also revealed a statistically significant association between gender and better salary and benefits as a return factor. In particular, more males reported better salary or benefits as im-

portant factor to return to Lebanon compared to females (87.9 vs 66.7%, $p = 0.004$, please refer to *Supplementary Table S2*).

Table 2 presents the simple and multiple logistic regression analyses for the associations of the socio-demographic and work-related characteristics with the likelihood of returning to practice nursing in Lebanon being the dependent variable. Using results from the simple logistic regression, variables significantly associated with the likelihood to return to practice nursing in Lebanon in the study population included current work position, employment sector, work experience in the current institution and in nursing field abroad, the region of residence, and the number of countries previously worked in. In particular, compared to research and training as current work position, nurse managers and staff nurses had significantly higher odds of returning to practice nursing in Lebanon (OR: 3.23; CI: 1.11–9.39 and OR=2.95; CI: 1.08, 8.05 respectively). Nurses working in hospital had higher odds of returning to practice nursing in Lebanon compared to those working in private/government sector. Furthermore, current institution and nursing field abroad were both associated with higher odds of returning to practice nursing in Lebanon (OR: 1.17; CI: 1.07–1.29 and OR=1.09; CI: 1.02–1.16 respectively). As far as region of residence is concerned, nurses living in the Gulf had the highest odds of returning to practice nursing in Lebanon compared to those residing in the non-Gulf countries (OR: 3.40; CI: 1.66–6.95). Finally, nurses

Fig. 4. Aspects that will attract emigrant nurses to return to Lebanon (%).

who worked previously in more than one country had significantly lower odds of returning to practice nursing in Lebanon compared to those who worked in only one country (OR: 0.42; CI: 0.21–0.84).

A multiple logistic regression model was used to examine the associations of the socio-demographic and work-related characteristics with the likelihood of returning to practice nursing in Lebanon in the study population (Table 2). Variables were put in the model in order of strength of their association with likelihood of returning to practice nursing in Lebanon as per the simple analysis. The effect of each variable on the model was assessed and the variable was kept if it significantly contributed to a better fit of the model. The final multiple logistic model included the following variables: current work position, employment sector, work experience in the nursing field abroad, the region of residence and the number of countries previously worked in. The results of the multiple logistic analysis showed that likelihood to return to practice nursing in Lebanon was significantly associated with current work position ($p = 0.027$), work experience in the nursing field abroad ($p = 0.015$), and region of residence ($p = 0.010$). Participants who were staff nurses were 4.22 times more likely to return to practice nursing in Lebanon as compared to nurse managers, academic staff, those with quality-related positions and those employed in other professions (OR: 4.22, CI: 1.18–15.07, Table 2). More years of work experience in nursing abroad among participants was associated with higher odds of returning to practice nursing in Lebanon (OR: 1.09, CI: 1.02–1.16). Furthermore, participants residing in the Gulf had a higher odd of returning to practice nursing in Lebanon compared to those residing in the non-Gulf (OR: 3.11, CI: 1.31–7.39).

5. Discussion

The results of this study are in conformity to a certain extent with similar studies that have been done in the past in regards to the push factors that drive nurses to migrate from Lebanon. However, this study is unique in offering comparison between nurses residing in the Gulf region and non-Gulf regions, and in unearthing

a high willingness of nurses to return to their home country specifying the incentives that entice them to return.

Findings of this study revealed that nurses who migrated from Lebanon were older than those who remained in the country, had greater work experience, and were highly educated. The top three reasons for leaving Lebanon were unsatisfactory salary/benefits (72.8%), better work opportunities in other countries (60.3%), and lack of professional development/career advancement (55.6%). These reasons are similar to those reported by El Jardali et al. (2008) of emigrant Lebanese nurses based on a major recruitment agency in the country. However, in the same study, surveyed Lebanese migrant nurses reported different reasons such as shift work, high nurse patient ratio, lack of autonomy and support from superiors, and poor commitment to nursing (El Jardali et al., 2008).

A review by Dywili et al. (2013) cites primary reasons for international nurse migration related to economic and professional factors (Dywili et al., 2013). The deteriorating economic situation of countries was a factor for the migration of nurses from their home countries, with a trend in international nurse migration from the low and middle-income countries to the high-income countries (Dywili et al., 2013). Similarly, a report on international nurse migration also found that nurses migrated from their countries in pursuit of higher salaries and financial improvement in the destination countries (Buchan et al., 2003).

