



## The effect of motivation on job satisfaction of health center workers in the Kingdom of Saudi Arabia in light of the COVID-19 pandemic

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### ABSTRACT

This research aimed to understand how incentives affect job satisfaction among employees at health centers in Bisha, a region in Saudi Arabia. The method used was descriptive and analytical, involving all 1,300 employees at these health centers, with 274 randomly chosen participants for the survey. A questionnaire collected data from these participants. The findings suggest that the average job satisfaction among these employees is moderate, indicating they are somewhat satisfied. However, the system of incentives was generally found to be weak, despite a clear link between incentives and job satisfaction, proven significant at the  $\alpha \leq 0.01$  level. When considering educational background and years of experience, these factors did not significantly impact satisfaction levels with the incentive system at the  $\alpha \leq 0.05$  level. Yet, gender did show a significant difference in satisfaction levels at the same significance level. The research concludes that there is a need to reevaluate and improve the incentive system for health center employees in Bisha to enhance their job satisfaction. It suggests conducting further research to develop management strategies and explore new methods to increase employee satisfaction.

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### 1. Introduction

Employees are considered crucial assets in any organization due to their diverse skills and levels of expertise across different functional areas. They are essential for an organization to leverage its other resources effectively and achieve its objectives. According to [Ashkanasy and Dorris \(2017\)](#), incentives play a significant role in enhancing employee enthusiasm, fostering a culture of initiative and competition, and promoting participation and cooperation. This, in turn, cultivates skills and creativity, contributing to an organization's success and growth. An incentive system, therefore, not only benefits employees but is also strategic for achieving organizational goals.

[Fu \(2012\)](#) outlined several benefits of an effective incentive system for organizations:

- **Enhanced profitability:** By motivating employees, an organization can increase its productivity and market share, which helps in achieving its broader goals.
- **Reduced workplace issues:** Effective incentives can decrease problems such as absenteeism and employee turnover, thereby lowering labor costs and improving quality.
- **Improved organizational image:** A well-implemented incentive system can enhance the organization's reputation in both internal and external environments.
- **Cultivation of positive work behaviors:** Incentives contribute to the development of acceptable work behaviors and stable work values, forming the core of an organization's culture.

Modern management practices place a high emphasis on human resources and their efficiency. Research continues to explore various factors that influence productivity. Human resources departments strive to maximize efficiency and effectiveness by fostering an environment that nurtures the skills and training of dedicated and qualified employees. [Hamadamin and Atan \(2019\)](#) confirmed that an individual's performance and

efficiency depend on two main factors, namely, the ability to work and the desire to work. The ability to work is represented by the knowledge, skills, and abilities that the employee possesses through education and training, while the desire to work is represented by that employee's motivation. Indeed, an employee's behavior must be consistent with the organization's goals, so the management literature has paid great attention to studying job satisfaction. More specifically, a convergent and discriminant validity matrix analysis suggested that it is possible to effectively measure people's satisfaction with different facets of their jobs (Wanous and Lawler, 1972). The human relations movement has also emphasized the importance of employee morale and highlighted the need to ensure a good work environment. The principles of scientific management, as emphasized by Frederick Taylor, have focused on the role of material incentives in increasing the productivity of employees. In addition, the theories of modern management have highlighted the importance of both material and moral incentives, linking them together due to their importance in increasing productivity and quality by satisfying employees' basic psychological and social needs and raising their morale (Cerasoli et al., 2014). Indeed, incentives kindle the employees' enthusiasm and motivation for work, regardless of their field of expertise, and this, of course, reflects on the overall performance of an organization. Incentives also enhance the interactions between management and employees by motivating them to work with a passion and preventing them from feeling that they are not being appreciated. According to Borisov (2022), incentives are based on temptations and external influences that, in turn, encourage employees to raise their level of performance, and this, in turn, increases the level of satisfaction and loyalty to the organization, which is then reflected in a further increase in the level of performance and productivity (Allebdi and Ibrahim, 2020).

In this context, the ministries and departments in the Kingdom of Saudi Arabia, including the Ministry of Health, all seek to achieve the highest levels of performance and productivity under the Saudi Vision 2030 programs, such as the Quality of Life Program and the Human Capacity Development Program. The Ministry of Health, therefore, seeks to guarantee citizens and residents the highest levels of quality in the health service it provides through all its outlets, such as hospitals and health care centers, as well as through interactive electronic services. As part of this, the Ministry seeks to improve the efficiency of people working in the health sector by implementing human resource development programs. Nevertheless, human resources in the health sector have faced, and continue to face, challenges.

