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**RESEARCH ARTICLE****Level of Motivation and Determining Factors of In-Service Training among Health Care Workers in South Sharqiya Governorate****Badriya AL Masharfi<sup>1</sup> ✉ Afrah AL Maskari<sup>2</sup> and Shamsa AL Masroori<sup>3</sup>**<sup>1</sup>*BSN, RN, Clinical Facilitator, Ja'alan Bani Bu Hassan Hospital, South Sharqiya; Sultanate of Oman*<sup>2</sup>*MBA, Head of Training, Directorate of General Health Services, South Sharqiya Governorate Sultanate of Oman*<sup>3</sup>*Master in Educational Administration, Administrative Affairs Researcher, Training Department, Jalan Bani Bu Hassan Hospital***Corresponding Author:** Badriya AL Masharf, **E-mail:** [Badriyanasser1@gmail.com](mailto:Badriyanasser1@gmail.com)

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**ABSTRACT**

Due to the vital role of health care workers and the effects of scientific advances on patient care, providing high-quality health care is not possible without participating in in-service training programs and becoming familiar with the new techniques. In-service training is considered as an important input in human resources management, which has an impact on quality health care delivery and contributes to strengthening the human resources pillar of every health system. In-service training of Health Care Workers is associated with their motivation, and without workforce motivation, productivity will be in danger. Assessing the level of motivation and its contributing factors to in-service training is really a priority area of intervention for the improvement of human resources in health care settings and has not been studied. Such studies help health management planners and decision makers to consider these interventions for further health care improvement and satisfaction. This study aimed to assess the level of motivation and determine the motivational factors influencing participation in the in-service training courses among health care workers working in the south Sharqiya governorate. A cross-sectional survey, using a quantitative descriptive design, was used in this study. The study involved 275 randomly selected health care providers from hospitals and primary health care settings in South Sharqiya Governorate. The study used self-administered survey questionnaires, and the tool has been reviewed by experts from the same field of topic. The data was analysed descriptively and analytically using SPSS version 21. Results showed that there is a significant relationship between the contributing factors and the level of motivation influencing participation in in-service training ( $B = .044, p < 0.01$ ). Multiple regression furthermore showed that a 35% variation in the motivation contributing factors is accounted for by variation in the 3 motivation statements, namely, positive work environment, overall motivation, and intrinsic motivation. The study also showed that the three motivation statements can be used to explain the substantial association with the motivation contributing factors. These results prove that there is a fair influence of intrinsic and extrinsic motivation on healthcare engagement in these training programs, which cannot be ignored. Thus, these contributing factors pertaining to the healthcare providers, such as a sense of achievement, recognition, career advancement and working environment, have been revealed to have a positive impact on their commitment, performance, satisfaction and timely and quality service delivery. In conclusion, the importance of fostering intrinsic and extrinsic motivators for healthcare providers to participate in in-service training to achieve optimal performance and service delivery has been highlighted. In-service training that is tailored to the specific needs of health workers should be conducted along with more opportunities at various institutions.

**KEYWORDS**

Motivational factors, In-service training, Health care providers, Research Problem

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**1. Introduction**

In-service training is considered as an important input in human resources management, which has an impact on quality health care delivery and contributes to strengthening the human resources pillar of every health system. In-service training of Health Care Workers is associated with their motivation, and without workforce motivation, productivity will be in danger. Assessing the level of motivation and its contributing factors to in-service training is really a priority area of intervention for improvement of human resources in health care settings has not been studied. Such studies help health management planners and decision makers to

consider these interventions for further health care improvement and satisfaction. Thus, a study in one governorate, such as south Sharqiya, will act as a pilot study for further comprehensive and national study.

### **1.1 Research Aim**

To determine the motivational factors influencing participation in the in-service training programs among health care providers who are working in the South Sharqiya governorate.

### **1.2 Research Objectives**

To examine the impact of factors related to the profession in participation in in-service training among health care providers who are working in south Sharqiya governorate.

To investigate the influence of organizational factors in participation in in-service training among health care providers who are working in the south Sharqiya governorate.

