

Comparison of Job Satisfaction by Alumni and Student Medical Representatives and The Associated Factors in Iraq

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ABSTRACT

Background: Job satisfaction is a multifaceted construct that involves the intricate interplay of an employee's emotional, cognitive, and behavioral characteristics with their job.

Objectives: To explore the difference in job satisfaction among alumni and student medical representatives (MRs), as well as to identify the factors that influence the job satisfaction of MRs.

Methods: A cross-sectional face-to-face survey was conducted with medical school students and alumni working as MRs in various Iraqi universities.

Results: A total of 449 MRs participated in this study. A statistically significant difference was found in job satisfaction items, namely recognition, responsibility, salary, and working conditions between alumni and student MRs, with higher values observed in the alumni MRs group (p-values of 0.008, 0.003, 0.029, and 0.025, respectively). More than half of the participants had low levels of job satisfaction.

Conclusions: Alumni and student MRs have similar levels of job satisfaction. The factors that significantly contribute to job satisfaction among alumni MRs include recognition of good performance, increased autonomy and responsibilities, competitive salaries, and improved working conditions within the company. The satisfaction of MRs is significantly influenced by the quality of products and the reputation of the company.

Keywords: Satisfaction, Alumni, Student.

Introduction

The pharmaceutical market in Iraq exhibits distinct characteristics that set it apart from other nations. Despite a substantial gross domestic product that surpassed \$110 billion in 2019, only \$5 billion were designated for the national health sector, with only a quarter of this budget being utilized for the reimbursement of medicines [1]. The shortage of supplied medicines in public healthcare institutions has created an opportunity for the private sector to step in and address the gap through international

companies and their local distributors [2]. The most recent records from the Iraqi Ministry of Health indicate that the pharmaceutical market in Iraq is highly competitive, with over 8,600 registered trade drugs and 28 national pharmaceutical companies [3]. To expand their market share or penetrate new markets, pharmaceutical companies often employ medical representatives (MRs) as a strategic approach [4].

The role of a medical representative (MR) involves representing a pharmaceutical manufacturer or distributor by providing information and persuading healthcare professionals about the quality, effectiveness, and safety of medicinal drugs. The MR's objective is to encourage the prescribing, purchase, and/or use of these drugs [5, 6]. The profession of a medical representative was initially

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documented in the early 1900s in Europe [6]. This profession has implemented various strategies to enhance outcomes by targeting prescribers through calls, visits, conferences, and symposia, as well as customers or end-users through advertising using brochures and media. Additionally, the MRs profession recruit researchers to further improve their techniques [7]. According to Buckley's (2004) study, the majority of MRs and marketing campaigns are targeted toward physicians. This is achieved through various means, such as in-person visits accompanied by the distribution of free medical samples, brochures, and the provision of current research that supports the efficacy of their products [8, 9].

Job satisfaction is a multifaceted construct that involves the intricate interplay of an employee's emotional, cognitive, and behavioral characteristics with their job [10, 11]. It describes the extent of comfort and contentment of an employee during work [12]. Recently, organizations and pharmaceutical companies have directed their efforts toward exploring and enhancing employees' job satisfaction, with the ultimate goal of improving organizational productivity [10]. Studies by Bruke (2005) and Ahmed and Rafiq (2013) revealed that pharmaceutical companies with high levels of employee satisfaction are more competitive and profitable than their counterparts [13, 14]. The company's strategy of incentivizing, rewarding, and providing professional leadership to its employees is aimed at ensuring that individuals meet management's expectations and deliver good results [14]. Despite the significance of job satisfaction among medical representatives (MRs), a review of the literature has revealed a paucity of research investigating this topic. This study aims to explore the difference in job satisfaction among alumni and student MRs, as well as to identify the factors that influence the job satisfaction of MRs.