Several studies pertaining to specific countries revealed the significant relationship between salaries and nurses decision to leave their countries or jobs. A study by Yaktin et al. (2003) on job satisfaction of nurses in Lebanon found that they were least satisfied with their salary (Yaktin et al., 2003). George and Rhodes (2017) studied pay differentials between nurses in India and those who migrate from it to popular destination countries, such as USA, United Kingdom (UK), Canada, and UAE. The authors found that nurses in the US would earn 82.7% more than those in India, whereas, those in Canada and UAE were better off by 28% and 20% (George and Rhodes, 2017). A study by Salami et al. (2014) on the motives for emigration of nurses from the Philippines revealed that the financial strain of supporting a family was a major factor for them to seek work abroad, which would subsequently allow them

Table 2

Simple and multiple logistic regression analyses for the associations of the socio-demographic and work-related characteristics with the likelihood to return to practice nursing in Lebanon.

	Return likelihood to practice nursing in Leb			Simple logistic regression	Multiple logistic regression
	Unlikely (n = 56)	Likely (n = 80)	p-value	OR 95%CI	OR 95%CI
Age (years), n (%)					
≥45	8(14.3)	14(17.5)	P=0.870	1.00	
25–34	16(28.6)	23(28.8)		0.82(0.28,2.41), p=0.721	
35–44	32(57.1)	43(53.8)		0.77(0.29,2.05), p=0.598	
Gender, n (%)					
Females	37(66.1)	41(51.3)	P=0.085	1.0	
Males	19(33.9)	39(48.8)		1.85(0.91,3.75), p=0.087	
Highest nursing educational credential, n (%)					
Diploma	7(12.5)	17(21.3)	P=0.407	1.00	
Bachelor degree	33(58.9)	41(51.3)		0.51(0.19,1.38), p=0.186	
Graduate/post-graduate degree	16(28.6)	22(27.5)		0.57(0.19,1.68), p=0.307	
Current work position, n (%)					
Research and training	14(25.0)	9(11.3)	P=0.059	1.00	1.00
Nurse manager	13(23.2)	27(33.8)		3.23(1.11,9.39), p=0.031	2.90(0.71,11.87), p=0.138
Staff nurse	19(33.9)	36(45.0)		2.95(1.08,8.05), p=0.035	4.22(1.18,15.07), p=0.027
Quality-related position/other	10(17.9)	8(10.0)		1.24(0.36,4.35), p=0.732	1.45(0.29,7.20), p=0.647
Employment sector, n (%)					
Private/government hospital	11(19.6)	16(7.5)	P=0.06	1.0	1.0
Academic/community	34(60.7)	62(77.5)		3.34(1.14,9.83), p=0.028	2.64(0.72,9.69), p=0.143
	11(19.6)	12(15.0)		2.00(0.55,7.25), p=0.292	2.94(0.54,16.01), p=0.213
Work experience (years), Mean ±SD					
Current institution	4.85±3.60	7.85±5.57	P<0.001	1.17(1.07,1.29), p=0.001	–
Nursing field abroad	7.96±4.64	11.50±8.45	P=0.002	1.09(1.02,1.16), p=0.008	1.09(1.02,1.16), p=0.015
Nursing field	13.21±5.61	15.00±7.91	P=0.149	1.04(0.99,1.09), p=0.152	–
Region of residence, n (%)					
Non-Gulf	34(60.7)	25(31.2)	P=0.001	1.0	1.0
Gulf	22(39.3)	55(68.8)		3.40(1.66,6.95), p=0.001	3.11(1.31,7.39), p=0.010
Number of countries previously worked in, n (%)					
1 country	26(46.4)	54(67.5)	P=0.014	1.0	1.0
>1 country	30(53.6)	26(32.5)		0.42(0.21,0.84), p=0.015	0.52(0.22,1.22), p=0.134

to send remittances back home (Salami et al., 2014). These studies reflect our findings on salary being a major factor for the migration of nurses.