One such challenge was the coronavirus pandemic that swept the world. Coronaviruses are a large family of viruses that cause disease in animals and humans, and some can cause respiratory infections in humans ranging in severity from the

common cold to more severe illnesses, such as the Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS). The recently discovered coronavirus causes COVID-19, and in the early days of the pandemic, there was no knowledge about this disease. The first outbreak of this new virus was in the city of Wuhan, China, in December 2019, and it subsequently created challenges that put a significant amount of stress on health systems. The COVID-19 pandemic has been a tough experience for people all over the world (Alsulimani et al., 2021). The most common symptoms of COVID-19 are fever, fatigue, and a dry cough, although patients may also suffer from aches and pains, nasal congestion, runny nose, sore throat, and diarrhea. The symptoms are usually mild and begin gradually, and some infected people show no symptoms or feel sick. Most people (about 80%) recover from the disease without the need for any special treatment, but for others, the severity of the disease intensifies. Almost one in every six people who become infected with COVID-19 have difficulty breathing, with the elderly and people with underlying medical issues—such as high blood pressure, heart disease, or diabetes—being more likely to develop serious disease.

The Ministry of Human Resources and Social Development in the Kingdom of Saudi Arabia issued a set of preventive protocols for the public sector to limit the spread of Covid-19. These related to public places, tracking and reporting, awareness, and implementing systems for taking out of the workplace anyone who was aged more than 65 or suffering from chronic lung disease, severe asthma, chronic heart disease, hereditary immunodeficiency, acquired immunodeficiency, severe obesity, and chronic medical conditions like diabetes and high blood pressure. Nevertheless, these protocols did not cover health sector workers, given that they were the first line of defense in confronting this pandemic, so they were more exposed to infection than other citizens. The number of people infected with this virus reached approximately 38 thousand cases in the Kingdom of Saudi Arabia. By comparison, at the end of 2018, the number of administrative and health staff employees of the Ministry of Health reached 68,655, and they were distributed across all departments.

This study investigated the effect of incentives, as an independent variable, on job satisfaction, as a dependent variable, for workers in the health centers of the Bisha governorate in the Al-Ashayer region. These workers have varying years of experience, academic qualifications, and genders due to the nature and specificity of this research work and the accessibility to these employees. The proposed relationship is illustrated in Fig. 1.

A review of the literature highlighted some dynamism in conceptualizations of job satisfaction over time (Aziri, 2011). An individual's job satisfaction can vary depending on the time and place, so it can vary between countries, geographical regions, hospitals, and even wards in the same

hospital (Chen and Johantgen, 2010). The definition of job satisfaction also varies from person to person and even for a single person over time (Pratama et al., 2022). Researchers tend to focus on a limited aspect of the field and define their variables in terms of the concepts they can work with most easily. This variation in approaches and conceptual ideas, therefore, makes it difficult to compare the results of various studies (Sanbonmatsu et al., 2021). Moreover, some researchers have argued that job satisfaction has been vaguely defined in the organizational literature (Sanbonmatsu et al., 2021). More specifically, there is a lack of consensus over the meaning of job satisfaction in nursing (Tovey and Adams, 1999), as well as how it is achieved and how people perceive it. Today, one of the most important missions of any organization is improving its

employees' job satisfaction, and measuring this is an important task. To do this, the concept of job satisfaction must be transparent and clear (Ravari et al., 2012). Despite considerable interest in studying job satisfaction and dissatisfaction, our understanding of these phenomena has not advanced at a rapid pace. Some argue that a major reason for this lack of progress is the implicit conception of causality that is accepted by most psychologists and is called the policy of "correlation without explanation" (Locke, 2004). This study has similar expectations to many previous studies in trying to improve managers' knowledge of what affects employee satisfaction, thus enabling them to make appropriate decisions. Moreover, a unique set of factors has not been studied, especially in the context of the pandemic.

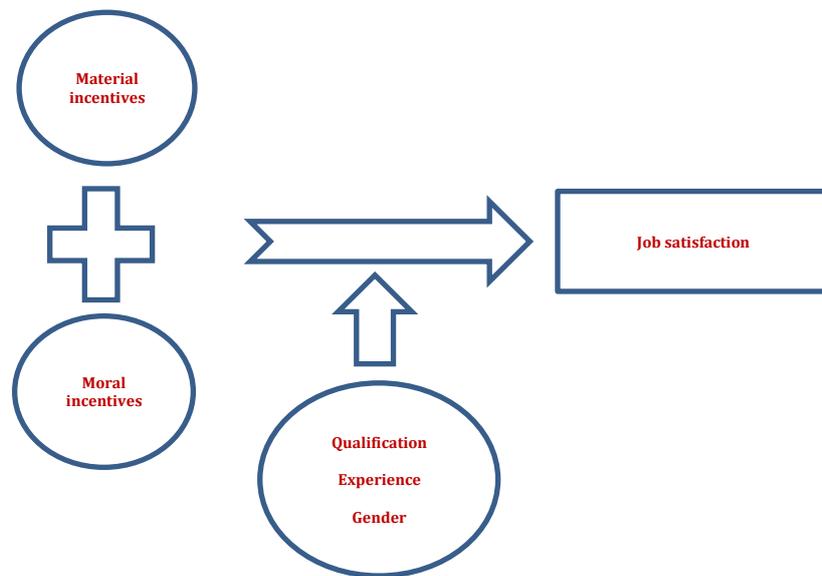


Fig. 1: The proposed relationship

## 2. Literature review and hypothesis development

The study of incentives in management has evolved significantly, beginning with the advent of scientific management theories. These theories have increasingly acknowledged the importance of incentives over time:

