BJPS

Brazilian Journal of
Pharmaceutical Sciences

http://dx.doi.org/10.1590/s2175-97902022e19929

Article

Exploring Work Satisfaction and Characteristics of Iraqi Pharmacist Workforce

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"This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors"

The objectives of this study were to describe work characteristics of Iraqi pharmacists, to compare pharmacist job satisfaction between private and public sectors and to assess factors influencing job satisfaction level. This cross-sectional study of pharmacists, their work sites and work satisfactions used an electronic questionnaire that was posted on Facebook pharmacy professional group from June to September 2018. The participants included pharmacists from all 18 Iraqi provinces. We used multiple linear regression to identify predictors of general job satisfaction among 13 pharmacist characteristics. We received 658 usable surveys. Approximately half (47.24%) of respondents indicated dissatisfaction with their primary workplace. Job performance, patient contact, satisfaction with manager, income and expectation satisfactions were significantly related with work satisfaction. Pharmacists working in the private sector had significantly more control over their workplace and higher satisfaction with manager, income and general satisfactions compared to those working in public sector. Pharmacists work in diverse settings across the public healthcare system, community pharmacies, private drug bureaus and academia. About half of them are dissatisfied with their primary workplace. The private sector has more satisfaction rate compared to the public sector. Thus, officials need to improve job environments in the public sector.

Keywords: Pharmacist. Workforce. Job satisfaction. Pharmacy practice. Workload.

INTRODUCTION

Pharmacists are highly trained healthcare professionals with expertise entitling them to dispense safe medication(s), monitor penitent's medication adherence, monitor and report for medications-related adverse effects, and limit expenditures in medications. (Hallit *et al*., 2017) Being more accessible to patients, pharmacists who work in community pharmacies have been considered the first healthcare professionals to be consulted. (Smith, 2014)

In Iraq, pharmacy is a 5-year college program that awards the degree of Bachelor's in Pharmacy and not a PharmD. (Rasheed, Abbas, 2012) Newly qualified pharmacists register in the Syndicate of Iraqi Pharmacists (SIP) which is the equivalent of the Board of Pharmacy. (Ibrahim, Wayyes, 2016) Pharmacists can work in governmental jobs including the public health sector and academia and in private jobs like community pharmacies, drug wholesalers, scientific drug bureaus, and private teaching institutions (Al-Jumaili, Hussain, Sorofman, 2013). These jobs are not mutually exclusive but rather a pharmacist can hold governmental job in the morning

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and work in the private sector in the afternoon. It is also worth noting that community pharmacies in Iraq are independent owned and run exclusively by pharmacists and there exist no pharmacy chains in the time of conducting this study.

The number of pharmacists has grown dramatically in the last few years with a 217.5% increase in the number of registered pharmacists over a five-year period (2013-2018) (Al-Hiti, 2019). This expansion comes primarily from the increased number of colleges of pharmacy (mainly private) which has increased from 16 (12 public and 4 private) in 2013(Al-Jumaili, Hussain, Sorofman, 2013) to 39 (14 public and 25 private) in 2019 (Al-Hiti, 2019). In 2019, there are 22,120 registered pharmacists in Iraq (Al-Hiti, 2019) an increase from 11,374 in 2013 (Al-Jumaili, Hussain, Sorofman, 2013) (i.e. 195.5% growth rate within 6 years). This immense increase in the number of pharmacists has led to more competition especially in private sector jobs. For example, there were more than 9000 independent pharmacies in Iraq as of 2019 (Al-Hiti, 2019) growing from 5336 community pharmacies in 2013 (Al-Jumaili, Hussain, Sorofman, 2013). These substantial growth rates have not been accompanied by studies evaluating pharmacy practice environments.