METHODS

A cross-sectional face-to-face survey was conducted between October 1st and November 15th, 2022. The study

received ethical approval from the research committee at the College of Pharmacy, Mosul University. The participants were current students of all academic levels or graduates from Iraqi medical schools with different specialties, including Pharmacy, Medicine, Dentistry, Nursing, and Veterinary medicine, who are currently full-time or part-time working or have previously worked as medical representatives in pharmaceutical companies for marketing medicines. The data collection process was conducted at various locations, including private community pharmacies, drug stores, and academic institutions such as colleges of pharmacy, medicine, and dentistry at the universities of Mosul, Baghdad, Duhok, Hawler, Kirkuk, Najaf, and Basrah. The interviews were conducted by IAJ, TAT, FFA, ZSS, and TMJ in a location convenient for the participants. The interviews took an average of 10 minutes to complete. Before conducting the interviews, the interviewers described the aims of the study and ensured that the interviews would be solely intended for scientific research. The researchers provided reassurance to the participants that the survey questionnaire would not gather any personally identifying information. Additionally, they emphasized that each interviewee's response would be anonymized, thereby ensuring that the respondent's identity remains confidential and cannot be tracked. Before commencing the interview, the interviewee provided informed consent to participate in the study, and they were also informed of their right to withdraw from the study at any time. After conducting the analysis, the gathered data were securely stored in a locked cabinet located within the chief investigator's office at the College of Pharmacy.

Study instrument

The study questionnaire comprised three sections. The first section aimed to explore demographic characteristics, including gender, age, marital status, province of employment, educational background, employment status, type of company, years of work experience, job position, work zone, and salary. The second section of the study

comprised a validated job satisfaction scale. The scale consisted of questions pertaining to various aspects such as achievement, recognition, responsibility, opportunity for advancement, company policy and administration, supervision, salary, interpersonal relations, and working conditions. This scale was obtained from Roopai's (2012) study, which utilized content and criterion validity measures to validate the scale [15]. The job satisfaction scale for each item ranged from 1 to 5, with 1 indicating a high level of dissatisfaction (very unsatisfied) and 5 indicating a high level of satisfaction (very satisfied). The overall score exhibited a range of 5 to 45. The assessment of job satisfaction factors was conducted using a five-point Likert scale, ranging from -2 to 2, where -2 indicated a factor of very low importance, -1 indicated a factor of low importance, 0 indicated a neutral factor, 1 indicated an important factor, and 2 indicated a very important factor.

The final section of the study aimed to explore the factors that influenced the satisfaction of the participants. These factors include training programs, the attitudes of the physician, pharmacist, supervisor, and physician gatekeeper, sales target, location of work, working hours, quality of the products, and the reputation of the company. This section was based on a separate study [16]. The questionnaire's validity was assessed through face and content validity, whereby it underwent review by a panel of 11 clinical pharmacy experts from the University of Mosul and Nineveh University, who were selected based on their academic credentials. The panel did not make any modifications to the questionnaire. Subsequently, the questionnaire underwent a pilot study with a cohort of 20 participants. The reliability of the questionnaire was confirmed, with the Cronbach's α coefficient being 0.733. The participants in this pilot study were pharmaceutical medical representatives employed by various pharmaceutical companies operating within Nineveh

province. The participants in the pilot study were excluded from the main study.

Statistical analysis

Descriptive and inferential statistical analyses were conducted using the Statistical Package for Social Science (SPSS) version 25. The determination of the cut-off point for the satisfaction level was achieved through the utilization of the median split method [17]. The Kolmogorov-Smirnov test results indicated that the data were non-normally distributed. Nonparametric statistical tests, including Spearman correlation, Mann-Whitney U test, and Kruskal-Wallis test, were utilized to assess the correlation between individual satisfaction items and the overall level of job satisfaction, as well as to identify any differences in mean scores. The study findings are reported using numerical values and percentages for categorical data, while normally distributed quantitative data are presented as means with standard deviation (SD), and non-normally distributed quantitative data are presented as median with interquartile range (IQR). The determination of the key factors that impact the level of satisfaction within each group was achieved through the computation of the total points assigned to each factor based on the responses received.