- Traditional or classical theories: Initially, organizations were seen purely as economic units disconnected from their external environments, with a primary focus on maximizing productivity and profits. Under this paradigm, individuals were viewed merely as tools within the production process. This phase, often referred to as scientific management, first introduced the concept of material incentives such as salaries and bonuses. Pioneers like Frederick Taylor developed early incentive systems based on output, such as wage systems that rewarded workers for meeting production targets within specific time frames (Ónday, 2016).
- Development of wage systems: Following Taylor, other theorists like Gantt introduced modifications

such as guaranteed wages to ensure workers received fair compensation regardless of productivity levels. Emerson later introduced a system where wages were determined by a worker's efficiency, measured on a weekly basis.

From this historical context, researchers emphasize that incentives are not just about financial rewards but also involve improving job performance through appropriate motivation systems (Misfeldt et al., 2014). Clark and Wilson (1962) identified three critical elements of incentives used in the motivation equation:

- Ability: The natural aptitude or skills of an individual to perform a job, which can be enhanced with proper motivation. Inadequately trained or unqualified individuals lack this fundamental component.
- Effort: The personal energy and time invested by an individual to accomplish tasks. This element is necessary but not sufficient on its own for high performance.

- Desire: The intrinsic motivation or willingness to perform a job. Without desire, even capable and hardworking individuals may not perform effectively.

This review sets the stage for further research, particularly examining how incentives influence job satisfaction among health center workers in Saudi Arabia during the COVID-19 pandemic. The study aims to explore the correlation between incentives and job satisfaction, assess the level of job satisfaction, and analyze differences in satisfaction based on variables such as educational qualifications, experience, gender, and staff type.

### 2.1. Testing and validating the study tool

To evaluate and ensure the reliability of the study instrument, the following steps were taken by the researcher:

1. Content validity: The study tool was initially reviewed by the research supervisor, who suggested revisions, such as additions or deletions of certain statements, based on his expertise to enhance the tool's relevance and coverage.
  2. Internal consistency: To assess the internal consistency of the study tool, a pilot test was conducted using a sample of 20 employees not included in the main study sample. The Pearson correlation coefficient was calculated for each item in relation to the total score of its respective dimension to determine the items' consistency. Those items are: 1- Current position, 2- Work relationships, 3- Contact and communicate with co-workers, 4- Superiors and subordinates in the field of work, 5- Feeling appreciated and respected in the field of work, 6- Supervision, leadership, and performance evaluation style, 7- The work environment provides ventilation, lighting, and cleanliness, 8- Work policies and regulations, 9- The nature of the work, services, and benefits provided, 10- Work hours, 11- Fair opportunities for advancement and privileges, 12- Fairness of the salary paid for the job, 13- Functionality, 14- Availability of appropriate physical stimulation methods, 15- Availability of appropriate moral stimulation methods, 16- Availability of appropriate individual stimulation methods, 17- Availability of appropriate group motivation methods, 18- Availability of training and qualification opportunities, 19- Availability of security, safety, and health care means, 20- Satisfaction in general.
- For the material incentives dimension, all items showed a direct correlation with the total scores of the dimension. Specific items (1,2,5,6,9,12,13, and 16) were statistically significant at a 0.05 level, and items (3,7,10,14) at a 0.01 significance level, indicating that these items effectively measure the intended construct of material incentives.

- In the moral incentives dimension, all items also displayed a direct correlation with the total dimension scores. Items (2,3,5,9,10,12, and 13) were significant at a 0.05 level, and item (6) at a 0.01 level, affirming that these items are appropriate for measuring moral incentives.
- For the job satisfaction dimension, items (1, 3, 4, 6, 8, 10, 11, 13, 15, 16, and 19) showed significance at the 0.05 level, and items (17, 7, and 14) at the 0.01 level, demonstrating that these statements accurately assess job satisfaction.

These procedures ensured that the study tool was both valid and reliable for measuring the constructs of interest, thus providing a solid foundation for the subsequent data collection and analysis.

### 2.2. Stability of the study tool

To ensure the stability of the study tool, the researcher used Cronbach's alpha coefficient for each axis of the study tool and the total sum of the tool. It was concluded that all the axes of the study tool yielded a reliability coefficient greater than 0.7, thus indicating the suitability of the tool for achieving the study's objectives through its application. When verifying the validity and reliability of the study tool, the researcher distributed it to the selected study sample.