Concerning professional factors for nurse migration, the literature cites professional development as one of the main incentives for the migration of nurses globally, where low professional status was mentioned as a push factor for nurses to seek work abroad (Buchan et al., 2003; Dywili et al., 2013). A study by Badr et al. (2010) on nurses' working conditions in Lebanon found that nurses cited continuing education as the most pressing issue in their profession (Badr et al., 2010). Another study by Aboderin (2007) found that one of the primary reasons for the migration of Nigerian nurses to UK was the declining status of the nursing profession (Aboderin, 2007). Furthermore, a scoping review on migration of health professionals, including nurses, from South Africa, reported lack of development opportunities and job insecurity as reasons for them to seek work abroad (Labonté et al., 2015). These studies are in line with the findings of our study, where Lebanese emigrant nurses mentioned professional advancement as one of their main reasons for leaving.

Lebanese emigrant nurses in the Gulf and non-Gulf regions were overall highly satisfied with their current work conditions; however, those in the non-Gulf were satisfied with more aspects of their work compared to those in the Gulf. Overall, an encouraging 59% of nurses expressed likelihood to return to practice nursing in Lebanon (71% for nurses in the Gulf and 42% for nurses in the non-gulf). The top reasons that would attract emigrant Lebanese nurses back to their home country were attractive salary/better benefits and opportunities for professional development/career advancement/continuing education. Being a staff nurse, having more years of work experience, and residing in the Gulf increased the odds of nurses to return to Lebanon.

In a study by Al-Nawafleh (2015) on Jordanian nurses who had migrated to the Gulf countries, higher salary and benefits, and seeking opportunities for career advancement or professional education were reported as the main reason for migration (Al Nawafleh, 2015). Our study shows that nurses from Lebanon are migrating to the Gulf countries for similar reasons, namely salary/better benefits or professional advancement. Interestingly, both our findings and that of Al-Nawafleh (2015) reported a high percentage of nurses who migrated to the Gulf expressed intention to return to their home countries. Hence, nurses in the region may not be attaining what they are seeking when migrating to the Gulf, or may be facing barriers to integration. A recent study reports that internationally educated nurses in the US faced several barriers to their integration such as language, communication, stigma due to educational preparation, legal issues, and differences in culture and practice (Ghazal et al., 2019). The literature has also cited movement of nurses from other countries such as India to the Middle East, to gain experience, prepare for foreign nursing exams, and save money, before they migrate to the US or UK (Percot, 2006a). Thus, nurse migration to the Gulf countries is considered a “stepping stone” for their future in other countries (Percot, 2006a). In a study by Percot (2006b), several factors were identified for the migration of Indian nurses from the Gulf to North America or Europe, such as lack of security, and inability to obtain a citizenship or own a business (Percot, 2006b). Indian nurses mentioned that migration to North America or Europe would allow them to obtain additional ‘goods’ such as housing or a retirement pension (Percot, 2006b). Hence, Lebanese nurses may be exhibiting such similar migratory patterns for the same reasons.

Worth noting in the findings of this study is that the male nursing workforce in Lebanon is around half of those who migrated, male nurses are twice more likely to migrate than female nurses.

Similar findings have been reported by [Al-Nawafleh \(2015\)](#) on his study on migration of nurses from Jordan which revealed that the majority of Jordanian nurses in the Gulf were males (67%) ([Al Nawafleh, 2015](#)). Furthermore, a national study on Lebanese migration by [Chaaban \(2009\)](#) reported that the trend of emigration of Lebanese nationals from their home country has been predominantly male with higher salaries and work opportunities documented as primary reasons for their migration ([Chaaban, 2009](#)). The fact that males are the higher proportion of those who migrate, reflects the cultural aspects of the Arab world in relation to the role of males as the primary bread-winners in their families ([Kargwell, 2012](#)). Therefore, increasing the salaries of nurses in Lebanon would be a main incentive to attract male nurses back to their home country.