RESULTS

The study involved the participation of 449 individuals identified as MRs, including both alumni MRs (256) and student MRs (193). The majority of the participants were male, single, and residing in the mid-north region of Iraq. Over fifty percent of the participants in the study had either graduated or were currently studying at the College of Pharmacy. Additionally, they were employed as Medical Representatives (MRs) in generic companies, with a work location limited to the city center, and earning a monthly salary exceeding \$600 (Table 1).

Table 1: Demographic characteristics of participating MRs

Variables		N	Alumni MRs (N=256)	Student MRs (N=193)
Age †		449	27 (25-30)	23 (22-24)
Gender	Male	347	216 (84.4%)	131 (67.9%)
	Female	102	40 (15.6%)	62 (32.1%)
Marital state*	Single	302	129 (50.4%)	173 (89.6%)
	Married	143	125 (48.8%)	18 (9.3%)
	Divorced	2	1 (0.4%)	1 (0.5%)
	Widow	2	1 (0.4%)	1 0.5%)
Provinces*	Kurdistan	30	21 (8.2%)	9 (4.7%)
	Mid-north	352	200 (78.1%)	152 (78.8%)
	South	67	35 (13.7%)	32 (16.6%)
College of study or graduation*	Pharmacy	246	130 (50.8%)	116 (60.1%)
	Medicine	59	31 (12.1)	28 (14.5%)
	Dentistry	41	19 (7.4)	22 (11.4%)
	Others	103	76 (29.7%)	27 (14%)
Working as a med rep*	ex-rep	175	97 (37.9%)	78 (40.4%)
	med rep	274	159 (62.1%)	115 (59.6%)
Company type*	Brand	109	74 (28.9%)	35 (18.1%)
	Generic	256	154 (60.2%)	102 (52.8%)
	I do not know	84	28 (10.9%)	56 (29.0%)
Years of working‡		449	3 (1-4)	1 (1-2)
Position inside the company*	Owner	6	3 (1.2%)	5 (2.6%)
	Team leader	47	30 (11.7%)	17 (8.8%)
	Marketing manger	7	6 (2.3%)	0 (0 %)
	Executive manager	3	2 (0.8%)	0 (0 %)
	Supervisor	37	35 (13.7%)	2 (1.0%)
	Medical representative	261	133 (52%)	128 (66.4%)
	Sale man	88	47 (18.4%)	41 (21.2%)
Work zone*	The city center only	282	161 (62.9%)	121 (62.7%)
	The city borders only	30	10 (3.9%)	20 (10.4%)
	The city center and borders	51	30 (11.7%)	21 (10.9%)
	The whole province	86	55 (21.5%)	31 (16.1%)
Salary*	Less than 200\$	28	10 (3.9%)	18 (9.3%)
	Between 200 and 400	67	29 (11.3%)	38 (19.7%)
	Between 400 and 600	91	46 (18.0%)	45 (23.3%)
	More than 600	263	171 (66.8%)	92 (47.7%)

‡ presented as median ± interquartile range; * presented as frequency and percentage

Job satisfaction items

With respect to the items contributing to job satisfaction among alumni and student MRs, the results show that interpersonal relations were ranked as the most highly scored item by the alumni MRs. The Mann-

Whitney U test results indicate a statistically significant difference in recognition, responsibility, salary, and working conditions between alumni and student MRs, with higher values observed in the alumni MRs group (p-values of 0.008, 0.003, 0.029, and 0.025, respectively) (Table 2).