To identify the impact of factors related to training course planning in participation in in-service training among health care providers who are working in south Sharqiya governorate.

### **1.3 Research Questions**

1-What is the level of motivation of health care workers who undergoing in-service training in the south Sharqiya governorate?

2-What are the determining factors of motivation influencing participation in the in-service training among health care workers in the south Sharqiya governorate?

### **1.4 Research Hypothesis**

Higher motivational levels among health care workers will lead to a higher rate of participation in in-service training programs.

### **1.5 Significance of study**

The study will highlight the significance of assessing the level of motivation and its contributing factors to in-service training programs. Thus, a study in one governorate, such as south Sharqiya, will act as a pilot study for further comprehensive and national study. The study findings will help health management planners and decision makers to consider these interventions for further health care improvement and satisfaction. The findings of the study will also provide a basis for resetting the training needs assessment system and special emphasis on the availability of employee motivation techniques.

## **2. Literature Review**

In Oman, the health sector is pivotal to the achievement of Vision 2040 for providing quality health services for all of its citizens. Success in providing quality health care should involve developing innovative strategies to meet the health objective, and one of those strategies is professional career development through continued in-service education and training.

In today's complex and dynamic world, learning is very important. Education is the base of learning, and it is an important factor in the improvement of human resources. Improvement of human resources in the health field is one of the most important responsibilities of hospital managers, which includes activities that increase the health care worker's knowledge and skills to provide better health services (Lambrou, 2010).

An effective and economical way to improve human resources and the development and coordination of the health profession with the advances in technology, medical and social sciences is through in-service training (Karaferis, 2022). In-service training consists of activities that maintain and increase the employees' ability and competence in performing the tasks assigned to them, thereby assisting the organizations in achieving their goals and objectives (Mathauer, 2006). In general, it can be said that in-service training is a set of systematic and planned educational activities designed to improve the employees' performance in the workplace, thereby increasing the productivity and quality of services provided (Dieleman, 2003)

The results of several studies conducted have shown the positive effects of various human resources development programs, including in-service training, on the health profession's efficiency, self-confidence, knowledge and skills (Cadwallader, 2010). Also, the results of a study showed that in-service training courses had resulted in reducing the organization costs, reducing the employees' resignations, turnover and absenteeism, as well as increasing the organizational efficiency, creating deeper insights, increasing the employees' abilities and skills and, in general, increasing the productivity (Mathauer, 2006).

In addition, health care providers are considered as individuals who have a close relationship with the patients and other members of the health team and community and due to the rapid progress of sciences and technologies, they should be aware of all the new skills and techniques of care. Therefore, considering the importance of increasing the health care provider's knowledge, their training seems necessary. In other words, because of the vital role of health care providers and the effects of scientific advances on patient care, providing high quality health services is not possible without participating in the in-service training programs and

becoming familiar with the new techniques because the factor affecting the quality of health care is the amount of their knowledge and insight on the issues and problems. The lack of health care provider knowledge can reduce the quality of clinical care and cause irreversible risks; the continuity of learning scientific issues by participating in in-service training courses is one of the main ways to improve the health profession (Bluestone, 2013).

The impact of in-service training on the nurses' performance is a fact that has been proven in practice. Because great developments and improvements continuously occur in modern nursing and medical activities, a health care provider should be familiar with new skills and techniques for performing their duties and roles in the best way. Providing professional training is the key to success in the wards and hospitals, and some outcomes, such as reduced errors and accidents, great achievements at work, and better health care, etc., are favourable outcomes of health care professional in-service training (CHAGHARI, 2017).

There are several reasons for health professionals' participation in continuing education programs, including their attitudes about, expectations of, and motivation for continuing education, as well as health care professional characteristics, job-related factors, organizational policies, etc. (Karaferis, 2022). In addition, as previously mentioned, due to the increasing advances in technologies and unprecedented growth in the medical information, training and improving human resources is necessary. It can be said that training employees and developing their talents, as well as helping and motivating them to improve their job skills, are among the most important responsibilities of organization managers (Momanyi, 2016).