Although higher salaries, better work, and professional development opportunities abroad were the main reasons for nurses to leave Lebanon, our study showed that Lebanese emigrant nurses in the non-Gulf regions emphasized political security in Lebanon as a reason that would attract them back to the country. While those in the Gulf placed a higher emphasis on higher salary and better opportunities for professional development as a reason to return home. Our findings show that the political situation of a country plays a major role in the migration of Lebanese nurses, secondary to achieving the desired salary and work/professional development opportunities. The literature has reported the political situation in Lebanon and the region, as one of the main reasons for the migration of nurses and other health professionals ([Chaaban, 2009](#); [Chikanda, 2005](#); [El-Jardali et al., 2008](#); [Kalipeni et al., 2012](#); [Thomas, 2006](#)). The civil war that Lebanon had endured during the 1970s was a major factor for the migration of physicians ([Kronfol et al., 1992](#)). Civil wars in other countries in the region such as Syria, Iraq, and Libya, have also documented the migration of their health professionals due to training concerns, security, and financial issues ([Bou-Karroum et al., 2019](#)). Similarly, other developing countries such as Mozambique and Liberia in Sub-Saharan Africa that had experienced civil wars, reported that up to 80% of their much needed nursing workforce migrated to practice abroad ([Kalipeni et al., 2012](#)). Providing a secure and stable environment for Lebanese nurses can attract them back to the country.

Most nurses living abroad were satisfied with the various aspects of their job especially those related to degree of autonomy and relationship with colleagues at work. Conversely, there were aspects of the job that were relatively less favored by nurses including working hours, benefits packages and opportunities for career advancement/professional development. The overall job satisfaction average score for all responding nurses was 90.4%. This level is higher than the level of job satisfaction reported in previous studies in Lebanon, where 30% of emigrant nurses are dissatisfied with their work ([El-Jardali et al., 2009](#)). Providing nurses with more autonomy and responsibility that would help them exercise their full potential will not need additional investments. Creating a safe and respectful work environment that fosters shared governance is reported as an important factor positively influencing nurses' job satisfaction and intention to stay ([McGilton et al., 2014](#)).

Similar to our results, studies on migration of Lebanese nurses have also indicated that nurses who migrate from the country are older ([Alameddine et al., 2017](#)) with higher educational qualifications ([El-Jardali et al., 2009](#)). A national study on migration in Lebanon reported that Lebanese nationals with technical degrees expressed willingness to leave the country, but did not have the financial means to do so ([Chaaban, 2009](#)). Furthermore, nurses with university degrees in Lebanon worked for a period of time before departing. This indicates that nurses are working to gain experience before searching for opportunities abroad. The departure of older and highly educated nurses may impact quality of patient care since the literature has indicated that degree of education is

positively associated with reduced patient outcomes ([Aiken et al., 2003](#)). Interventions should aim towards the retention of nurses, so as not to lose health personnel who are critical for the provision of health services. In the Philippines, an entire cardiovascular unit temporarily closed in a hospital due to the recruitment of its nurses overseas ([Alkire and Chen, 2006](#)). While such consequences of nurse migration have not been documented in Lebanon, a study by [Alameddine et al. \(2017\)](#) showed that increasing numbers of nurses are leaving Lebanon, with a 173% increase of nurses working abroad during the years 2009–2014 ([Alameddine et al., 2017](#)). Emigrant Lebanese nurses returning to Lebanon would not only supplement the market quantitatively but also add lots of quality as they would have accumulated clinical, administrative, and research experience that is much needed in Lebanon taking into consideration that the vast majority of the nursing workforce in Lebanon is young and relatively less experienced ([Alameddine et al., 2017](#)). Older and more experienced nurses who return to the country can be an essential component to the training of nurses as they can act as mentors, leading to increased patient safety and nurse retention ([Batcheller et al., 2004](#)).

The logistic regression model findings provide an opportunity for nursing stakeholders to develop evidence based targeted intervention that could potentially encourage emigrant nurses to return to their home country. For example, staff nurses and nurses working in hospitals are four times more likely to express willingness to return to practice nursing in Lebanon. A regional focus could also potentially yield a better return on investment with Gulf region residing Lebanese emigrant nurses being three times more likely to express willingness to return to Lebanon compared to their non-Gulf residing counterparts.

