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Investigating the job satisfaction of healthcare providers at primary healthcare centres in Lebanon: A national cross-sectional study

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Abstract

Low job satisfaction is linked to higher staff turnover and intensified shortages in healthcare providers (HCP). This study investigates the level of, and factors associated with, HCP job satisfaction in the national primary healthcare (PHC) network in Lebanon. The study adopts a cross-sectional design to survey HCP at 99 PHC centres distributed across the country between October 2013 and May 2014. The study questionnaire consisted of four sections: socio-demographics/professional background, employment characteristics, level of job satisfaction (Measure of Job Satisfaction scale) and level of professional burnout (Maslach Burnout Inventory-HSS scale). A total of 1,000 providers completed the questionnaire (75.8% response rate). Bivariate and multivariate regression analyses were used to identify factors significantly associated with job satisfaction. Findings of the study highlight an overall mean job satisfaction score of 3.59 (SD 0.54) indicating that HCP are partially satisfied. Upon further examination, HCP were least satisfied with pay, training and job prospects. Gender, age, career plans, salary, exposure to violence, and level of burnout were significantly associated with the overall level of job satisfaction which was also associated with increased likelihood to quit. Overall, the study highlights how compensation, development and protection of PHC HCP can influence their job satisfaction. Recommendations include the necessity of developing a nationally representative committee, led by the Ministry of Public Health, to examine the policies and remuneration scales within the PHC sector and suggest mechanisms to bridge the pay differential with other sectors. The effective engagement of key stakeholders with the development, organisation and evaluation of professional development programmes offered to HCP in the PHC sector remains crucial. Concerned stakeholders should assess and formulate initiatives and programmes that enrich the physical, psychological and professional well-being of their HCP. The aforementioned suggestions are necessary to strengthen and sustain PHC HCP and support the provision of universal health coverage to the Lebanese population.

KEYWORDS

human resources for health, job satisfaction, Lebanon, primary healthcare, professional burn out

1 | INTRODUCTION

Primary healthcare (PHC) is a means to achieve universal access to health (Lawn et al., 2008). Intentions to commit to PHC as a means to promote and protect population health started to receive increased support since the Declaration of Alma Ata 38 years ago (WHO, 1978). In 2008, it re-emerged as the theme of the World Health Report (Van Lerberghe, 2008). PHC can enhance the attainment of health equity through decreased cost, improved accessibility and exacerbated appropriateness to the needs of individuals and populations (Lawn et al., 2008; Starfield, Shi, & Macinko, 2005). With its focus on health sustainability through healthy lifestyle promotion and disease prevention (Van Lerberghe, 2008), PHC is considered the most effective and efficient point of entry into the healthcare system with the ability to address population health challenges, especially in low- and middle-income countries (Biola, Green, Phillips, Guirguis-Blake, & Fryer, 2003; Kringos, Boerma, Hutchinson, Van Der Zee, & Groenewegen, 2010; Starfield et al., 2005; Walley et al., 2008). The strength of PHC system and services improves overall health system performance (Kringos et al., 2010; Starfield et al., 2005; Walley et al., 2008) as well as population health (Gulliford, 2002; Kruk, Porignon, Rockers, & Van Lerberghe, 2010; Macinko, Starfield, & Erinosho, 2009; Rohde et al., 2008).

The expansion of PHC services has not been complemented with a similar growth in planning and managing PHC human resources (Hurst, 2006). In fact, many countries have reported critical shortages in healthcare providers (HCP), particularly nurses and physicians (Hongoro & McPake, 2004). The shortage of nurses is imposing considerable stress on HCP and limiting the population's access to healthcare (Best & Thurston, 2004; Mahmoud, 2008; Mitchell, 2003; Scheffler, Mahoney, Fulton, Dal Poz, & Preker, 2009). Such shortage is enhanced by the migration of nurses to more developed countries driven by "push and pull" factors. These factors include work conditions, living standards, salaries, work experience, and inadequate or absent recruitment and retention policies (Dovlo, 2007; Dussault & Dubois, 2003). Low- and middle-income countries in the Middle East Region are particularly affected by such shortages (El-Jardali, Jamal, Abdallah, & Kassak, 2007). HCP constitute a major pillar in the system's quality and performance, and are vital to the delivery of healthcare (Biola et al., 2003). Thus, their number, experience and education should be sufficient and adequate to ensure the proper delivery of health services (Walley et al., 2008). Moreover, the performance of HCP represents a key determinant of excellence, effectiveness, convenience and sustainability of health services (Anand & Bärnighausen, 2004; Biola et al., 2003). In fact, the number and performance of HCP are associated with several health outcomes such as quality of care, morbidity and mortality (Anand & Bärnighausen, 2004).