Table 2 Alumni and student MRs job satisfaction items

Job satisfaction items	Alumni MRs (N=256) Median (IQR)	Student MRs (N=193) Median (IQR)	z-value	p-value
Achievement	3 (3-5)	3 (3-5)	-1.754	0.079
Recognition	3(3-5)	3 (1-3)	-2.632	0.008*
Responsibility	3 (3-5)	3 (1-3)	-2.986	0.003*
Opportunity for advancement	3 (1-4)	3 (1-3)	-1.551	0.121
Company policy & administration	3 (3-5)	3 (3-4)	-0.920	0.357
Supervision	3 (3-5)	3 (3-5)	-1.025	0.305
Salary	3 (3-5)	3 (1-5)	-2.185	0.029*
Interpersonal relations	5(3-5)	5 (3-5)	-1.838	0.066
Working conditions	3 (1-4)	3 (1-3)	-2.238	0.025*

Satisfaction level

The findings illustrated in Table 3 indicate that the job satisfaction levels between the two groups are comparable,

with a majority of participants - encompassing both alumni and student Medical Representatives (MRs) - reporting low levels of job satisfaction.

Table 3 Satisfaction levels of alumni and student MRs

Level of satisfaction	Alumni MRs	Student MRs
Low satisfaction	136 (53.1%)	99 (51.3%)
High satisfaction	120 (46.9%)	94 (48.7%)

The correlation between the overall satisfaction scores and demographic characteristics of alumni and student MRs

The Spearman correlation analysis results show

positive correlations between the overall satisfaction score and the duration of work experience in both alumni and student MRs. The p-values for these correlations were 0.007 and 0.025, respectively (Table 4).

Table 4 correlation between overall satisfaction level and demographic characteristics of alumni and student MRs

Variables	Alumni MRs (N=256)		Student MRs (N=193)	
	Rho	p-value	rho	p-value
Age	0.078	0.211	0.002	0.974
Number of years of work	0.168	0.007	0.14	0.025

rho: Spearman's correlation

The difference between the overall satisfaction scores and demographic characteristics of alumni and student MRs

Regarding alumni MRs, the Kruskal-Wallis test results reveal statistically significant differences in the overall satisfaction level among groups with different employment statuses, specifically between those currently working as MRs and those who have resigned.

Additionally, the results show significant disparities in satisfaction levels among MRs employed by different types of companies. Conversely, in the case of student MRs, the Kruskal-Wallis test results indicate statistical differences in satisfaction levels among groups holding diverse positions within the company and earning varying salaries (Table 5).

Table 5 The difference between overall satisfaction level and demographic characteristics of alumni and student MRs

Demographics variable		Alumni MRs		Student MRs	
		Mean (SD)	p-value	Mean (SD)	p-value
Gender*	Male	28.42 (8.84)	0.623	27.48 (8.84)	0.813
	Female	27.9 (7.89)		27.29 (7.40)	
Marital status**	Single	27.66 (8.39)	0.150	27.37 (8.28)	0.862
	married	29.20 (8.84)		27.61 (9.93)	
	divorced	27 (0)		30 (0)	
	Widow	9 (0)		30 (0)	
Province**	Kurdistan	29 (6.87)	0.45	23.77 (8.21)	0.189
	mid-north	28.69 (8.92)		27.92 (8.35)	
	South	25.94 (8.09)		26.06 (8.42)	
Profession **	pharmacist	28.28 (9.18)	0.424	27.38 (8.22)	0.545
	physician	27.61 (8.7)		27.67 (7.01)	
	Dentist	25.73 (8.98)		25 (8.47)	
	Others	29.38 (7.66)		29.29 (10.12)	
Have you worked as a med rep*	Ex-rep	26.69 (8.72)	0.024	26.05 (8.57)	0.064
	med rep	29.34 (8.54)		28.35 (8.15)	
Company type**	Brand	32.29 (7.65)	0.001	27.88 (8.96)	0.322
	generic	26.98 (8.57)		28.09 (8.28)	
	I do not know	25.32 (8.67)		25.91 (8.15)	
Working zone **	city center only	27.70 (8.55)	0.338	27.04 (8.38)	0.418
	whole province	29.47 (9.0)		26.74 (9.05)	
	whole city	29.63 (9.98)		28.85 (8.03)	
	city borders	28.5 (3.1)		29.25 (7.84)	
Position inside the company**	Owner	35.33 (9.6)	0.184	22.2 (7.79)	0.002
	team leader	30.63 (9.31)		32.76 (7.15)	
	marketing manager	31.5 (5.75)		11(1.14)	
	executive manager	32 (1.41)		12 (1.4)	
	supervisor	30.42 (8.52)		23 (2.82)	
	med rep	27.12 (8.46)		26.15 (7.8)	
	sale man	27.74 (8.96)		30.02 (9.44)	
Salary **	less than 200\$	24 (9.67)	0.13	24.66 (9.97)	0.013
	200\$- 400\$	28.03 (8.01)		28.33 (7.87)	
	400\$ - 600\$	25.93 (9.44)		25.06 (7.83)	
	more than 600\$	29.29 (8.39)		29.31 (8.81)	