### 2.3. General data for the study sample

The researcher distributed the questionnaire electronically to the study sample of 380 employees who had been selected using simple random sampling and received responses from all of them. The general data that the researcher collected included the following:

1. Number of years of experience (i.e., less than 5 years, 5–10 years, more than 10 years)
2. Educational qualifications (i.e., high school or lower, diploma, bachelor's, postgraduate)
3. Gender (i.e., male or female)
4. Staff type (i.e., medical, nursing, administrative, support services)

For the study sample, the distribution of years of experience is detailed in [Table 1](#), indicating that the majority (60.3%) of participants had over 10 years of experience. A smaller portion of the sample (26.1%) had between 5 to 10 years of experience. Regarding educational qualifications, as shown in [Table 2](#), nearly half (48.4%) of the participants held a university degree, while a smaller percentage (6.1%) had a high school diploma or less. [Table 3](#) reveals that the sample was predominantly male (72.1%). [Table 4](#) shows that the largest segment of the sample was medical employees, comprising 49.2%, while the smallest segment was workers in support services, making up 7.9%.

**Table 1:** Distribution of the study sample according to the number of years of experience

Years of experience	Number	Proportion
Less than 5 years	52	13.7%
5–10 years	99	26.1%
More than 10 years	229	60.3%
Total	380	%100

**Table 2:** Distribution of the study sample according to academic qualification

Qualification	Number	Proportion
Secondary and lower	23	6.1%
Diploma	105	27.6%
Bachelor's	184	48.4%
Postgraduate	68	17.9%
Total	380	%100

**Table 3:** Distribution of the study sample according to gender

Type	Number	Proportion
Male	274	72.1%
Female	106	27.9%
Total	380	%100

**Table 4:** Distribution of the study sample according to staff type

Job type	Number	Proportion
Medical	187	49.2%
Nursing	100	26.3%
Administrative	63	16.6%
Supportive services	30	7.9%
Total	380	%100

### 3. Organizational factors relating to employee job satisfaction

Various organizational factors—such as mission statement, management philosophy, ethical climate, ethical ambiguity, and emotional competence— influence employee job satisfaction. The reason for choosing these constructs is that while they often do not affect job satisfaction linearly, they are crucial for generating satisfaction in the long term when other factors, such as good salaries and bonuses, are present (Gabriel et al., 2018). In the following sections, we present the conditions that will boost employee satisfaction based on the five selected factors. The retention of a skilled and well-equipped workforce is vital to the growth and overall performance of an organization. Satisfied employees contribute more to an organization to help it achieve a competitive advantage over its competitors. This present study investigates the relationship between compensation and job satisfaction (Adeoye and Fields, 2014). Job satisfaction is a key factor in determining the level of employee retention at any organization. In addition, organizational culture also plays a powerful role in retaining the best talent within an organization. Loyalty and strategic commitment among all employees, regardless of position, can be enhanced through an organizational culture by emphasizing teamwork, security, and respect (Iqbal et al., 2017).

### 4. Methods

After precisely identifying the research community, the researcher delved into the methods

of sample selection in scientific research, which vary depending on the type of sample. Our study required a simple random sample. After creating a list that includes the characteristics of the research community, encompassing variables such as gender, age, marital status, and educational qualifications, the sample was chosen randomly. All individuals in the study community being equal, we used random number tables (assigning numbers to individuals in the research community, then selecting numbers randomly until reaching the required sample size).

The size and proportion of the study vary based on the nature of scientific research and the desired information. Therefore, the study sample size can be large, making it challenging to control variables, or it can be small and easier to manage. However, the researcher opted for a representative random sample, constituting more than 21% of the population, with a sample size of 274 employees selected through a simple random sampling method.

The study community consists of all employees working in healthcare centers in the Kingdom of Saudi Arabia, totaling (1300) employees. The researcher will use a simple random sampling method to select the study sample, given the large size of the study population.

After precisely identifying the research community, the researcher delved into the methods of sample selection in scientific research, which vary depending on the type of sample. Our study required a simple random sample. After creating a list that includes the characteristics of the research community, encompassing variables such as gender, age, marital status, and educational qualifications, the sample was chosen randomly. All individuals in the study community being equal, we used random number tables (assigning numbers to individuals in the research community, then selecting numbers randomly until reaching the required sample size).

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#### 4.1. Study tool

The steps of designing a good survey were followed according to methodological frameworks, and the most crucial part of the survey process was creating questions that accurately measured the respondents' opinions and behavior.