Regardless of where they work, job satisfaction is a detrimental factor for pharmacist involvement, integration, and motivation for work. (Lau, Pang, Chui, 2011) Job satisfaction, as defined in organizational studies, is "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences". (Locke, 1976) As such, positive and enthusiastic attitudes towards the job indicates job satisfaction while dissatisfaction is linked with negative and dispassionate attitudes. Hoppock (1935) defines job satisfaction as "any combination of psychological, physiological and environmental circumstances that cause a person truthfully to say "I am satisfied with my job". These circumstances and the resulting feelings compile over time and are nourished by a worker's relationships and experience in the work environment and more specifically by the gap or agreement between expectations and reality. (Aziri, 2011; Mobley, Locke, 1970; Munyewende, Rispel, Chirwa, 2014)

Job satisfaction reflects the influence of various factors including workplace related factors like workload, job security, supervisors, advancement opportunities, motivation and incentives, as well as pharmacists' socio-demographic characteristics like age, gender and expectations. (Carvajal, Popovici, 2018; Johnson *et al.*, 2014) Pharmacists' satisfaction with their work can influence pharmacists, their employers as well as patients who receive their services. (Ahmad *et al.*, 2016, Boran *et al.*, 2012) As an important component of the healthcare system, pharmacists' job satisfaction can potentially affect the overall health and wellbeing of society. (Zeind, Ww, 2006) Unfortunately, in the Middle East, and specifically in Iraq, pharmacy workforce environment and pharmacists' job satisfaction have not received the proper attention from scholars or managers of various business organizations.

This study aims to provide insight into the impact of the complex work environment on the pharmacy profession in Iraq. To the best of our knowledge, this is the first study to quantitatively investigate Iraqi pharmacist workforce characteristics and measure pharmacist satisfaction in Iraq. The objectives of this study were to describe the work characteristics of the Iraqi pharmacist workforce, to compare pharmacist job satisfaction in the private and public sectors and to assess factors influencing the job satisfaction levels of pharmacists.

MATERIAL AND METHODS

We used a cross-sectional study design which included a descriptive survey of Iraqi pharmacists, their work sites and work satisfaction. Data were collected using a self-administered electronic questionnaire that was posted on the Facebook page of a pharmacist professional group (Al-Multaka Al-Saidalani). This Facebook page is only open to Iraqi pharmacists. The electronic survey was administered through Qualtrics Survey Software (Qualtrics, Inc, Provo, UT). The survey link was available from June 22 to September 22, 2018. The survey was reposted once a week for three months. The target was 18,000 pharmacists who worked within the country and members of the Facebook page.

Questions comprising each section of the survey were taken primarily from the U.S. National Pharmacist Workforce survey conducted in 2014 (Gaither *et al*., 2015). Thus, the survey items are reliable and valid according to previous studies. The first 17 items of demographics were modified to fit Iraqi pharmacy practice and terminologies. The content validity of the new items was evaluated by an expert in the field (co-author). The survey was piloted with several pharmacists to receive feedback about the clarity. Consequently, we added some Arabic terms to the English-written survey items to clarify their meaning according to the pilot group feedback. The survey included 73 items which were organized into five sections: 1) General employment status and work environment, 2) information about pharmacists, 3) pharmacist workload perceptions and compensation, 4) quality of work-Life (job satisfaction and stress in work environment), 5) pharmacist practice site (Gaither *et al*., 2015). The U.S. National Pharmacist Workforce Survey includes a sixth section (pharmacist career) which contains at least 30 items. However, we did not include the sixth section to reduce the length of the survey. The study proposal was approved by Ethical Committee at University of Baghdad College of Pharmacy.

Statistical Analyses

The analyses were conducted using the Statistical Package for the Social Sciences (SPSS, IBM, USA). Means, ranges, standard deviations (SD), frequencies and percentages of participant characteristics were calculated. We used multiple linear regression to identify predictors of general job satisfaction among 13 characteristics of the pharmacists. The dependent variable was general satisfaction, and it was measured using a 5-points Likert scale (very dissatisfied, dissatisfied, neither satisfied nor dissatisfied, satisfied, very satisfied). We also measured Cronbach's alpha (reliability indicator) of the four satisfaction items (general satisfaction, expectation satisfaction, income satisfaction and satisfaction with manager). Chi-square analysis was used to measure the association between binary satisfaction (yes vs no) and work shifts (governmental, private or both). Mann-Whitney test was used to measure the difference between pharmacists working in the private sector vs the public sector in terms of controlling workplace and manager, income, expectations and general satisfaction at their current workplace.

RESULTS

Among the received 1,127 surveys, only 658 were usable (answered at least the first 42 questions of the survey which included demographic, education, workload, workplace and satisfaction items).