* Mann Whitney; ** Kruskal-Wallis test

Factors affecting alumni and student MRs job satisfaction

Alumni Medical Representatives (MRs) ranked factors that positively influence or predict job satisfaction in the following descending order: quality of products, company reputation, attitude of the pharmacist, working hours, sales target, work location, training programs, attitude of other MRs, and physician's attitude. The participants highlighted

the negative impact of the gatekeeping attitude of physicians on their job satisfaction. Conversely, student MRs rated the factors that positively influence or predict job satisfaction slightly differently from the alumni MRs. In order of importance, as determined by the ratings, they were: quality of products, working hours, pharmacist's attitude, company reputation, work location, supervisor's attitude, sales target, training programs, and physician's attitude (Figure 1).

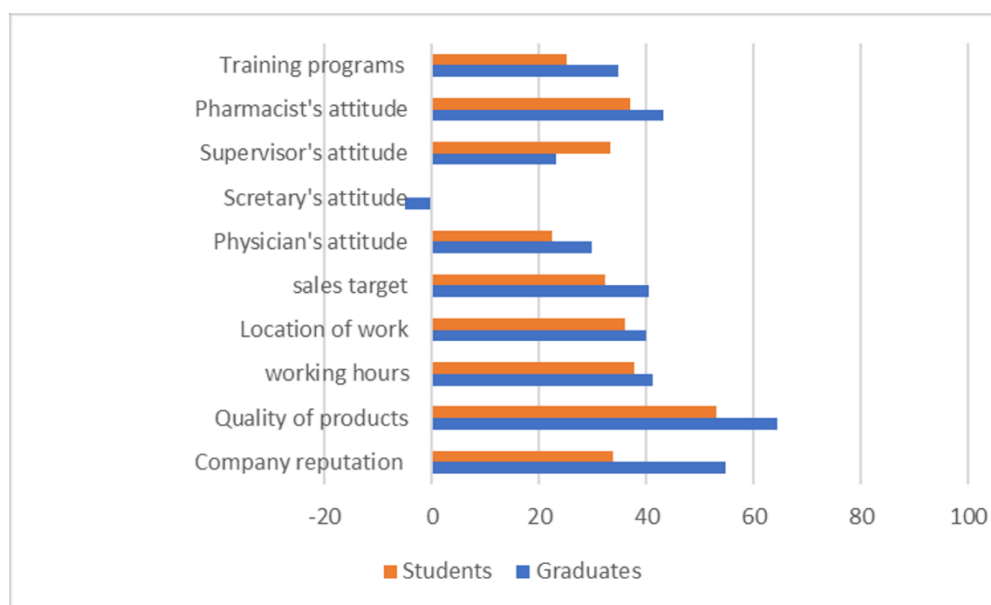


Figure 1 Factors affecting alumni and student MRs job satisfaction

MRs plans to change job

The participating MRs were asked about their preferences to either remain with their current company, transition to a different organization, or leave the MR profession entirely. The results of the survey indicate that a majority of alumni MRs, specifically 57%, expressed

their intention to remain employed with their current company. On the other hand, over one-third of the respondents expressed their desire to permanently leave the MR profession. In contrast, a smaller proportion of student MRs reported their intention to remain employed with their current company (Table 6).