According to literature, high job satisfaction among the HCP induces a better performance, higher productivity, increased creativity and stronger commitment to the organisation (Lu, While, & Barriball, 2005; Mahmoud, 2008). Low job satisfaction, on the other hand, is one of the main factors leading to nurse turnover (Coomber & Barriball, 2007; Hayes et al., 2006; Lu et al., 2005). Several reviews on the effect of job satisfaction elements on turnover and intent to leave report an association between leadership style, exhaustion, heavy workload, lack of respect and stress on one hand, and turnover and dissatisfaction on the other hand (Coomber & Barriball, 2007; Lu et al., 2005; Visser, Smets, Oort, & De Haes, 2003). Contrastingly, educational level and salary were associated with job satisfaction among nurses in one hospital (Coomber & Barriball, 2007). Considering the remarkable health spending incurred by HCP turnover, and given that job satisfaction is an important predictor of expected turnover and intent to leave (Hayes et al., 2006; Shields & Ward, 2001; Tourangeau & Cranley, 2006), it becomes pivotal for administrators to reduce their costs through retaining their human resources (Dussault & Dubois, 2003). Turnover intent is also predicted by satisfaction with supervision (Larrabee et al., 2003; Yin & Yang, 2002). The absence of an organised and supportive overseeing body significantly affects PHC workers, as it decreases their motivation at the workplace (Manongi & Marchant, 2006; Mathauer & Imhoff, 2006). Moreover, the tension encountered by HCP in their work environment may decrease the quality of care they provide, leading consequently to a lower patients' satisfaction. This is evident in numerous studies that have revealed a direct association between HCP satisfaction and patients' satisfaction (Al-Aameri, 2000; Shanafelt, Bradley, Wipf, & Back, 2002).

What is known about this topic

- Primary healthcare is the linchpin of equitable provision of preventive and curative services.
- Having an adequate number of healthcare providers is essential for provision of quality primary healthcare services.
- Low job satisfaction is linked to increased staff turnover, exacerbating existing shortages at the primary healthcare sector.

What this paper adds

- Healthcare providers' job satisfaction was influenced by salary, benefits, access to training opportunities and job growth prospects.
- Gender, age, career plans, salary, exposure to violence and level of burnout were associated with overall level of job satisfaction.
- A systematic approach engaging all primary healthcare stakeholders is necessary to ensure pay equity, access to professional development and quality practice environments.

1.1 | Primary healthcare in Lebanon

There are over 800 health outlets, including primary healthcare centres (PHCCs) and dispensaries, which deliver health services to the Lebanese community (WHO, 2010). Such services include health

education, immunisation, nutrition education, medication provision and general medical care including paediatric, oral, reproductive and cardiac care (Ammar, 2009). With the aim to strengthen PHC and community services delivery, the Lebanese Ministry of Public Health (MOPH) has led several initiatives. These included partnering with municipalities or privately governed PHCCs, conducting training, developing health education tools, and distributing vaccines and drugs (Ammar, 2009). The MOPH-PHCC partnerships have a unique characteristic represented by the shared governance and open networks. In these networks, the PHCCs are not standardised, but are rather granted autonomy of the management of their HCP, including decisions related to the HCP salaries. However, the PHC sector faces a number of challenges including the shortage of its generalists (Alameddine, Khodr, Mourad, Yassoub, & Abi Ramia, 2016; El-Jardali, Longeunesse, Jamal, & Kronfol, 2012) and nurses (El-Jardali, Dimassi, Dumit, Jamal, & Mouro, 2009). The shortage is further exacerbated by HCP migration (Akl et al., 2008; El-Jardali et al., 2009), impeding consequently the appropriate provision of services in PHCCs (Alameddine et al., 2016).

This study investigated the level of HCP job satisfaction in the national PHC network of the Lebanese Ministry of Public Health and determined the factors that are significantly associated with the PHC HCP job satisfaction. To our knowledge, this study is the first national attempt to explore the determinants of job satisfaction of service providers who are employed by the national PHC network of the MOPH.

2 | METHODS

2.1 | Study design

This was a quantitative study that used a cross-sectional design, employing a self-administered questionnaire, to investigate the factors influencing job satisfaction of the HCP employed by PHCCS in the national PHC network in Lebanon. The study activities adhered to the ethical standards of research. Ethics approval to conduct this study was obtained from the MOPH, Lebanon, as well as the Institutional Review Board at the American University of Beirut (Protocol number FHS.MA.05).

2.2 | Study tool

The research team developed a self-administered questionnaire, containing closed-ended questions to be used in this study. The questionnaire consisted of four main sections, each one assessing different factors that influence the retention of HCP in PHCCs, ultimately allowing an in-depth understanding of the issues at play within these centres. The first section (seven items) included questions about the healthcare providers' socio-demographics and professional background. The second section (21 items) covered employment characteristics, and included questions pertaining to the HCP's educational system/medical training, as well as questions related to organisational and institutional characteristics. The third section measured employee's level of satisfaction with their job using the Measure of Job Satisfaction (MJS) scale (Traynor & Wade, 1993). The fourth section measured the level of professional burnout using the Maslach Burnout Inventory-HSS scale (Maslach & Jackson, 1986).