The fact that emigrant Lebanese nurses working in the Gulf region are relatively less satisfied compared to their counterparts in the non-Gulf, coupled with the high likelihood expressed by Gulf residing nurses to return to practice in Lebanon, open a window of opportunity for Lebanese nursing stakeholders to devise targeted recruitment plans. This would attract experienced nurses back to their home country. Such potential brain drain reversal plans are time sensitive since Gulf residing nurses, after accumulating a few years of experience, may as well immigrate to the non-Gulf where it becomes more difficult to attract them back to their home country, as we found in this study. A multi stakeholder approach involving the Ministry of Public Health, the ONL, and other policy makers would be pivotal to design and implement such campaigns. An incentive package, consisting of a combination of financial compensation packages and growth/development opportunities, could be put together to attract nurses back to their home country. Tapping into the potential of social media and other technological platforms will be prudent to bring together Lebanese emigrant nurses with potential employers in Lebanon. For example, online platforms have been created in Canada and the US that link newly graduated nurses with potential employers through an online portal ([Health Force Ontario, 2017](#)). Technological platforms that offer employment opportunities in Lebanon could be created as a link between employers in Lebanon, and Lebanese nurses working abroad. The Egyptian government as another example has made agreements with Arab, European, and African countries for Egyptian doctors to go for two years on sabbatical leave, with the choice of returning to practice in their home country ([de Guchteneire et al., 2006](#)). It has also been suggested that the diaspora can be encouraged to assist their home countries through exchange programs. The Nigerian president for example meets with Nigerian expatriates during his travels to encourage them to contribute to their home country ([de Guchteneire et al., 2006](#)). Such collaborative efforts could also be initiated in Lebanon. The order of nurses in Lebanon, the ministry of public health, and the syndicate of private hospitals in Lebanon, together could lobby for employment

opportunities that would acknowledge the nurses' expertise and continuously grow their skills. The society of nursing directors in Lebanon could also create a strategic plan for attracting immigrant nurses. The schools of nursing in Lebanon in collaboration with the established alumni association can encourage alumni to come back to practice in their home country.

6. Conclusion

This study has its limitations but also strengths. Although it is cross sectional that demonstrates correlation and not causality and has a moderate response rate despite our best efforts, it revealed that more than half of the sampled Lebanese emigrant nurses are willing to return to practice nursing in their home country, despite their reported high level of job satisfaction abroad. Moreover, while we cannot ascertain that non-respondents would have a similar opinion as the respondents yet, the findings open a window of opportunity for an inter-sectoral collaboration between concerned Ministries, the ONL, academic institutions and other related stakeholders to design and implement targeted initiatives that would bring Lebanese nurses back to their home country. In specific, we are referring to the findings related to the aspects that would bring nurses back to their country. Acknowledging the small sample, there is a need for future research to delve deeper into the findings using qualitative methodology or mixed methods to better understand the incentives that would bring nurses back to practice in Lebanon and better inform decisions of inter-sectoral collaborators in healthcare.

It is well known that offering higher salaries and benefits is a far-fetched expectation of healthcare institutions. Nevertheless, building a synergy between a small financial incentive commensurate with the level of experience, a clear growth path and good access to professional development opportunities could perhaps constitute a good enough incentive package that would bring emigrant nurses back to the country.

Although the findings of this study are applicable to the context of Lebanon, countries with a nursing labor market context comparable to that of Lebanon may also find the results and recommendations of this study relevant to their context. Study findings call for concerted efforts of the health authorities and the Order of Nurses in Lebanon to draw strategic health human resources planning for nursing involving other stakeholders from academia and health services. The purpose is to retain our nurses, reverse the drain of experienced nurses, and attract more persons to study and practice nursing. Noteworthy, is that nursing and hospital administrators need to acknowledge the findings of this study and others done previously to learn from them and accordingly design retention strategies and healthy work environments for nurses with opportunities to develop professionally. Moreover, findings of this study may inform other countries with similar contexts facing the same challenges.

Conflict of interest

None.

CRedit authorship contribution statement

Mohamad Alameddine: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing - original draft, Writing - review & editing. **Samer A. Kharroubi:** Data curation, Formal analysis, Writing - original draft, Writing - review & editing. **Nuhad Y. Dumit:** Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing - original

draft, Writing - review & editing. **Sara Kassas:** Conceptualization, Funding acquisition, Formal analysis, Writing - original draft, Writing - review & editing, Data curation. **Marwa Diab-El-Harake:** Formal analysis, Writing - original draft, Writing - review & editing, Data curation. **Nathalie Richa:** Conceptualization, Funding acquisition, Investigation, Methodology, Writing - review & editing.

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