The participants included pharmacists in all 18 provinces (including three Kurdish provinces) and Baghdad had more than half of participants (57%). Respondent characteristics are listed in Tables I and II. The majority of the respondents were male (57% compared to 43% female respondents) (Table I). Approximately 80% of the participants were aged between 22 and 39 years and 40.8% of them had 1 to 6 years of experience. Three-quarters (75.2%) of the participants had bachelor's degree in pharmacy, BS Pharm, while the other quarter (24.8%) had graduate degrees. The vast majority (93%) of the participants graduated from domestic universities and only 7% graduated from foreign universities. The majority (79.1%) of the domestic graduates received their BS Pharm degree from governmental universities (Table I).

TABLE I - Demographic, academic and experience characteristics of participants

Variable	Categories	Frequency (N)	%
Age	22-29	283	44.1
	30-39	231	36.0
	40-49	95	14.8
	50-59	21	3.3
	60 and above	11	1.7
Gender	Female	278	43.0
	Male	368	57.0
Academic degree	BS Pharm	484	75.2
	High Diploma	33	5.1
	MBA	4	0.6
	MSc	77	12.0
	PhD	37	5.7
	Board in Clinical Pharmacy	9	1.4
Years of experience	Less than 1 years	51	7.9
	1-3 years	141	21.9
	4-6 years	122	18.9
	7-9 years	100	15.5
	10-15 years	105	16.3
	15-20 years	72	11.2
	20 or more years	24	8.4
BSc Origin	Iraqi University	601	93.0
	Non-Iraqi University	45	7.0
College type	Governmental (Public) College	511	79.1
	Private College	135	20.9
	Total	646	100.0

Only 12.3% of the participants were not registered in the SIP (Board of Pharmacy) that provides accreditation and license to work in community pharmacies (Table II). Almost all (96.2%) participants were working in pharmacies or pharmacy-related careers. Almost half (47.7%) of survey participants were working in governmental settings, while 48.1% were working in private settings. Governmental hospitals (28.8%) and universities (9.8%) were the most common workplaces in the public sector, whereas private community pharmacies (32.5%) and drug scientific bureaus (12.7%) were the most common workplaces in the private sector. Some participants (21.5%) had quit their jobs in the public sector. Most participants (86%) were actively practicing

as pharmacists in governmental hospitals and/or private community pharmacies. However, only 70.3% had direct contact with patients and 55.3% had contact with physicians (Table II).

TABLE II - Pharmacist Employment and Workplace Characteristics

Item	Categories	N	%
Iraqi Pharmacists Syndicate registration	Registered	564	87.7
	Not Registered	79	12.3
	Total	643	100.0
Job Status/ Type of employment	Practicing as a pharmacist (in a hospital or community pharmacy)	382	58.8
	Employed in a pharmacy-related field or position, but not practicing as a pharmacist (e.g. university faculty, scientific drug bureau agents and MOH employees)	195	30.0
	Retired, but still working in pharmacy or employed part-time as a pharmacist	48	7.4
	Retired, do not practice pharmacy at all	6	0.9
	Employed in a career is totally unrelated to pharmacy	5	0.8
	Unemployed	14	2.2
	Total	650	100.0
Primary Practice Setting	Governmental hospital	186	28.8
	Governmental University	63	9.8
	Governorate healthcare headquarter	39	6.0
	MOH/KIMADIA	15	2.3
	National Centre for Drug Control and Research	5	0.8
	Private drug scientific bureau	82	12.7
	Private Pharmacy	210	32.5
	Private University	13	2.0
	Private wholesale drug store	6	0.9
	Other	27	4.2
	Total	646	100.0
Pharmacy Practice	Practice in both hospital and community pharmacies	238	37.5
	Practice in hospital pharmacy (clinical or outpatient pharmacy)	120	18.9
	Practice in private community pharmacy	188	29.6
	Not practicing in a pharmacy (neither in a hospital pharmacy nor in a community pharmacy)	89	14.0
	Total	635	100.0

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TABLE II - Pharmacist Employment and Workplace Characteristics

Item	Categories	N	%
Contact with Patient	Yes	457	70.3
	No	193	29.7
	Total	650	100
Contact with Physician	Yes	260	55.3
	No	210	44.7
	Total	470	100.0
MOH=Ministry of Health			