The MJS Scale covers seven subscales, with 43 items, including:

1. *Personal satisfaction* (six items)
2. *Satisfaction with workload* (eight items)
3. *Satisfaction with professional support* (eight items)
4. *Satisfaction with training* (five items)
5. *Satisfaction with pay* (four items)
6. *Satisfaction with prospects* (six items)
7. *Satisfaction with standards of care* (six items) (Traynor & Wade, 1993)

The MJS uses a 5-point Likert scale, where 1 = very dissatisfied and 5 = very satisfied. 'Overall level of job satisfaction' was a mean score calculated based on the employee's satisfaction with various dimensions of work, and was measured using a 5-point Likert scale.

The Maslach Burnout Inventory-HSS uses three subscales, with 21 items, including:

- *The emotional exhaustion subscale* (nine items); measures the extent to which an employee is exhausted by his/her work
- *The depersonalisation subscale* (five items); measures the extent to which an employee feels impersonal towards those receiving his/her care
- *The personal accomplishment subscale* (eight items); measures the extent to which an employee feels successful and professionally capable in his/her work (Maslach & Jackson, 1986)

The Maslach Burnout Inventory-HSS uses a 6-point Likert scale, where 0 = never and 6 = every day (Maslach & Jackson, 1986).

'Likelihood to quit' was defined as a respondent's plan to quit his/her current position within the next 1–3 years, and was measured using a 5-point Likert scale.

The questionnaire was reviewed and validated by a multidisciplinary expert panel. It was translated to Arabic. Functional and conceptual equivalence across English and Arabic was checked through back-translation. The final version of the questionnaire and consent form was pilot-tested on a representative sample of HCP to enhance their comprehension, validity and reliability.

2.3 | Respondent selection and data collection

The target population for this study was all HCP (physicians, nurses, lab technicians and radiology technologists) at the PHCCs that were part of the MOPH national PHC network at the time of this study (n = 183). The authors aimed at surveying HCP working at no less than 50% of those centres. The directors of all centres were invited to a workshop at the MOPH during which the study was introduced and the centres were invited to participate. A total of 99 centres agreed to participate in the study during that workshop. The centres represented the various geographic regions of Lebanon.

Approval to distribute questionnaires was obtained from the MOPH, which also provided a complete list of the numbers of HCP working in each PHCC. Prior to the distribution of questionnaires, the HCP in each PHCC received an email or a letter explaining the objectives of the project and outlining the ethical guidelines of the study. Based on the list provided, a total of 1,317 survey packs were prepared. Note that HCP with less than 12 months of cumulative work experience in a PHC setting (prior to receiving the questionnaire) and staff members who are not involved with the provision of medical services (janitors, administrators, security, etc.) were excluded from the study.

A co-ordinators from each of the six Governorates in Lebanon visited the participating centres and provided the administrator of every centre with a number of survey packs corresponding to the number of reported health providers working in that centre. The survey pack included three documents: (i) an instruction sheet, (ii) the consent form in two copies and (iii) the survey questionnaire. In addition, a return envelope was provided in each pack. The clinic administrator distributed the survey packs to all health providers working in that centre. Providers wishing to participate were instructed to read the information sheet, sign the consent form (and keep a copy with them), complete the questionnaire and place the signed consent form and completed questionnaire in a sealed envelope and return the envelope to the clinic administrator. Participants were explicitly instructed not to include any personal identifiers in or on the returned envelopes. The clinic administrators gathered the returned envelopes and returned them back to the study co-ordinators in batches. The co-ordinators visited the clinics three times with each visit 3–4 weeks apart. Data collection was concluded after three visits or when all the health providers in the participating centre returned their sealed survey envelopes back. Data collection took place between the months of October 2013 and May 2014.

2.4 | Statistical analysis

Ten per cent of the questionnaires were checked for accuracy and completeness to ensure quality and integrity of the data collected. For data analysis, "IBM SPSS Statistics 21.0" was used. To simplify the analysis, 'Likelihood to quit' was regrouped from a 5-point scale into three groups, namely, unlikely to quit, undecided and likely to quit. Burnout scores were calculated by adding up the individual scores for each subscale, and the level of burnout was established by comparing the subscale score to cut-off points for medical professionals (Maslach & Jackson, 1986). Job satisfaction scores were computed by calculating the item mean scores for each subscale, and the overall job satisfaction score was calculated by determining the mean using all the scale items (Traynor & Wade, 1993).

Univariate descriptive statistics were generated to characterise the study population based on their socio-demographic and professional characteristics. The number of missing values for each variable was also indicated. Bivariate analyses using bivariate linear regression were used to compare respondent characteristics to "overall level of job satisfaction". Stepwise multivariate linear regression was used to determine which factors were significantly associated with the dependent variable, overall job satisfaction. Variables were put in the model in order of strength of their association with the outcome in the bivariate analysis and their importance in the literature. The effect of each variable on the model was assessed and this variable was kept in if it significantly contributed to a better fit of the model. In case of collinearity, the variable which, according to the literature, is unlikely to be significant was taken out of the model.