Table 6 the plans of alumni and students MRs to change job

Plans to change job	Alumni MRs	Student MRs
Leave MR job forever	98 (38.3%)	66 (34.2%)
Stay with the same company	146 (57%)	81 (42.0%)
Move to another company	12 (4.7%)	46 (23.8%)

DISCUSSION

The present study investigates the difference in job satisfaction between alumni and student MRs, as well as the various factors that contribute to job satisfaction. This study intended to enhance the job satisfaction of medical representatives and address the knowledge gap in this area. Previous research in this field has primarily focused on alumni, thus highlighting the need for further investigation of the experiences of current medical representatives. In order to comprehend the results of the comparison between alumni and student MRs, it is crucial to consider that working students may differ significantly from working alumni in various aspects. For instance, their financial motivation and propensity to leave a job may be unpredictable [18].

Job satisfaction is a multidimensional concept. Previous research has indicated that these dimensions are influenced by a combination of demographic and work-related factors [19–21]. Herzberg's Theory posits that job satisfaction is influenced by both intrinsic factors, such as achievement, recognition, responsibility, and opportunities for advancement, as well as extrinsic factors, including company policy and administration, supervision, salary, interpersonal relationships, and working conditions [22, 23]. The findings of the present study suggest that alumni MRs consider interpersonal relations to be a crucial and foundational aspect of their job satisfaction. The quality of social life and productivity of the MR can be influenced by the interpersonal relationships they establish with their manager, peers, colleagues, and external contacts within and outside the company. According to a study by Kreitner et al. (2002), positive interpersonal relationships can serve as a motivator and enhance job satisfaction [24]. The alumni MRs' ratings of interpersonal relations were higher than those of the student MRs, as the former recognized the importance of building relationships over time and through effective communication skills. Moreover, a considerable number of medical institutions incorporate communication skills training into their

academic program [25, 26].

The findings of the present study indicate that the recognition item holds greater significance for alumni MRs compared to student MRs. Recognition refers to acknowledging or commending a task that has been accomplished, and to differentiate between scenarios where tangible incentives are provided in conjunction with acknowledgments of achievement and those where such incentives are absent. The studies conducted by Bodla and Naeem (2004) and Malik and Naeem (2009) have demonstrated that recognition plays a crucial role as a motivational factor for MRs [27, 28]. This finding is consistent with the research conducted by Roopai (2012) [15].

The item of responsibility held greater significance for alumni MRs in comparison to student MRs. Responsibility, in this context, refers to the act of being entrusted with tangible duties and possessing the necessary authority to execute them proficiently. According to a study conducted by Graham and Messner (1998), there is a positive correlation between job responsibilities and job satisfaction among employers [29]. The greater emphasis on responsibility exhibited by alumni may also be attributed to their proclivity for working independently to enhance their sales targets and profits, as well as their potential for career advancement.

The salary was identified as a significant item in job satisfaction among alumni MRs, as opposed to students' MRs. As alumni rely on their salary as their primary source of income, while students typically work to supplement their finances and gain practical experience. According to a study conducted by Kabir and Parvin (2011), salary was identified as the most significant motivational factor for job satisfaction among employees working in pharmaceutical companies [30].

The alumni MRs rated the quality of working conditions as one of the most significant items influencing job satisfaction, as opposed to the student MRs. Robbins (2001) study suggested that the level of job satisfaction

experienced by employees can be influenced by their working conditions, as employees prioritize a comfortable physical work environment. This, in turn, can lead to a higher level of job satisfaction. Employees may perceive that unfavorable working conditions can result in poor performance, given the mental and physical demands of their jobs [31]. Student MRs might be less affected by the working conditions since they are working in part-time jobs and/or due to the fewer chances that are available for students. Pharmaceutical firms prefer to hire alumni rather than students. The impact of working conditions on students' MRs' job satisfaction may be explained by their part-time employment status and limited job opportunities. Pharmaceutical companies exhibit a preference for recruiting alumni over current students.