A good percentage (44.8%) of the participants reported working two shifts per day: mornings in governmental setting and evenings in private setting (Table III). On the other hand, 35.8% reported working one shift only (either morning governmental or private job) and 19.5% had a two-shift job in the private sector. The participating pharmacists reported working from 4 to 9 hours (5.7 hours on average) per day. During these working hours, 43.4% experienced high or excessively high workload, while 42.7% had "about right" workload. A high workload had negative impact on several aspects of pharmacist work and even health according to our survey results. One-third (36.4%) of the participants reported that workload negatively (though not statically significant) influenced their job satisfaction. Additionally, workload was reported to have negative impact on half of the participants' emotional health (48.3%) and physical health (49.9%) and even their performance (Figure 1 A).

TABLE III - Workload, Income and Community Pharmacy related items

Item	subgroups	N (%)
Work shifts	2 shifts: Morning governmental and evening private	273 (44.8)
	Morning shift in governmental job (one shift)	164 (26.9)
	Full-time in private sector	119 (19.5)
	Evening shift in private job (one shift)	54 (8.9)
	Total	610 (100.0)

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TABLE III - Workload, Income and Community Pharmacy related items

Item	subgroups	N (%)
Work hours per day	4 hours	146 (23.3)
	5 hours	134 (21.4)
	6 hours	219 (34.9)
	7 hours	70 (11.2)
	8 hours	43 (6.9)
	9 hours	15 (2.4)
	Total	627 (100.0)
Workload	Excessively High	48 (7.4)
	High	233 (36.0)
	About Right	276 (42.7)
	Low	82 (12.7)
	Excessively low	8 (1.2)
	Total	647 (100.0)
Monthly Income change (compared to last year)	Stays the same	297 (46.2)
	Increases	225 (35.0)
	Decreases	121 (18.8)
	Total	643 (100.0)
Community Pharmacy practice	Yes	329 (61.5)
	No	206 (38.5)
	Total	535 (100.0)
Main Community Pharmacy income	Both prescriptions and OTC	182 (55.5)
	Behind/Over the Counter medications	100 (30.5)
	Prescriptions	46 (14.0)
	Total	328 (100.0)

Less than one-fifth (18.8%) of the participants reported a decrease in income compared to last year, while 35% reported an increase in their income. The majority (61.5%) of participants reported working in community pharmacies (one or two shifts). Approximately one-third (30%) of the participants classified their community pharmacies as mainly relying on dispensing behind and over the counter (OTC) medications (no nearby physician clinics). In contrast, more than half of the community pharmacies (55%) relied on combination of prescriptions and behind/OTC medications (Table I).

Among the 12 independent variables included in the regression analysis, five had significant (p-value < 0.05) association with general job satisfaction (Table IV). These significant five factors included income satisfaction, satisfaction with manager, expectation satisfaction, job

performance and patient contact. The first four factors have a significant positive association with job satisfaction rate, while having contact with patients has negative significant association with pharmacist job satisfaction (Table IV).

TABLE IV - Multiple Linear Regression Results of Factors Influencing Pharmacist Job Satisfaction

Variable	Standardized Coefficients (Beta)	P-value
Gender	-.015	.673
Expectation satisfaction	.377	.0001*
Income satisfaction	.175	.0001*
Satisfaction with manager	.193	.0001*
Workload	.080	.050
Work site	-.030	.393
Work hours	-.042	.227
Emotion health	.108	.014*
Physical health	-.041	.334
Adequate breaks	-.004	.919
Patient contact	-.086	.014*
Workplace control	.023	.510

N=565. *Significant, P-value < 0.05. Model R-Square=0.483.
No collinearity concern among independent variables (VIF< 5).
Work site=1 governmental, 2 private and 3 both.
Dependent variable = general satisfaction (In general, how are you satisfied with your general job?)
Satisfaction items has 5-points Likert scale (Very Dissatisfied, Dissatisfied, Neither satisfied nor dissatisfied, Satisfied, Very Satisfied)
Expectation satisfaction= How satisfied are you with your general job when you consider the expectations you had when you took the job?;
Satisfaction with manager = How satisfied are you with the way that your manager directs your practice site?
Workload = How does the current level of workload in your workplace affect your job satisfaction?
Emotion Health: How does the current level of workload in your workplace affect your mental/emotional health?
Physical Health: How does the current level of workload in your workplace affect your physical health?