Response rates aligned with the collected information, which was based on unbiased questions. The questionnaire included gathering insightful comments, crafting clear questions for the target audience, and aiming for research-oriented outcomes. A well-structured survey design was employed by organizing these questions based on

the steps of good research design, which were as follows:

1. Survey duration: Provide respondents with a realistic time estimate and remind them that their opinions are secure.
2. Examination tools: Design questions to ensure respondents meet the researcher's specific criteria.
3. Body: The largest part of the survey included questions about usage, attitudes, awareness, and concept testing.
4. Population composition: Questions used to identify or categorize respondents. Avoid repeating any demographic composition used as variables.
5. Demographic structure: Questions are used to identify or categorize respondents; there is no need to duplicate any demographic structure used as a variable.
6. Avoid using jargon: We refrained from using linguistic and technical terms, making it easier for respondents to understand and respond to the surveys.
7. Short survey: We kept the survey short to maintain respondents' interest throughout, preventing survey fatigue and potential deviation in results.
8. Logical question sequence: We followed a logical order in placing questions and adhered to a specific theme.
9. Single choice questions: We opted for a single-choice question format, allowing respondents to quickly make decisions. We provided clear and distinctive options.

Based on the aforementioned, the researcher developed a survey to measure the impact of motivation on achieving job satisfaction among healthcare workers during the COVID-19 pandemic. The first section was dedicated to general data (educational qualifications, years of experience, gender, and workforce category). The second section focused on measuring incentives, divided into two parts: material incentives, measured using 16 statements, and moral incentives, measured using 15 statements. The third section was dedicated to measuring the employees' satisfaction level, which was assessed using 19 statements. The researcher utilized a five-point Likert scale to measure the study sample's responses regarding the statements in the second and third sections.

This study adopted a descriptive-analytical approach. On examining the existing literature, the researcher arrived at the main study variables, as discussed below:

- Independent variable: incentives
- Dependent variable: Job satisfaction in light of the COVID-19 pandemic
- Modifying variables: educational qualification, experience, gender, and workforce

The studied population comprised all the 38,940 employees of health centers in the Kingdom of Saudi Arabia. The researcher used the simple random sampling method to select a study sample due to the large size of the study population. The researcher also developed a questionnaire to measure the impact of motivation in achieving job satisfaction for health center workers in light of the COVID-19 pandemic. The first section was dedicated to gathering general data (i.e., academic qualifications, number of years of experience, gender, staff type), while the second section sought to measure incentives. This was divided into two parts: Material incentives were measured using 16 statements, while moral incentives were measured using 15 statements. A third section was devoted to measuring the degree of employee satisfaction using 19 statements. The researcher used a five-point Likert scale to measure the study sample's responses to the statements in the second and third sections.

We did not observe any significant variation or weakness in the generalization of the results, as the choice of the region for the study was accurate and precise. This city in the Kingdom of Saudi Arabia closely resembles, to a large extent, the rest of the cities in the kingdom in terms of the healthcare sector. The ideal example was surveyed, and reliable data were obtained by ensuring that all participants in the study had an equal opportunity to participate in the survey. The survey forms were shared where they were accessible to the desired individuals, aiming to avoid what is known as sampling bias. This type of bias occurs based on how respondents are selected for the survey, and it occurs when the samples are not entirely random.

To eliminate this bias, samples were taken from our survey distribution correctly. The best way to overcome this bias in the survey was by using multiple distribution channels. Through channels such as email, website, social media, and messaging apps, the survey was distributed to a larger number of individuals in the statistical community. This approach helps ensure a more representative sample and minimizes the risk of sampling bias by reaching a diverse audience through various channels.

## 5. The sub-questions of the study

The study's first sub-question: "What is the degree of job satisfaction among health center workers during the COVID-19 pandemic in the Kingdom of Saudi Arabia?" To answer this question, the researcher used the weight of the arithmetic means for the five-point Likert scale, as shown in [Table 5](#), to determine the extent of job satisfaction among health center workers during the COVID-19 pandemic in the Kingdom of Saudi Arabia based on the study sample's responses to the second axis (i.e., job satisfaction). [Table 6](#) shows the average responses of the study sample to the second axis (i.e., job satisfaction) in the questionnaire. From [Table 6](#), we can see that the study sample's responses to the statements that measure the degree of job

satisfaction tend toward *somewhat satisfied*, implying that health center workers in the Kingdom of Saudi Arabia have a moderate degree of satisfaction with the incentives provided to them at a rate of 67%. The second sub-question of the study: “What is the level of incentives provided to health center workers in light of the COVID-19 pandemic in the Kingdom of Saudi Arabia?” To answer this question, the researcher referred to the study sample’s responses to the first axis (i.e., material and moral incentives), and the results of this are shown in Table 7. Note from Table 7 that the study sample finds that the financial incentives provided to health center workers in the Kingdom of Saudi Arabia are relatively few in light of the COVID-19 pandemic.

**Table 5:** Weighted average for the five-point Likert scale

The weight	Degree of satisfaction	Incentive level
1-1.8	Never satisfied	Very few
2.6-1.81	Not satisfied	Few
3.4-2.61	Fairly satisfied	Medium
4.2-3.41	Satisfied	High
5-4.21	Very satisfied	Very high

The third sub-question of the study: “What is the relationship between incentives and job satisfaction for health center workers in the Kingdom of Saudi Arabia in light of the COVID-19 pandemic?” The researcher answered this question by testing the study’s first hypothesis: There is a statistically significant relationship between incentives and job satisfaction for health center workers in the Kingdom of Saudi Arabia in light of the COVID-19 pandemic. Calculating the Pearson correlation coefficient between the sum of the items on the first axis (i.e., incentives) and the sum of the items on the second axis (i.e., job satisfaction) yielded the results shown in Table 8.