For this analysis, multiple imputations were used to account for missing data. Our missing data analysis procedures used missing at random (MAR) assumptions. The FCS (fully conditional specification) method of multiple multivariate imputations was used in SPSS because the missing data pattern was not monotonic. A total of 10 completed data sets were generated. The 'pooled' parameter estimates and their associated standard errors were calculated according to Rubin's rule. Note that the variance estimates involve both the "within" variance calculated for each data set individually, as well as the "between" variance that reflects the uncertainty in the imputations. To determine the suitability of the MI, the key analysis was conducted with complete cases and the results were compared to those with imputed data (data not shown). A 95% confidence interval and P-value ≤.05 were used to determine statistical significance.

In order to check the adequacy of the fitted multiple regression model, four aspects of regression diagnostics were examined, including linearity, normality, multicollinearity and homoscedasticity. The linearity assumption was checked using plots of the residuals versus individual independent variables, none of which showed any systematic pattern. We have checked the assumption of normality by plotting a histogram and normal Q-Q plot of residuals and have found that both broadly support this. As for the assumption of multicollinearity, Pearson's bivariate correlation among all independent variables was checked and none of the correlation coefficients was higher than 0.8. In addition, tolerance values were also checked and supported the absence of multicollinearity. Finally, homoscedasticity was checked using the plot of residuals versus predicted values which showed uniform variance of the errors illustrating non-violation of the assumption.

The results from imputed data analysis, outlined above, were compared with those of complete case analysis. This comparison showed similar directions for the association between the various predictors and the outcome, although for a few predictor variables the associations were not significant. The discrepancy in significance observed between the complete case and imputed analysis could be due to the high proportion of missing data especially for the outcome variable (530 out of 960), which may have reduced the statistical power.

3 | RESULTS

A total of 99 PHCCs (54% of all PHCCs in the National network), employing 1,318 HCP, were included in this study. Of the questionnaires distributed to respondents, 1,000 were completed and returned, yielding a response rate of 75.8%. Subjects with more than 50% of their answers missing were excluded from analysis (n = 40). Hence, the total sample size used in this study was 960.

3.1 | Respondent characteristics

Respondent characteristics are detailed in Table 1. Respondents were almost equally divided by gender. Most respondents were aged 45–54 (29.4%), followed by those aged 35–44 (26.5%). Most respondents were married (70.5%) and had children (71.8%). Half of the respondents held a medical degree and 40.5% of them were holding a medical specialist position at their respective PHCC.

Most respondents were permanent employees at their respective PHCC, either permanent full-time employees (36.5%) or permanent part-time employees (34.9%). While 58.1% of respondents worked in a PHCC in the capital (Beirut) and other major cities, 41.9% worked in a semi-urban setting. Approximately, 36.6% of respondents reported travelling between 15 and 30 min from home to the PHCC where they worked, while 17.5% reported travelling more than 30 min. Half of the respondents had planned to work in a PHC setting (50.3%), and 93.7% reported feeling part of the community where they work. The majority of respondents worked less than 15 hr per week (46.3%) and received a salary ranging 11–22 US dollars per hour (51.9%).

With respect to exposure to violence, 15.7% of surveyed HCP indicated being exposed to either physical or verbal violence in their work setting. Furthermore, 22.1%, 10.8% and 20.8% or respondents reported a high level of emotional exhaustion, high level of depersonalisation and low level of personal accomplishment, respectively. While 35.3% of respondents reported a high likelihood to quit their current job, 26.4% were undecided.

3.2 | Bivariate analyses of respondent characteristics with "overall level of job satisfaction"

The mean satisfaction scores of respondents for each subscale of job satisfaction are shown in Table 2. The overall mean score for job satisfaction among the respondents was 3.59 (SD 0.54), indicating that HCP are partially satisfied with their jobs. Respondents were most satisfied with standards of care (mean 4.09, SD 0.57), professional support (mean 3.89, SD 0.61) and workload (mean 3.74, SD 0.52). On the other hand, HCP were least satisfied with pay (mean 2.86, SD 0.99), training (mean 3.25, SD 0.82) and job prospects (mean 3.48, SD 0.71).

Results for the bivariate analyses for "overall job satisfaction" are shown in Tables 3–5. Table 3 reveals that males were significantly less satisfied with their jobs compared to females ($P = .001$). Respondents that did not have children were significantly more satisfied with their jobs compared to those that had children ($P = .024$). Nurses ($P < .001$) were significantly less satisfied with their jobs compared to Medical specialists. Furthermore, HCP falling under the "Other" category were significantly less satisfied ($P = .012$).

With respect to employment status, Table 4 shows that temporary casual employees ($P < .001$) and permanent part-time employees ($P = .047$) were significantly less satisfied compared to permanent full-time employees. Respondents working ≤15 hr per week were significantly less satisfied with their jobs compared to those working ≥35 hr per week ($P = .05$). As for rate of pay per hour, HCP receiving \$2–10.99 per hour ($P = .01$) or \$11–20.99 per hour ($P = .001$) were significantly less satisfied than those receiving >\$21 per hour. HCP who travelled 15–30 min to get to work were significantly less satisfied with their jobs than those who travelled <15 min to get to work ($P = .001$). Furthermore, HCP who did not feel they belonged to the PHCC ($P < .001$) or who were undecided ($P = .02$) were significantly less satisfied compared to those who expressed a feeling of belonging to the PHCC where they were employed (Table 4).