According to Chi-square analysis, there is a significant association between binary outcome variable (primary/morning workplace satisfaction) and working shifts in different sectors (governmental, private and both). The majority of those with two jobs were dissatisfied with their primary workplace (morning / governmental), while the majority of those with a single job were satisfied with their primary workplace (Table V). In another question, 47.24% of respondents affirmatively indicated dissatisfaction with their primary workplace. Only small percent (≤ 7.1%) of the participants reported very satisfied with their work. The Cronbach's alpha of the four satisfaction items (general satisfaction, expectation satisfaction, income satisfaction and satisfaction with manager) demonstrated good reliability (0.77).

TABLE V - The relationship between pharmacist work site and primary workplace satisfaction

Work Settings	Primary satisfaction N (%)		Total	P-value
	No	Yes		
Both	147 (56.1)	115 (43.9)	262	.000*
Government	75 (46.3)	87 (53.7)	162	
Private	56 (35.9)	100 (64.1)	156	

Total N=580. *There was significant association according to Chi-square (P< 0.05) between work setting and binary primary workplace (morning) satisfaction. The majority of those with 2 jobs were dissatisfied with their primary workplace (morning / governmental) while the majority of those with a single (governmental or private) were satisfied with their workplace. Primary workplace satisfaction = Are you satisfied with your current primary (morning) job?

1. We also compared between the private and governmental sectors according to different work aspects. Mann-Whitney test showed that pharmacists working in the private sector had significantly (p-value < 0.05) more control over work and higher manager, income, expectation and general satisfactions at their current workplace compared to those working in the public sector (Figure 1 B). Although there was no significant difference in physical and emotional health between pharmacists working in governmental and those working in the private sector, the pharmacists working in the private sector had better emotional and physical health. On the other hand, pharmacists working in the governmental sector had significantly (p-value < 0.05) longer job hours.

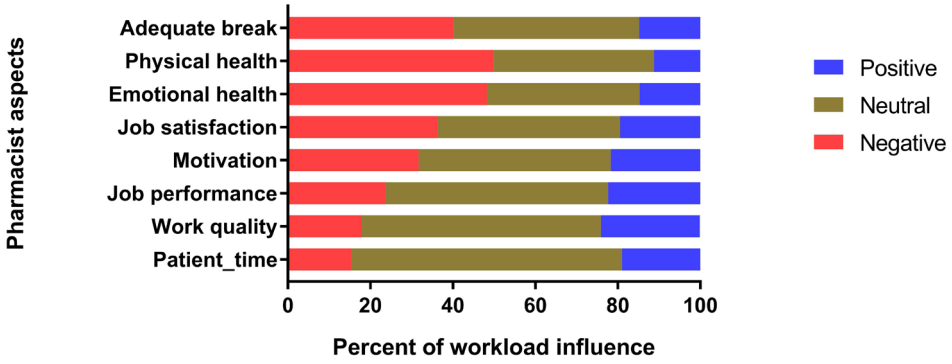

FIGURE 1 A - The influence of pharmacist workload on pharmacist health and work aspects