Note from Table 9 that there is an incomplete positive relationship between the incentives axis and the job satisfaction axis that is statistically significant at the level of  $\alpha \leq 0.01$ . The fourth sub-question of the study: “Does the degree of employee satisfaction differ according to demographic factors (i.e., academic qualification, number of years of experience, gender)?”

**Table 6:** Average responses of the study sample to the job satisfaction axis

No.	Statement	Standard deviation	Arithmetic mean	Degree of satisfaction
1	Current position	1.073	3.58	Satisfied
2	Work relationships	1.023	3.82	Satisfied
3	Contact and communicate with co-workers	.988	4.00	Satisfied
4	Superiors and subordinates in the field of work	1.121	3.78	Satisfied
5	Feeling appreciated and respected in the field of work	1.172	3.73	Satisfied
6	Supervision, leadership, and performance evaluation style	1.162	3.69	Satisfied
7	The work environment provides ventilation, lighting, and cleanliness	1.206	3.58	Satisfied
8	Work policies and regulations	1.086	3.62	Satisfied
9	The nature of the work, services, and benefits provided	1.216	3.29	Fairly satisfied
10	Work hours	1.134	3.57	Satisfied
11	Fair opportunities for advancement and privileges	1.289	3.03	Fairly satisfied
12	Fairness of the salary paid for the job	1.214	3.08	Fairly satisfied
13	Functionality	1.027	3.80	Satisfied
14	Availability of appropriate physical stimulation methods	1.304	2.58	Not satisfied
15	Availability of appropriate moral stimulation methods	1.297	2.84	Fairly satisfied
16	Availability of appropriate individual stimulation methods	1.269	2.77	Fairly satisfied
17	Availability of appropriate group motivation methods	1.254	2.84	Fairly satisfied
18	Availability of training and qualification opportunities	1.260	2.74	Fairly satisfied
19	Availability of security, safety, and health care means	3.46	1.207	satisfied
20	Satisfaction in general	3.3571	.92366	Fairly satisfied

**Table 7:** The study sample’s average responses to statements measuring the level of material incentives

No.	Item	Standard deviation	Arithmetic mean	Incentive level
1	Salary value	.841	3.06	Medium
2	Rewards	1.191	2.02	Few
3	Upgrade	1.195	2.49	Few
4	Health	1.414	2.26	Few
4	Insurance	1.326	2.36	Few
6	Housing	1.266	2.40	Few
7	Providing	1.245	2.34	Few
8	Transportation	1.208	2.43	Few
9	Periodic	1.264	2.02	Few
10	Bonuses	1.206	1.72	Very few
11	Annual salary	1.114	1.53	Very few
12	Increase	1.169	1.61	Very few
13	Annual leave	1.248	2.32	Few
14	Allowance	1.333	2.23	Few
15	Bonus	1.346	2.13	Few
16	Financial rewards	1.265	2.23	Few
	Prizes and in-kind gifts	97178	2.1969	Few

**Table 8:** Pearson correlation coefficient between the two axes of the study tool

Axes	Correlation value	Significance level
1-Incentives	**0.685	0.00
2- Job satisfaction		

\*\* : confidence level at the 0.01

The answer to this question relates to testing the study’s following hypotheses:

**H1:** There is a statistically significant relationship between incentives and job satisfaction for health center workers.

**H2:** There are statistically significant differences at the level of  $\alpha \leq 0.05$  in the degree of satisfaction that health center employees have with the incentive system based on academic qualifications.

**H3:** There are statistically significant differences at the level of  $\alpha \leq 0.05$  in the degree of satisfaction that health center employees have with the incentive system based on the number of years of experience.

**H4:** There are statistically significant differences at the level of  $\alpha \leq 0.05$  in the degree of satisfaction that health center employees have with the incentive system based on gender.

Thus, the researcher conducted a one-way ANOVA to test for differences in the study sample's responses to the second axis of the study tool (job satisfaction) that could be attributed to academic qualifications. The results are shown in [Table 9](#). The

test results in [Table 10](#) show that the F value is 0.647 and the level of significance is (0.986), which is greater than 0.05, so there are no statistically significant differences that can be attributed to academic qualifications in the sample's responses to the second axis of the study tool (job satisfaction).

The researcher then tested the third hypothesis: "There are statistically significant differences at the level of  $\alpha \leq 0.05$  in the degree of satisfaction that health center employees have with the incentive system based on the number of years of experience."

The researcher again conducted a one-way ANOVA to test the differences in the study sample's responses to the second axis of the study tool (job satisfaction) that could be attributed to the number of years of experience. The results of this are shown in [Table 10](#).