Motivation is one of the factors affecting the employees' participation in training programs. Motivation has been defined as a process of stimulating, strengthening, continuing, and regulating activities (Zeng, 2022). The results of some studies indicate that factors such as complying with the heads and managers, acquisition of credentials, professional knowledge (Cerasoli, 2014), raising income levels (Yanriatuti, 2020), earning points and scores to improve job position (Cerasoli, 2014; Aarabi, 2013), becoming acquainted with the experiences of other researchers (14), improving self-esteem and self-confidence, increasing opportunities for job promotion (Flores, 2006), etc. are the most important motivational factors influencing the employees' participation in the continuing and in-service training courses. On the other hand, the results of some other studies also show that some of the main barriers to employees' participation in the in-service training programs are the lack of employers' support and encouragement, problems with achieving and keeping a balance between family, work and study life; staff shortages; lack of income and financial resources.

Employee motivation is the ultimate and the only source of getting the desired performance. Linder (1998) referred to Kreitner (1995) and Higgins (1994) for motivation as an urge to behave in a certain manner for the sake of certain goals. Motivation is like an in-built potential that enables one to put extensive effort into achieving desired goals (Young, 2000). Motivation is directly correlated with the satisfaction of one's needs. Needs to be satisfied will, later on, decide how much effort will or can be exerted for the purpose (Antomioni, 1999). Achievement of the goal, according to Greenberg and Baron (2003), depends on an internal set of processes that actually operate on human behaviour. The words of Bassett-Jones and Llyod (2005) in their study spotlighted two sides of human nature. "Taylorism", according to them, is one way to behave in a workplace where people show reluctance, avoidance and a non-serious attitude towards the job, which can only be tackled with extrinsic rewards.

On the other hand, "The Hawthorne studies" unfold the other side of the picture that people can be motivated if their tasks are correlated and connected with their interests and potential. This type of human nature, in fact, asks for intrinsic incentives. With reference to motivation, content theories are available for guidance. Maslow (1943) defined human need as a classification that is hierarchical in nature and comprised of fine needs like basic needs, security needs, social needs, esteem needs, and self-actualization needs. One of the content theorists, Herzberg (1959), presented his motivation theory for employees. In this Two-factor theory, two major factors were described "Hygiene" and "Motivation". Satisfaction with the job was associated with tangible accessories like salary, employee-leader relationship, policies of the organization, etc. When satisfaction is attained, then a worker may proceed further towards the motivation factor. As far as motivation factors are concerned, achievement, recognition, advancement, nature of work and advancement in the profession are considered important. Schmidt (1976) concluded from his study on educational managers in Chicago that achievement, advancement and recognition were more elevated factors for satisfaction. In this context, it may be recommended that job descriptions be redefined in such a way as to provide a chance for them to achieve their goals meaningfully (Herzberg, 1959). Productivity, as a prime concern of all organizations, can be attained through motivation, while hygiene factors can only reduce the sense of dissatisfaction.

Therefore, those indicators cannot be analyzed in a simplistic way. From an academic point of view, three key aspects of academic motivation should be addressed, namely achievement motivation, learning goals and self-efficacy. Achievement motivation leads to the successful accomplishment of a socially recognized goal in a competitive way. According to the theory of achievement motivation, a human being acts upon two opposing forces: one is the need to achieve success, and the other one is the need to avoid failure and fear of ridicule. Each one of them consists of three elements: the power of the motive, the expectation or probability of success and the value given to the task. The dominance of one over the others determines the character and disposition directed towards the achievement of success. (Eccles y Wigfiel, 1995). It is also important to address the theory of

expectation-value, which is based on the assumption that students always ask themselves whether the activity they are required to undertake is indeed of value to them. (Eccles and Wigfiel, 1995; Wigfield, 1994).

Motivation is directly related to one's personal goals since those constitute cognitive representations that organize and regulate behaviour centered on the accomplishment of the objective. Different goals are translated into different levels of commitment to the task that can predict the processes that students set for themselves and create a roadmap that conditions the processes of achievement and results. According to Miller and Brickman (2004), all goals are representations of the future, independently from the time set for the achievement of their objective.