All three subscales of level of burnout were significantly associated with overall level of job satisfaction (Table 5). Respondents reporting a high ($P < .001$) and average ($P = .039$) levels of emotional exhaustion were significantly less satisfied with their jobs compared to those reporting a low level of emotional exhaustion. In terms of depersonalisation, respondents reporting a high level of depersonalisation were significantly less satisfied with their jobs compared to those with a low level of depersonalisation ($P = .003$). In relation to personal accomplishment, respondents with a high level of personal accomplishment were significantly more satisfied with their jobs compared to those with a low level of personal accomplishment ($P < .001$). With respect to intention to quit, respondents who reported likelihood to quit ($P < .001$) and those who are undecided ($P = .003$) were significantly less satisfied compared to those who reported unlikelihood to quit their jobs over the next 1–3 years. Finally, HCP reporting exposure to occupational violence were significantly less satisfied compared to their counterparts who report never being exposed to violence at work ($P < .001$) (Table 5).

3.3 | Predictors of 'overall level of job satisfaction'

After adjustment for other variables in the model, the multiple regression analyses revealed that respondent age was significantly associated with job satisfaction; namely that younger respondents (aged <35) were more satisfied than their older counterparts (Table 6). Gender also played a role as males were significantly less satisfied compared to female HCP ($P = .019$). Furthermore, HCP who have not planned on working in a PHCC were significantly less satisfied compared to their counterpart who have planned to work in the sector ($P = .003$). HCP reporting receiving an hourly compensation of 2–10.99 and 11–20.99 USD were significantly less satisfied compared to HCP receiving an hourly compensation that exceeds 21 USD per hour (Table 6). In terms of burnout, HCP reporting a high level of emotional exhaustion were significantly less satisfied compared to their counterparts reporting a low level of emotional exhaustion ($P = .02$). Furthermore, HCP reporting ever exposed to violence were significantly less satisfied compared to those reporting no exposure to violence ($P = .009$).

4 | DISCUSSION

The study solicited the feedback of 1,000 service providers working in 99 PHCCs distributed across the whole of Lebanon. The findings highlight an assortment of variables that affect the level of job satisfaction for HCP working in PHCCs, including: demographic variables (e.g. gender, family status and age), professional variables (e.g. type of degree, position, access to professional development and career path)

TABLE 1 Demographic and professional characteristics of study respondents (n = 960)

Variable	N (%)
Age	
<35	217 (24.8)
35–44	232 (26.5)
45–54	257 (29.4)
>55	168 (19.2)
Missing	86
Gender	
Male	457 (48.4)
Female	487 (51.6)
Missing	16
Marital status	
Not married	278 (29.5)
Married	664 (70.5)
Missing	18
Having children	
No	247 (28.2)
Yes	628 (71.8)
Missing	85
Education	
Nursing	162 (17.8)
Medical	451 (49.7)
Other	295 (32.5)
Missing	0
Position in the PHCC	
General practitioner	105 (11.4)
Family medicine	17 (1.8)
Medical specialist	375 (40.5)
Nurse	199 (21.5)
Laboratory technician	60 (6.5)
Other	169 (18.3)
Missing	35
Employment status	
Permanent full-time	315 (36.5)
Permanent part-time	301 (34.9)
Temporary casual	246 (28.5)
Missing	98
Employment mode	
Staff	502 (58.2)
Voluntary	229 (26.5)
Both	132 (15.3)
Missing	97
Location of the PHCC	
The capital (Beirut)	163 (19.5)
Other major cities	323 (38.6)
Semi-urban setting	351 (41.9)
Missing	123
Travel between home and work	
Less than 15 min	434 (45.9)
Between 15 and 30 min	346 (36.6)
More than 30 min	165 (17.5)
Missing	15
Planned to work in PHC centre	
No	449 (49.7)
Yes	455 (50.3)
Missing	56
Feeling of belonging to the PHCC	
Undecided	29 (3.1)
No	30 (3.2)
Yes	874 (93.7)
Missing	27
Total number of years in PHCCs	
<3	138 (15.8)
3–5	192 (21.9)
6–10	217 (24.8)
>10	329 (37.6)
Missing	124,122
Exposure to violence	
Never exposed	781 (84.3)
Exposed to either verbal or physical violence	146 (15.7)
Missing	33
Work hours/week	
≤15	380 (46.3)
16–34	133 (16.2)
≥35	307 (37.4)
Missing	140
Salary/hour ($)	
2–10.99	72 (38.1)
11–20.99	98 (51.9)
>20	19 (10.1)
Missing	771
Level of burnout	
Emotional exhaustion	
Low	539 (56.1)
Average	209 (21.8)
High	212 (22.1)
Missing	None
Depersonalisation	
Low	666 (69.4)
Average	189 (19.7)
High	104 (10.8)

(Continues)

TABLE 1 (Continued)

Variable	N (%)
Missing	1
Personal accomplishment	
Low	200 (20.8)
Average	204 (21.3)
High	556 (57.9)
Missing	None
Intention to quit	
Unlikely	357 (38.2)
Undecided	247 (26.4)
Likely	330 (35.3)
Missing	26