**Table 9:** One-way ANOVA test for the academic qualification variable

Source of variance	Sum of squares	Degree of freedom	Square of means	F	Significance level
Between groups	32.043	71	451		
Within groups	214.828	308	697	.647	.986
Total	246.871	379	1148	.647	.986

**Table 10:** One-way ANOVA test for the variable number of years of experience

Source of variance	Sum of squares	Degree of freedom	Square of means	F	Significance level
Between groups	33.032	71	.465		
Within groups	165.523	308	.537	.866	.765
Total	198.555	379	.902		

The test results in [Table 10](#) show that the F value is 0.866 and the level of significance is 0.765, which is greater than 0.05, implying that there are no statistically significant differences that can be attributed to the number of years of experience in the sample's responses to the second axis of the study tool (job satisfaction). The researcher then tested the fourth hypothesis: "There are statistically

significant differences at the level of  $\alpha \leq 0.05$  in the degree of satisfaction that health center employees have with the incentive system based on gender."

To test this hypothesis, the researcher applied a test to compare the means for independent samples (a T-test) depending on the gender variable. The results of this are shown in [Table 11](#).

**Table 11:** T-test for independent samples depending on the type variable

Gender	Arithmetic mean	Standard deviation	Value (v)	Significance level
Male	3.4205	.92575		
Female	3.1931	.90200	2.162	0.031

From [Table 11](#), we can see that the level of significance between the arithmetic means of the study sample's responses to the axis measuring their job satisfaction based on gender was lower than 0.05. This means that there are statistically significant differences at the level of  $\alpha \leq 0.05$  in the satisfaction that health center workers have with the incentives provided to them in light of the COVID-19 pandemic.

## 6. The main study question

The main question is "what is the effect of motivation on the job satisfaction of health center workers in light of the COVID-19 pandemic in the Kingdom of Saudi Arabia?" The researcher estimated a regression equation to reveal the degree of influence that incentives have on job satisfaction, as shown in [Table 12](#). The results shown in [Table 12](#) reveal that there is a statistically significant effect at

the level of  $\alpha \leq 0.01$ , such that the F value was 335.059. This confirms the presence of a statistically significant effect of the independent variable (incentives) on the dependent variable (job satisfaction), especially as the calculated t-value was 18.305, which is statistically significant at the level of  $\alpha \leq 0.01$ . This means that a one-unit change in the value of the independent variable (incentives) corresponds to a change of 0.702 in the dependent variable (job satisfaction). Moreover, the coefficient of determination ( $R^2$ ) was estimated at 0.47, meaning that 47% of the variation in the degree of job satisfaction is explained by changes in incentives, thus confirming that other factors affect job satisfaction. Indeed, stress management and patient satisfaction have been found to significantly impact health worker's satisfaction with their jobs ( $P = 0.001$  and  $P = 0.021$ , respectively) ([Halawani et al., 2021](#)).

**Table 12:** Results of the regression

	Regression equation		F-Test		T-Test		R <sup>2</sup> (Coefficient of determination)
	Transactions	Error	F	Indication	T	Indication	
Constant	0.113	.133	335.059	0.000	0.848	0.397	0.470
Satisfaction	.702	0.038			18.305	0.000	

## 7. Summary of results

The study's results can be summarized as follows:

1. Health center workers in the Kingdom of Saudi Arabia have an average degree of satisfaction with the incentives that are provided to them in light of the COVID-19 pandemic.
2. The financial incentives provided to health center workers in the Kingdom of Saudi Arabia are believed to be insufficient in light of the Covid-19 pandemic.
3. The moral incentives provided to health center workers in the Kingdom of Saudi Arabia are also insufficient in light of the COVID-19 pandemic.
4. There is an incomplete positive relationship between incentives and job satisfaction that is statistically significant at the level of  $\alpha \leq 0.01$ .
5. No statistically significant differences in job satisfaction could be attributed to academic qualifications.
6. No statistically significant differences in job satisfaction could be attributed to the number of years of experience.
7. Some statistically significant differences at the level of  $\alpha \leq 0.05$  in the satisfaction of health center workers with the incentives provided to them could be attributed to gender in light of the COVID-19 pandemic, with them favoring males.
8. Incentives have a statistically significant effect on job satisfaction.

The results of the study are presented briefly below:

1. Health center workers in the Kingdom of Saudi Arabia have an average level of satisfaction with the incentives provided to them in light of the pandemic.
2. The financial incentives provided to health center workers in the Kingdom of Saudi Arabia are insufficient in light of the pandemic.
3. The moral incentives provided to health center workers in the Kingdom of Saudi Arabia are insufficient in light of the pandemic.
4. There is an incomplete positive relationship between incentives and job satisfaction that is statistically significant at the level of  $\alpha \leq 0.01$ .
5. No statistically significant differences in the sample's responses for job satisfaction could be attributed to academic qualifications.
6. No statistically significant differences in the sample's responses for job satisfaction could be attributed to the number of years of experience.
7. There are statistically significant differences at the level of  $\alpha \leq 0.05$  in the satisfaction that health

center workers have with the level of incentives provided to them based on gender in light of the COVID-19 pandemic, with them favoring males.