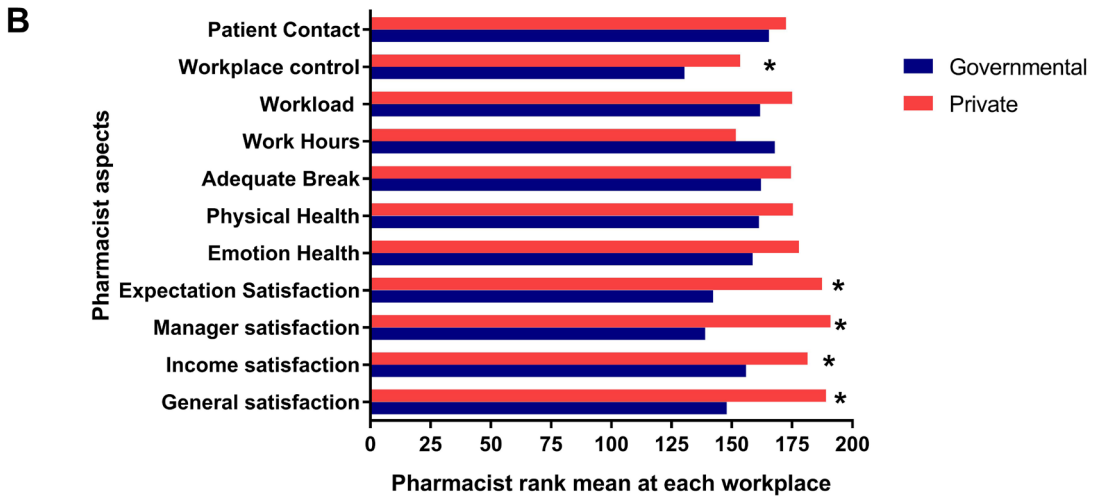

FIGURE 1 B - Difference between the private and governmental sectors and their effects on pharmacist health and work aspects

*Significant difference (P< 0.05) according to Mann-Whitney Test

DISCUSSION

The study found about half of the participants were dissatisfied with their primary workplace and 19.5% chose to leave a governmental job and work two shifts in the private sector. The role of pharmacists as healthcare professionals differs from one country to another. In Iraq, the pharmacy practice environment is largely understudied with the exception of a few descriptive reports (Al-Jumaili, Hussain, Sorofman, 2013; Ibrahim, Wayyes, 2016). This study aims to shed the light on the complex work environment of pharmacy practice in Iraq given the current growth of the number of pharmacists and the competitive work environment.

The strength of study that it included pharmacists from all 18 provinces. However, the study had a few limitations including low response rate which may was due to the timing of the survey which coincided with the election campaign of SIP in Summer 2018. Thus, the Facebook site was busy with advertisements for candidates for the SIP board and consequently the survey link did not attract many viewers although we reposted it for 12 times. The second limitation was the large percentage of incomplete responses which may be due to the length of the survey. However, we still received acceptable number of usable surveys. Additionally, the study sampling was convenience since we did not have a comprehensive database about all Iraqi pharmacists. Our responses represented 6.3% of the total Iraqi pharmacists in 2018. In contrast, the pharmacist workforce study in the U.S. had a random sample of 2,446 out of 290,780 which is the total number of American pharmacists in 2014 (i.e. sample was 0.84% of the total number) (Gaither *et al.*, 2015).

Even though pharmacists can sustain governmental and private jobs, only less than half (44.8%) of respondents chose dual jobs. While nearly one-fifth (19.5%) chose to leave a governmental job and work two shifts in the private sector, a good percentage (35.8%) chose to work only one shift by sustaining either a governmental or evening private job (Table III). Above findings align well with workload reports where nearly equal percentage of pharmacists reported working two shifts also reported high or excessively high workload. In contrast, 66% of American pharmacists reported high or excessively high workload in 2014 (17). This might be the reason for Iraqi pharmacists to consider and actively choose to maintain only one-shift job.

Additionally, we found that about half of the participants reported a negative impact of workload on their physical and emotional health (Figure 1). This agrees with previous reports of the negative impacts of increased workload for health professionals on their health (Boran *et al.*, 2012). Furthermore, heavy workload has been linked to increased work stress which in turn

has been linked to increased dispensing errors (Boran *et al.*, 2012; Johnson *et al.*, 2014; Lea, Corlett, Rodgers, 2012). These findings are alarming as they would have a direct impact not only on pharmacists' health but also on the general population.

Looking at income reports, 35% of participants reported an increase in income compared to last year (Table III). This increase is expected to be sourced from participants working in the private sector as pay in governmental jobs does not increase considerably in one year. Additionally, participants in the private sector reported significantly higher satisfaction with their income compared to those working in the public sector.

Regarding job satisfaction, nearly half of the participants (47.24%) reported being dissatisfied with their jobs. Additionally, only small percent (≤ 7.1%) of the participants reported very satisfied with their work. Looking closely at influencing factors, income, manager, expectations, emotional health, and contact with patients were the only five out of 12 total factors studied that had a significant association with job satisfaction (Table IV). In adequate monthly income and emotional health in addition to frequent patient contact may negatively impact pharmacist satisfaction. These factors been previously been reported in other studies to influence job satisfaction to variable degrees in other countries including Lebanon (Hallit *et al.*, 2017), Saudi Arabia (Suleiman, 2015), Romania (Iorga *et al.*, 2017), and Ethiopia (Belay, 2016).