Intrinsic motivation is fundamental for learning as it is a source of satisfaction and helps to generate students' self-motivation (Ulstad, Halvari, Sorebo and Deci, 2016). However, it is not at odds with extrinsic motivation because it fosters staff's commitment to the task, and both kinds of motivation can co-exist and complement each other (Adeyeri, 2012). On the other hand, as Simonet (2008) reports, there is a strong relationship between effort and extrinsic motivation that can influence the persistence in completing the task, whether or not service-learning is at stake. Nevertheless, intrinsic motivation is viewed more positively due to fostering self-determination and boosting the ability of individuals to act simply because they enjoy it (Levesque-Bristol, Knapp and Fisher, 2017).

Despite the importance of health professional in-service training, few health care providers in practice have participated in these programs (Amerioun, 2022). Perhaps one reason for that is the lack of proper implementation of training programs. The results of Emamzadeh Ghasemi and colleagues' study (2014) showed that the quality of health training programs has been poor and met only 18% of their training needs (Ebadi, 2008).

This study aimed to assess the level of motivation and determine the motivational factors influencing participation in the in-service training programs among health care providers who are working in south Sharqiya governorate in order to increase their motivation for participating in these training courses, thereby enhancing their job skills and improving the quality of nursing care delivered to the patients.

### **3. Methodology**

#### **3.1 Design**

A cross-sectional descriptive (quantitative) research design was used for this study. It is appropriate for this study, as it answers the research questions by exploring health care worker's level of motivation and motivational factors associated with in-service training. The purpose of using data is to help health management planners and decision-makers to consider these interventions for further health care improvement and satisfaction in the existing conditions. The data was collected using a questionnaire. The questionnaire was developed on the survey administration app Google Forms. The questionnaire was sent to the participants in all regions of the south Sharqiya governorate through WhatsApp. The survey was performed in July 2023. The questionnaire contains demographic data, specific questions on qualification, years of experience, and motivational factors influencing the health care worker's participation in the in-service training courses, including organizational factors and those related to the profession and the training courses' planning.

#### **3.2 Population and Sample of the Study**

A random sample of MOH staff (registered nurses, pharmacy, doctors, laboratory technicians, x-ray technicians and administration) who work in hospitals and primary health care settings in South Sharqiya Governorate, Sultanate of Oman, were chosen as a study population. All health care providers (registered nurses, pharmacy, doctors, laboratory technicians, x-ray technicians and administration) working under the Ministry of Health who attended the in-service education in the last 6 months and are willing to participate, and it is these that were included in the study. Conversely, the staff who have not attended in-service education in the last 6 months, the MOH staff other than the South Sharqiya Governorate and The MOH staff who joined/transferred with the South Sharqiya Governorate in the last 6 months were excluded. The samples were calculated by using the population proportion formula, Confidence interval (CI) -95%, proportion (P) -50%, margin of error (d) -5 and 10% non-response rate. According to this calculation, the required sample size is 360 participants.

#### **3.3 Study sampling**

A simple random sampling technique was used in the study. A sample size of 360 (registered nurses, pharmacy, doctors, laboratory technicians, x-ray technicians and administration) are working at hospitals and primary healthcare institutions in South Sharqiya Governorate. The sample size was determined for the study depending on sample size calculation and a confidence level of 95%. Inclusion criteria included all health care providers (registered nurses, pharmacy, doctors, laboratory technicians, x-ray technicians and administration) working under the Ministry of Health who attended the in-service education in the last 6 months and are willing to participate. Exclusion criteria comprised the staff who have not attended in-service education in the last 6 months, the MOH staff other than those in South Sharqiya Governorate, and the MOH staff who joined/transferred with South Sharqiya Governorate in the last 6 months.

**3.4 Setting:**

This research project took place in health care institutions in DGHS in South Sharqiya Governorate. The number of health institutions is 23, including hospitals, polyclinics and health centres.

**3.5 Procedure****3.5.1 Data collection**

Each health institution was asked for permission to conduct the study. Initially, the study's purpose was explained to the head of the health institutions, and permission was granted. Since the data collection was multicentre, researchers held a meeting via an online link with all participants in each health institution to inform them about the objective of the research and voluntary participation prior to introducing survey questions.