8. Incentives have a statistically significant effect on job satisfaction.

The results of the study show that the material and moral incentives provided to health center workers in the Kingdom of Saudi Arabia in light of the COVID-19 pandemic are clearly insufficient, and this is reflected in their low level of satisfaction. This may lead to a lack of motivation to do the work, and the chances of working well will diminish. Indeed, a decrease in incentives can lead to a decrease in employee morale, while [Almalki et al. \(2012\)](#) indicated that incentives raise employees' level of performance and morale by stimulating the enthusiasm of groups, encouraging a spirit of initiative and competition among group members, and developing a culture of participation and cooperation. Furthermore, developing the skills and creative energies among group members in an appropriate way can ensure an organization's prosperity and success, so an incentive system not only benefits the employees but also the organization. Nevertheless, an organization must establish the goals it aims to achieve when developing an incentive system ([Mathauer and Imhoff, 2006](#)).

The low degree of job satisfaction among health center workers in the Kingdom of Saudi Arabia is an unhealthy indicator for the healthcare system. Indeed, [Halawani et al. \(2021\)](#) pointed out the importance of job satisfaction as an indicator of the health and wellness of an organization and its organizational effectiveness. The assumption is that an organization with dissatisfied employees will have a lower chance of succeeding than one in which employees feel satisfied because employees who are satisfied with their work are more willing to continue in their jobs and actively and enthusiastically contribute to achieving the organization's goals. The most important aspect of job satisfaction is that it addresses human feelings about their work and the environment they work in.

In contrast, a low level of job satisfaction can lead to a high rate of absenteeism and lower levels of ambition. Individuals with low levels of job satisfaction also tend to be less satisfied with their free time, especially with their families, but also with life in general. They are also more likely to be involved in work accidents, so there is also a close relationship between job satisfaction and work productivity, such that a greater degree of job satisfaction leads to increased productivity, as pointed out by [Gazi et al. \(2022\)](#).

## 8. Conclusion

In view of this study's findings, the managers of health centers in the Kingdom of Saudi Arabia should reconsider the incentives that are provided to their workers, especially in light of the COVID-19 pandemic, because this may reflect positively on their job satisfaction and, thereby, their job performance. Thus, the study recommends conducting essential studies aimed at raising the level of satisfaction for healthcare workers. At health centers in the Kingdom of Saudi Arabia, we recommend developing administrative mechanisms and programs that seek to raise the job satisfaction of their employees, as well as seeking out new appropriate alternatives for improving their level of satisfaction.

## 9. Recommendations for future research

Job satisfaction is widely recognized as a crucial element in enhancing the performance of both employees and organizations. It helps foster a positive and motivational work environment. Several factors contribute to job satisfaction by aligning with individuals' needs for self-fulfillment and personal growth. These factors, which merit further research, include but are not limited to:

- **Supervisor relationships:** The support and collaborative atmosphere provided by supervisors can significantly influence employee satisfaction, more so than the opportunity to participate in decision-making. Effective managers understand the importance of recognizing employees' efforts and achievements, ensuring open communication for discussing any job-related concerns. This approach substantially contributes to job satisfaction.
- **Growth opportunities:** Employees feel motivated when they perceive opportunities for professional advancement or personal improvement. This motivation arises from the potential to develop skills and advance in their careers.
- **Peer comparison and recognition:** Employees are often motivated by excelling beyond their peers, which can be encouraged through both tangible and intangible rewards. Recognition of their achievements, whether material or moral, plays a critical role in enhancing motivation.
- **Workplace flexibility:** Offering flexibility, such as adaptable working hours, can significantly boost team members' morale and productivity. It allows employees to work according to schedules that suit their personal needs, which can increase job satisfaction. However, it's important to balance this flexibility with the need for collaboration, as too much flexibility might reduce team interaction.

Each of these factors contributes uniquely to creating an environment where employees can thrive and feel satisfied with their work, thereby improving overall organizational performance.

## Compliance with ethical standards

### Ethical considerations

This study took a set of ethical considerations into account in its implementation, which was in line with general scientific research ethics. Scientific honesty and respect for the intellectual property of publishers and authors are at the forefront of scientific research ethics, so the researcher attributed opinions to their original owners in a transparent manner. The researcher also avoided emotional methods when conducting the various research steps, trying instead to be as objective and fair as possible in order to establish the facts. Indeed, the researcher was interested in obtaining accurate data to enrich this study and provide information that would benefit others. The researcher also strived to maintain the confidentiality of the respondents' opinions, using them only to achieve the objectives of this study after informing the participants of these objectives.

### Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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