TABLE 2 Mean satisfaction scores of respondents by satisfaction subscale (n = 960)

Variable	N	Mean	SD
Satisfaction with standards of care	749	4.09	0.57
Satisfaction with professional support	672	3.89	0.61
Personal satisfaction	748	3.79	0.65
Satisfaction with workload	678	3.74	0.52
Satisfaction with job prospects	688	3.48	0.71
Satisfaction with training	709	3.25	0.82
Satisfaction with pay	715	2.86	0.99
Overall job satisfaction	430	3.59	0.54

as well as other important variables (e.g. exposure to violence, intention to quit and degree of burnout). The survey respondents had an overall mean job satisfaction indicating that they are partially satisfied (3.6 on a scale from 1 = very dissatisfied to 5 = very satisfied), they have also highlighted a number of issues including dissatisfaction with pay, training and job prospects.

Survey respondents were least satisfied with the salary/compensation they were receiving. Analysis revealed that respondents who received a higher rate of pay per hour were more satisfied than those who received a lower rate. Males were also less satisfied than females according to the results of this study. This may be related to the gender roles within the Middle Eastern context (D'Enbeau, Villamil, & Helens-Hart, 2015; Price, 2016), where males are usually responsible for addressing the financial needs of their families (Chamlou, Nabli, & Chamlou, 2004; Farjānī, 2003). Thus, their satisfaction with the pay they receive is a main determinant of their satisfaction with their job. Furthermore, HCP with higher educational degrees, especially those holding medical degrees, generally have expectations for higher financial returns from their jobs compared to that provided at PHCCs which could contribute to relatively lower levels of job satisfaction (Coomber & Barriball, 2007). The findings are in agreement with previous studies that revealed a strong and significant relationship between salary and job satisfaction (Bakan & Buyukbese, 2013; Coomber & Barriball, 2007; Judge, Piccolo, Podsakoff, Shaw, & Rich, 2010). In fact, low pay is one of the main push factors that have exacerbated the attrition and migration rate among health workers and consequently intensified HCP shortages (Dovlo, 2007; Dussault & Dubois, 2003; El-Jardali et al., 2007; Hongoro & McPake, 2004). As an initiative to quantify the compensation gap and identify appropriate solutions to bridge it, a national task force to assess pay differential between PHCCs and hospitals should be developed. This task force will need to examine the remuneration scales and policies within the PHC sector to ensure that the level of compensation is comparable to that offered in other sectors (e.g. hospitals, long-term care, etc.). Remuneration scales need also to ensure that the pay range is appropriate to the level of education and experience of the HCP. The importance of this exercise cannot be overstated in lights of the strategic direction to strengthen PHC and use it as a basic pillar to the provision of universal health coverage (Bodenheimer, Berenson, & Rudolf, 2007; Goroll, Berenson, Schoenbaum, & Gardner, 2007).

Moreover, training and opportunities for development could be linked to the finding that younger respondents were more satisfied than their older counterparts. Young HCP would join the PHC sector with updated knowledge and skills acquired from their educational programmes. However, in a few years, they would feel the need to update and refine their information and skills (Kooij, Jansen, Dikkers, & De Lange, 2010; Lange, Jansen, & Kooij, 2007). Without access to training and professional development programmes, HCP may develop cumulative frustration that leads to decreased job satisfaction, intention to quit and eventually turnover (Chiang, Back, & Canter, 2005; Sadri & Robertson, 1993; Schmidt, 2007; Shields & Ward, 2001). The proposed national taskforce should engage the concerned stakeholders (policy makers, educational institutions, orders and syndicates) to develop, offer, monitor and evaluate a professional development programmes offered on an annual basis to all HCP in the PHC sector.

Although employment status was not selected in the final regression model, full-time HCP were significantly more satisfied compared to temporary casual employees. This could be attributed to the additional income and benefits that full-time job offers usually encompass (Kalleberg, 2000), accumulated knowledge of work culture (Brazil, Wakefield, Cloutier, Tennen, & Hall, 2010; Linzer et al., 2005) and the enhanced sense of belongingness to the organisation (Linzer et al., 2005). Several studies have concluded that the effect of support and positive relations increases employees' satisfaction levels and decreases job-induced stress (Freeborn, 2001; Visser et al., 2003; Walley et al., 2008). PHC stakeholders are advised to increase the opportunities for permanent full-time and part-time positions at PHCCs as a means to enhance job satisfaction and workforce stability.