Some factors influencing pharmacist job satisfaction shared with other healthcare providers. In a Korean study measuring the factors influencing job satisfaction among 6846 physicians, nine factors were found to have significant relationship with physician job satisfaction including autonomy for care delivery, colleagues/patient relations, income, healthcare resources, social reputation, personal leisure time, administration, restrictions and regulations, and work hours and loads. The two factors shared between physician and pharmacist job satisfaction are income satisfaction and emotional health (personal leisure time). While work hours significantly influenced physician job satisfaction in the Korean study, it has appreciable effect (P-value =0.05) on Iraqi pharmacist job satisfaction (Oh, Kim, Kim, 2019).

Interestingly, contact with patients had a negative association with job satisfaction. These results are inconsistent with studies in other countries where patient care and patient-oriented activities were reported to contribute positively to pharmacist satisfaction. (Hincapie *et al.*, 2012; Mihm *et al.*, 2011; Suleiman, 2015) This association is shown for respondents in both public and private sectors. These results might be due the nature of pharmacy practice in the private sector in Iraq where counseling is free and time consuming for pharmacists. Furthermore, patients are hard to deter from some common misusing of OTC medications and, in many cases, they try to negotiate prices particularly for behind/over the counter medications. Similarly, dealing with difficult patients was reported to be a significant problem for health professionals including pharmacists in a neighboring Mediterranean country (Boran *et al.*, 2012). Both MOH and SIP are working on a pricing project for medications, but progress is rather slow. Additionally, there is an enormous variety of generic and brand medications available on the market which makes it challenging to satisfy all patients. Lastly, it is possible that pharmacists are troubled by patients complaining about unavailable medications in public health settings because they would have to purchase those out of pocket from community pharmacies. Even though MOH is working to secure all required medications in public health settings, frequent random shortages are still a burden for Iraqi patients and health care personnel. Another factor that might be contributing to such results is the limited interprofessional pharmacist-physician agreements as reported by previous studies conducted specifically in an Iraqi province (Al-Jumaili *et al.*, 2017; Al-Jumaili *et al.*, 2016). Poor pharmacist-physician collaboration was reported as a job stressor for pharmacists (Al Khalidi, Wazaify, 2013) while improved professional relationships was suggested to positively affect job satisfaction (Håkansson Lindqvist, Gustafsson, Gallego, 2019).

Given that pharmacists can practice in public and private jobs, it was important to compare job satisfaction for pharmacists working in both sectors to those maintaining only one job (Table V). Additionally, the

fact that we had nearly equal number of respondents working in governmental and private sectors strengthens the evaluation and comparison between the two sectors. Our results show that pharmacists working in both sectors were the least satisfied with their primary work site (public) while higher percentage of those maintaining only a governmental job reported work satisfaction. Not surprisingly, the highest percent of job satisfaction was reported by pharmacists working only in the private sector (Table V). This is mainly due to income, managers, workplace control and expectation factors as these are hard to control in governmental jobs. Indeed, there was a significant difference in satisfaction reported in these aspects between the two groups. Additionally, pharmacists working in the private sector were more satisfied (although they were not statistically significant) with four aspects including physical health, emotional health, workload, and breaks compared to those working in the public sector (Figure 1 B). Likewise, studies reported significant differences in job satisfaction for pharmacists working in varying job settings (independents pharmacies, dispensaries and chain pharmacies) in Riyadh, Saudi Arabia (Suleiman, 2015) and Amman, Jordan (community pharmacies versus hospitals) (Al Khalidi, Wazaify, 2013).

In summary, about half of the participants are unsatisfied with their primary (governmental) job. Thus, officials need to enhance pharmacists' work environment in the public sector.

CONCLUSIONS

Iraqi pharmacists work in diverse settings across the public healthcare system, community pharmacies, private drug bureaus and academia. Many pharmacists work in both the public and private sectors on the same day. Workload negatively impacts pharmacist physical and emotional health. Approximately half of the participants are dissatisfied with their primary workplace. The private sector is more appealing and has a higher satisfaction rate compared to public sector. The Ministry of Health need to improve work environments for pharmacists to enhance their satisfaction and productivity in addition to retaining more pharmacists in public sector positions.

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Received for publication on 08th December 2019
Accepted for publication on 04th October 2020