The results of the present study indicated that the majority of Iraqi MRs exhibit a low level of job satisfaction. The findings indicate that alumni and student MRs exhibit comparable levels of job satisfaction. The present study findings are consistent with those of Saleh (2018), who reported that 73% of Ethiopian medical representatives exhibited low levels of job satisfaction [32]. However, the findings of this study were inconsistent with those of Roopai's (2012) study, which reported that 62% of South African medical representatives had high levels of job satisfaction [15].

The results of the present study indicated that there was a positive correlation between the number of years of work and the overall level of satisfaction in both groups. The level of satisfaction among MRs increases with their accumulated experience. According to Jaffar et al (2017) research, there is a positive correlation between the length of service of MRs within a company and their job satisfaction [33]. In contrast, a study conducted in India discovered that the job satisfaction of MRs was not significantly associated with their length of service within a company. This finding can be attributed to the tendency of MRs to leave their jobs after a few years in India [15].

The present study found that job satisfaction varied

between current and former MRs, with higher levels of satisfaction reported among those who are currently employed in the field. This phenomenon is not unexpected, as the persistence of their employment suggests a level of contentment with their work.

The results of the present study also indicated that the level of job satisfaction varied between MRs employed in brand pharmaceutical companies and those employed in generic companies, and those who were uncertain about their company's drug production status. A greater level of satisfaction was observed among alumni MRs who were employed in brand companies. The present study findings are consistent with those of Arafat et al. (2015), who reported that job satisfaction among Bangladeshi MRs was higher among those employed in brand companies [34]. Similarly, the job satisfaction level was higher among student MRs who worked as team leaders within the company. According to Bakhuys Roozeboom et al. (2020) study, individuals occupying higher positions within their organizations experienced lower levels of work stress and organizational stress, leading to higher levels of job satisfaction [35]. The level of job satisfaction experienced by MRs was found to be positively correlated with their salary, with those earning a higher salary reporting greater job satisfaction than those with a lower salary. The study conducted by Jaffar et al. (2017) demonstrated a positive correlation between the job satisfaction of MRs and their promotion and salary levels [33]. Previous research has indicated a positive correlation between job satisfaction and both higher salaries and improved job positions within the workplace [15, 36].

The present study examined the factors that impact the job satisfaction of MRs. This study found that the quality of the products promoted by MRs and their ability to persuade healthcare professionals to prescribe or sell these products were identified as the most significant positive factors by both groups. The alumni MRs have conveyed that the reputation of the drug manufacturing company is the second most significant factor that contributes to their

satisfaction, whereas this factor holds less importance for the student MRs. This finding is consistent with the research conducted by Musleh and Al-Dmour (2011) [37]. This could be attributed to the eagerness of student MRs to secure employment at any company, coupled with the limited job offers available to them. In contrast, alumni MRs have access to a wider range of job opportunities, which allows them to be more selective and opt for companies with a better reputation.

The pharmacist's attitude was identified as the most significant factor that positively influenced the satisfaction of both groups. This could be ascribed to the greater proportion of pharmacists and/or pharmacy students who took part in the study. Furthermore, the potential good relationship between pharmacists and MRs, as pharmacies serve as the ultimate destination for medical promotion efforts. The attitude of supervisors was found to be more significant for students than for alumni MRs, given the greater need for training among students to achieve professional readiness.

Conversely, the attitude of physicians' gatekeepers towards medical representatives has been identified as a detrimental factor that impacts the job satisfaction of alumni MRs. As physicians' gatekeepers, these individuals have the authority to regulate the access of MRs to healthcare professionals, which may impede the representatives' ability to conduct medical representation calls. The student MR's level of enthusiasm and persistence may potentially mitigate the impact of this factor.

Despite the comparatively lower levels of job satisfaction reported by both alumni and student MRs, a greater proportion of alumni MRs indicated a desire to remain with their current company. A smaller proportion (42%) of student MRs indicated their intention to remain employed with their current company. This finding may be attributed to the older employees' preference for job stability compared to younger ones. Additionally, this could be attributed to the comparatively lower salaries provided to MRs who are still students, in contrast to those who have graduated, as well as the necessity for them to discontinue

their work at some point to fulfill their education.