Analysis reveals that HCP who planned to work in a PHC setting before joining the centres were more satisfied compared to those who had planned to work in other settings. Two key recommendations stem from this finding: the first targets the directors of centres who are advised to focus their recruitment efforts on the HCP that have had plans to work in a PHC setting as a mechanism to enhance job

TABLE 3 Bivariate association between personal characteristics of study respondents and 'overall level of job satisfaction' (n = 960)

		Overall level of job satisfaction			
Variable	Values	Mean	SD	B [95% CI]	*P*-value[a]
Age	<35	3.66	0.53	Ref	
	35–44	3.56	0.58	−0.103 [−0.204; −0.002]	.02
	45–54	3.52	0.54	−0.143 [−0.242; −0.045]	<.001
	≥55	3.60	0.52	−0.066 [−0.176; 0.043]	.102
Gender	Male	3.52	0.53	−0.123 [−0.192; −0.054]	.001
	Female	3.65	0.54	Ref	
Marital status	Not married	3.61	0.53	0.029 [−0.047; 0.105]	.075
	Married	3.58	0.55	Ref	
Having children	No	3.64	0.53	0.080 [0.000; 0.159]	.024
	Yes	3.56	0.55	Ref	
Education	Nursing	3.68	0.49	0.05 [−0.078; 0.127]	.072
	Medical	3.51	0.56	−0.147 [−0.225; −0.068]	.10
	Other	3.63	0.55	Ref	

[a]*P*-values derived from bivariate linear regression.

satisfaction and longevity (Buddeberg-Fischer, Stamm, Buddeberg, & Klaghofer, 2008). Perhaps more importantly, the second recommendation targets medical, nursing and health schools and colleges that are advised to enhance the exposure and appreciation of students regarding the importance and centrality of PHC so that they may include this essential sector in their career plans (Bluestein & Cubic, 2009).

Last but not least, it is pivotal for PHC stakeholders to be cognizant of the strong influence that the quality of work environment plays in shaping the job satisfaction of PHC HCP. In our study, we have examined the level of professional burnout and the exposure to violence at the workplace and have found both to be significantly and negatively related to HCP job satisfaction. While the PHC sector is often perceived as a relatively relaxed and less tense environment compared to other healthcare work settings (Nylenna, Gulbrandsen, Førde, & Aasland, 2005), our study reveals that PHC workers still suffer from professional burnout and exposure to occupational violence. We call on PHC stakeholders to regularly assess the well-being of their HCP and devise initiatives and programmes that would enhance their physical, psychological and professional well-being. On that front, the efforts of the MOPH are to be commended with the establishment of a national committee to examine and improve the quality of work environment at PHCCs in Lebanon.

4.1 | Limitations of the study

Although the research has reached its aims, there were some unavoidable limitations. First, not all PHCCs in the national network agreed to participate in the study. We could not ascertain whether the participant PHCCs are different than the non-participants. Second, not all HCP invited to participate in this study agreed to participate. Third, in this study, some form of stepwise selection of variables was used in building the final model. Stepwise regression remains popular and in widespread use as it appears to provide more information than does the ordinary multiple regression option, and it is especially useful for sifting through a set of candidate predictor variables and/or fine-tuning a model by entering and removing predictors, as is the case with the analysis here. However, there are three main potential limitations of the stepwise regression approach. These include bias in parameter estimation, lack of consistency among model selection algorithms, and an inadequate reliance on a single best model. More details of the stepwise modelling approach and its limitations in practice are given elsewhere (Burnham & Anderson, 2002, Babyak, 2004, Whittingham et al., 2006; Mundry & Nunn, 2009). Lastly, the cross-sectional nature of the study allows for the establishment of associations rather than causality.

5 | CONCLUSIONS

The study findings reflect the need to recognise the strong influence that personal (gender, age and career plans) and institutional (salary, professional burnout and exposure to violence) variables can have on HCP's job satisfaction. It is pivotal for PHC stakeholders to invest in enhancing job satisfaction, as it is an indicator of quality of care and employee retention. Numerous recommendations may be considered at the level of PHC centre management aiming to improve the labour force and safeguard its endurance. Retention approaches must be established, applied and assessed at PHC centres for all employees generally and for the group of workers who are at higher risk of leaving their jobs based on their job satisfaction level specifically. The development of a national taskforce to ensure fair compensation to employees is crucial and should be treated as a priority and starting point. Additionally, concerned stakeholders need to assess and formulate initiatives that enrich the physical, psychological and professional well-being of their human resources in a work milieu that fosters a positive low-stress environment that enhances employees' satisfaction, ensuring consequently the sustainability in provision of good quality primary health services.

TABLE 4 Bivariate association between PHCC-related characteristics of study respondents and 'overall level of job satisfaction' (n = 960)