**3.5.2 Study Instruments**

The data was collected using a questionnaire. Although the questionnaires were developed by the author, some of the tool questions were adapted from previous studies [Zeng, 2022; Aarabi, 2013]. The questionnaire contained 30 questions arranged into two sections; the first section contained five items regarding the sociodemographic characteristics of the participants, and the second section contained twenty-five items on motivational factors influencing the health care worker's participation in the in-service training courses, including organizational factors, and those related to the profession and the training courses planning, were evaluated with a 5-point Likert scale (i.e. strongly disagree; disagree; neutral; strongly agree and agree).

**3.5.3 Study instrument, its validity and Reliability**

The content validity of the instrument was maintained by an expert in nursing and statistician, and necessary modifications and corrections were made. Reliability was pre-tested by a pilot study among twenty health care providers who were not selected for this study but shared similar characteristics as the subjects under study. The result shows that the values of Cronbach's coefficient alpha were satisfactory, indicating questions in each element are measuring similar concepts.

**3.5.4 Ethical consideration**

Participants of this study were informed about the objective of the research, and voluntary participation will be explained via an online link prior to the introduction of the survey questions. Additionally, participants were informed through the link that once they clicked on the bottom of the agreement, they automatically agreed to participate in the study and had the right to withdraw at any time. The individual identifiers were not included in the questionnaire. To secure the collected data, all data were transferred directly online to the primary researcher.

**3.6 Inclusion criteria**

-MOH staff who attended the in-service education in the last 6 months,  
The respondents who were willing to participate in this study voluntarily,

**3.7 Exclusion criteria:**

- The staff who have not attended in-service education in the last 6 months,
- The MOH staff other than south Sharqiya Governorate,
- The MOH staff joined/transferred with South Sharqiya governorate in the last 6 months

**3.8 Data Analysis**

A descriptive approach (frequencies and percentages) was used in data analysis, and inferential statistics was used in the statistical package for social sciences SPSS software (version 21). A p-value < 0.05 was considered statistically significant; the more consequential the finding, the smaller the p-value obtained. The chi-square test and Pearson's correlation coefficient were used to assess the study hypotheses and the significance between quantitative variables. The Bi variate and multi variate regression was done to explore the influencing factors, and logistic regression was done to identify the determining factors (obj: 2)

**4. Results****4.1 General characteristics and clinical variables.**

The demographic characteristics of the 270 participants are shown in Table (1) during the period from August 2023 to November 2023. The results reported that the total of participants in this study is 275 from different categories: Doctor, Nurse, Pharmacy, Laboratory Technician, Ray Technician and Administration). Most of them (71.3%) are female and the others (28.7%) are male. The findings show that the highest percentage of the age is (63.6%) for those aged (30-39) years. (42.2%) of them have a diploma degree. The outcomes stated that (38.5%) of them have 11-15 experience years. Around two-thirds of them work in Primary Health Care. The results indicate that (40.0%) of them are nurses.

**Table (1): Demographic Characteristics of the Study Sample**

The variable	count	percent%
<b>Gender</b>		
Male	79	28.70%
Female	196	71.30%
Total	275	100.00%
<b>Age</b>		
20-29	27	9.80%
30-39	175	63.60%
40-49	68	24.70%
50-59	5	1.80%
Total	275	100.00%
<b>Educational Level</b>		
Post Basic Diploma Degree	31	11.30%
Diploma Degree	116	42.20%
Bachelor's Degree	96	34.90%
Master's Degree	23	8.40%
Doctorate (PhD) Degree	9	3.30%
Total	275	100.00%
<b>Years of Experience</b>		
5 years or less	13	4.70%
6-10 years	85	30.90%
11-15 years	106	38.50%
16-20 years	51	18.50%
More than 20 years	20	7.30%
Total	275	100.00%
<b>Working Institution</b>		
Hospital	98	35.60%
Primary Health Care	177	64.40%
Total	275	100.00%
<b>Which category do you belong to?</b>		
Doctor	49	17.80%
Nurse	110	40.00%
Pharmacy	35	12.70%
Laboratory Technician	24	8.70%
X-Ray Technician	19	6.90%
Administration	38	13.80%
Total	275	100.00%