The present study bears a number of strengths and limitations. This research is pioneering in its exploration, comparison, and contrast of job satisfaction levels among alumni and student Medical Representatives (MRs) in Iraq and the Middle East region. It is particularly significant due to its focus on the distinctive opportunity offered by Iraqi pharmaceutical companies, which employ students as MRs. However, the study also carries certain limitations that may impact its findings' generalizability. Nevertheless, eliminating these limitations posed a significant challenge. (1) The subjective nature of job satisfaction, which is influenced by psychographic factors, can result in varying levels of satisfaction among MRs from the same company who are working under similar conditions. (2) The Iraqi market is characterized by a large number of pharmaceutical companies that are dispersed across various locations and are subject to different regulatory frameworks. (3) The dynamic nature of the profession of MRs poses a challenge due to the limited availability of interview opportunities. (4) The study was designed to incorporate interviews with MRs from various provinces in Iraq. The combination of the aforementioned reasons, coupled with the limitations of time, led to the selection of convenient sampling as the most appropriate method for this study. Furthermore, we did not conduct regression analysis to build a model with the variables which are significantly and independently associated with the study outcome. Given the aforementioned limitations, it is recommended that a more extensive survey be conducted to encompass all pharmaceutical companies operating in Iraq. This will provide a more comprehensive understanding of the satisfaction levels among this population.

CONCLUSIONS

The current study reveals a similarity in job satisfaction levels between alumni and student Medical Representatives (MRs). Significant contributing factors to job satisfaction among the alumni MRs included

recognition of good performance, increased autonomy and responsibilities, competitive salaries, and enhanced working conditions within the company. Alumni MRs working in brand companies displayed higher satisfaction. Meanwhile, holding higher positions within the company and earning higher salaries were associated with greater satisfaction among student MRs. Both groups were significantly influenced by the quality of products and the company's reputation, highlighting these factors as being of paramount importance. Policymakers and managers of

pharmaceutical companies should give greater consideration to these determinants in order to improve employee satisfaction.

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مقارنة الرضا الوظيفي من قبل الخريجين والطلاب المندوبين الطبيين والعوامل المرتبطة بها في العراق

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ملخص

الخلفية: الرضا الوظيفي هو تفاعل متعدد الأوجه للخصائص العاطفية والمعرفية والسلوكية للموظف مع وظيفته.
الأهداف: استكشاف الاختلاف في الرضا الوظيفي بين المندوبين الطبيين من الخريجين والطلاب وكذلك تحديد العوامل التي تؤثر على الرضا الوظيفي للمندوبين الطبيين.
الأساليب: تم إجراء مسح مقطعي مستعرض وجهًا لوجه مع طلاب وخريجي كليات المجموعة الطبية في العديد من الجامعات العراقية.
النتائج: شارك 449 مندوبًا طبيًا في هذه الدراسة. فروق ذات دلالة إحصائية في عناصر الرضا الوظيفي وهي؛ الاعتراف والمسؤولية والراتب وظروف العمل بين المندوبين الطبيين من الخريجين والطلاب، مع وجود قيم أعلى لوحظت في مجموعة الخريجين (قيم $p = 0.008$ ، 0.003 ، 0.029 ، و 0.025 ، على التوالي). أكثر من نصف المشاركين لديهم مستويات منخفضة من الرضا الوظيفي.
الاستنتاجات: لدى الخريجين والطلاب مستويات مماثلة من الرضا الوظيفي كانت العوامل التي ساهمت بشكل كبير في الرضا الوظيفي بين الخريجين هي الاعتراف بالأداء الجيد، وزيادة الاستقلالية والمسؤوليات، والرواتب التنافسية، وتحسين ظروف العمل داخل الشركة. يتأثر رضا المندوبين الطبيين بشكل كبير بجودة المنتجات وسمعة الشركة.
الكلمات الدالة: رضا، خريج، طالب.

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