		Overall level of job satisfaction			
Variable	**Values**	**Mean**	**SD**	**B [95% CI]**	***P*-value[a]**
Position in the PHCC	General practitioner	3.47	0.55	−0.067 [−0.183; 0.050]	.269
	Family medicine	3.38	0.45	−0.152 [−0.414; 0.111]	.326
	Medical specialist	3.54	0.57	Ref	
	Nurse	3.69	0.48	0.149 [0.057; 0.242]	<.001
	Laboratory technician	3.50	0.59	−0.031 [−0.178; 0.116]	.793
	Other	3.68	0.50	0.140 [0.042; 0.238]	.012
Total number of years working in PHCCs	<3	3.74	0.62	Ref	
	3–5	3.64	0.51	−0.07 [−0.271; 0.086]	.308
	6–10	3.59	0.58	−0.110 [−0.321; 0.033]	.111
	>10	3.58	0.59	−0.126 [−0.322; 0.016]	.076
Planned to work in PHCC	No	3.51	0.56	−0.155 [−0.226; −0.084]	<.001
	Yes	3.66	0.53	Ref	
Employment status	Permanent full-time	3.76	0.55	Ref	
	Permanent part-time	3.63	0.54	−0.130 [−0.258; −0.002]	.047
	Temporary casual	3.46	0.58	−0.296 [−0.430; −0.162]	<.001
Work hours/week	≤15	3.54	0.53	−0.113 [−0.192; −0.033]	.05
	16–34	3.62	0.50	−0.038 [−0.146; 0.070]	.432
	≥35	3.65	0.53	Ref	
Salary per hour ($)	2–10.99	3.49	0.54	−0.444 [−0.720; −0.168]	.01
	11–20.99	3.32	0.55	−0.564 [−0.831; −0.296]	<.001
	>21	3.88	0.41	Ref	
Location of the PHCC	The capital (Beirut)	3.58	0.51	−0.095 [−0.258; 0.067]	.250
	Other major cities	3.61	0.58	−0.066 [−0.186; 0.054]	.280
	Semi-urban areas	3.68	0.55	Ref	
Travel between home and work	Less than 15 min	3.64	0.55	Ref	
	Between 15 and 30 min	3.52	0.53	−0.120 [−0.197; −0.044]	.001
	More than 30 min	3.59	0.54	−0.047 [−0.144; 0.050]	.462
Feeling of belonging to the PHCC	Undecided	3.27	0.60	−0.345 [−0.540; −0.150]	.02
	No	2.89	0.52	−0.731 [−0.922; −0.539]	<.001
	Yes	3.62	0.52	Ref	

[a]*P*-values derived from bivariate linear regression.

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AUTHORS' INFORMATION

MA conceptualised the study, led the writing of the proposal, supervised all aspects of the study and prepared the first version of the manuscript. MB contributed to data analysis and assisted with the write up of the manuscript. SK carried out the statistical analysis necessary for the study and contributed to manuscript writing. RH contributed to the conceptualisation of the study, supervised data collection and contributed to the write up of the manuscript. WA contributed to the conceptualisation of this study, oversaw data collection and contributed to the write up of the manuscript. HS led the statistical analysis in this study and prepared the methods section. HK co-led the various aspects of the study and contributed to write up. All authors approved the final submitted version of the manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study activities adhered to the ethical standards of research. Ethics approval to conduct this study was obtained from the MOPH, Lebanon, as well as the Institutional Review Board at the American University of Beirut (Protocol number FHS.MA.05).

TABLE 5 Bivariate association between characteristics related to burnout, exposure to violence and intention to quit and 'overall level of job satisfaction' (n = 960)

		Overall level of job satisfaction			
Variable	**Values**	**Mean**	**SD**	**B [95% CI]**	***P*-value[a]**
Level of burnout	Emotional exhaustion				
	Low	3.68	0.50	Ref	
	Average	3.57	0.53	−0.106 [−0.191; −0.021]	.039
	High	3.38	0.60	−0.295 [−0.380; −0.211]	<.001
	Depersonalisation				
	Low	3.63	0.52	Ref	
	Average	3.60	0.54	−0.060 [−0.147; 0.027]	.279
	High	3.39	0.58	−0.232 [−0.344; −0.121]	.003
	Personal accomplishment				
	Low	3.68	0.53	Ref	
	Average	3.47	0.50	0.005 [−0.099; 0.109]	.998
	High	3.45	0.56	0.223 [0.137; 0.310]	<.001
Exposure to violence	Never exposed	3.63	0.52	Ref	
	Exposed	3.33	0.61	−0.300 [−0.394; −0.205]	<.001
Intention to quit	Unlikely	3.74	0.53	Ref	
	Undecided	3.56	0.46	−0.175 [−0.259; −0.090]	.003
	Likely	3.44	0.57	−0.303 [−0.381; −0.225]	<.001

[a]P-values derived from bivariate linear regression.

TABLE 6 Multivariate predictors of job satisfaction among study respondents (n = 960)

Variable	**B[a]**	**95% CI**	***P*-value**
Age			
<35 years	Ref		
35–44 years	−0.546	[−0.800; −0.291]	<.001
45–54 years	−0.541	[−0.787; −0.295]	<.001
≥55	−0.377	[−0.656; −0.097]	.009
Male	−0.208	[−0.382; −0.035]	.019
Did not plan to work in a PHCC	−0.230	[−0.378; −0.082]	.003
Salary per hour ($)			
2–10.99	−0.284	[−0.547; −0.021]	.035
11–20.99	−0.342	[−0.599; −0.085]	.009
>21	Ref		
Exposed to violence	−0.306	[−0.535; −0.077]	.009
High level of emotional exhaustion	−0.266	[−0.489; −0.042]	.020
Likely to quit	−0.434	[−0.614; −0.253]	<.001

[a]Derived from multivariate linear regression model.

AVAILABILITY OF DATA AND MATERIAL

All data generated or analysed during this study are included in this published article [and its supplementary information files].

COMPETING INTERESTS

The authors declare that they have no competing interests.

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