**4.2 Level of motivation of health care workers who are undergoing in-service training in South Sharqiya governorate**

Table (2) illustrates the descriptive statistics of the level of motivation. It demonstrates the relative distribution, arithmetic averages, standard deviations, and measurement degrees of the dimension. The results indicate that the statement (I am intrinsically motivated to participate in in-service training programs to enhance my professional skills and knowledge) has the highest average (4.38) with a standard deviation (0.717). After that, the average (4.37) for the statements (I feel motivated to work as hard as I can) and (Positive work environment has a positive impact on in-service education) with standard deviations (0.811) and (0.651), respectively. In general, the average motivation is (4.37), and the standard deviation is (0.726). The findings reported that the level of evaluation is very high.

**Table (2): Descriptive statistics of Level of Motivation**

No.	The Statement	SD	D	N	A	SA	M	Std.	EL	O
1	I feel motivated to work as hard as I can	1.8%	0.7%	8.0%	37.1%	52.4%	4.37	0.811	Very high	2
2	I am intrinsically motivated to participate in in-service training programs to enhance my professional skills and knowledge	0.7%	0.7%	7.3%	42.5%	48.8%	4.38	0.717	Very high	1
3	Positive work environment has positive impact on in-service education	0.7%	0.4%	4.0%	50.9%	44.0%	4.37	0.651	Very high	2
Total		1.1%	0.6%	6.4%	43.5%	48.4%	4.37	0.726	Very high	

**SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree, M = Mean, Std. = Std. Deviation  
EL = Evaluation level O = order.**

#### **4.3 Determining factors of motivation which influence participation in the in-service training among health care workers in south Sharqiya governorate**

Table (3) represents the descriptive statistics of the contributing factors. It shows the relative distribution, arithmetic averages, standard deviations, and measurement degrees of the dimension. The results stated that all statements have a high and very high level of evaluation. The findings reported that the statement (Shortages in the workplace reduce participation in in-service training programs) has the highest average (4.51) with a standard deviation (0.727). Then, the statement (Training programs have a positive impact on the patient outcome) with an average of (4.45) and a standard deviation (0.645). However, the lowest average is (3.50) for the statement (My supervisor provides sufficient support and encouragement to participate in in-service training programs) and its standard deviation (1.105). The findings reported that the average of contributing factors is (4.01) and its standard deviation is (0.741) with a high level of evaluation.

**Table (3): Descriptive statistics of Contributing Factors**

No.	The Statement	SD	D	N	A	SA	M	Std.	EL	O
1	The opportunity for career advancement motivates me to participate in in-service training programs	1.5%	1.8%	9.8%	63.6%	23.3%	4.05	0.730	High	11
2	Achievements and recognition in the profession motivate me to participate in in-service training programs	1.8%	1.8%	14.2%	50.5%	31.7%	4.08	0.831	High	9
3	The relevance of the in-service training content influences my motivation to participate	0.0%	1.5%	9.5%	67.3%	21.7%	4.09	0.603	High	8
4	In-service training gives me a feeling of achievement and accomplishment.	0.0%	1.1%	10.5%	62.2%	26.2%	4.13	0.628	High	7
5	The quality of in-service training program design and delivery has great impact on participating actively	0.0%	2.9%	12.4%	63.3%	21.4%	4.03	0.675	High	12
6	The objective of in-service training program addresses my learning needs	0.7%	2.9%	14.2%	65.5%	16.7%	3.95	0.700	High	13

**Level of Motivation and Determining Factors of In-Service Training among Health Care Workers in South Sharqiya Governorate**

No.	The Statement	SD	D	N	A	SA	M	Std.	EL	O
7	In-service training program designed according to the assessment needs for health care provider	4.0%	6.2%	21.1%	52.7%	16.0%	3.71	0.946	High	16
8	Attendance in-service training enhances self-confidence	0.0%	1.1%	9.5%	62.9%	26.5%	4.15	0.619	High	5
9	Self-efficacy and the desire for professional development influence to engage in in-service training programs	1.1%	0.7%	6.9%	70.2%	21.1%	4.09	0.632	High	8
10	The availability of recognition and rewards for participating in in-service training program motivate me	1.8%	2.2%	10.9%	33.8%	51.3%	4.31	0.884	Very high	3
11	In-service training programs help me stay up to date with the latest developments in my field	0.0%	1.1%	9.8%	64.4%	24.7%	4.13	0.612	High	7
12	Training programs have positive impact on patient outcome	0.0%	0.4%	7.3%	39.3%	53.0%	4.45	0.645	Very high	2
13	In-service training programs are effective way to address skills gaps or deficiencies among health care workers	0.0%	0.0%	5.1%	65.5%	29.4%	4.24	0.536	Very high	4
14	In-service training programs (time and place) are suitable for health care providers	1.8%	5.1%	12.0%	64.7%	16.4%	3.89	0.800	High	14
15	Shortages in the workplace reduce participation in in-service training programs	1.1%	0.0%	7.3%	30.2%	61.4%	4.51	0.727	Very high	1
16	My supervisor provides sufficient support and encouragement to participate in in-service training programs	5.5%	15.3%	19.6%	42.9%	16.7%	3.50	1.105	High	18
17	The perception of the organizational culture, including support for continuous learning and development influences my motivation to participate in in-service training	1.8%	7.3%	21.8%	54.9%	14.2%	3.72	0.861	High	15
18	Peer support and social interaction within the workplace have positive effect to participate in in-service programs	0.0%	0.4%	11.3%	70.5%	17.8%	4.06	0.551	High	10
19	Continuous evaluation and monitoring from supervisor encourage me to participate in in-service training programs	1.8%	14.5%	22.5%	51.3%	9.9%	3.53	0.921	High	17
20	I feel that objectives of service training met the organizational objectives	0.7%	0.7%	15.6%	68.7%	14.3%	3.95	0.626	High	13



No.	The Statement	SD	D	N	A	SA	M	Std.	EL	O
21	Regular feedback from my supervisor encourages me attending training programs	3.6%	13.1%	23.6%	45.5%	14.2%	3.53	1.008	High	17
22	There are limited training opportunities in health care institutions	0.0%	1.1%	12.7%	57.5%	28.7%	4.14	0.664	High	6
Total		1.2%	3.7%	13.1%	56.7%	25.3%	4.01	0.741	High	
<b>SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree, M = Mean, Std. = Std. Deviation            EL = Evaluation level O = order.</b>										

## 5. Discussion

The results of the present study showed that the mean motivation score among healthcare workers who underwent in-service training in the South Sharqiya governorate was 4.37 out of a maximum score of 5. This was considered very high on the evaluation level score. It is thus of critical importance for the management of the Ministry of Health to meet the needs and achieve goals of the staff as well as outcomes of the organization – which would pave the way for sustenance and quality improvement of services provided (Øvretveit, 2005).

Among the main motivational statements influencing health care workers' motivation for participating in in-service training, intrinsic motivation scored the highest, followed by general motivation and work environment impact. It was found that participants rated these statements very highly on the evaluation level score. Healthcare workers' motivation and job satisfaction are interlinked with retention strategies. Literature supports this finding that healthcare workers are usually motivated mainly by intrinsic factors (Lambrou, 2010; Karaferis, 2022). This opens the door for targeting effective staff motivation strategies in terms of in-service training, which could, in turn, have a positive effect on service quality output.

The healthcare workers who participated in the study reported that the biggest contributing factor among the determining factors of motivation influencing participation in in-service training was staff shortages in the workplace. This finding is supported by a survey of ministries of health in various countries (Mathauer, 2006). Supervisory support and encouragement showed a high level of evaluation and scored the lowest mean in terms of influencing participation. More than half of the participants strongly agreed that the availability of recognition and rewards for participating in an in-service training program would motivate them. This was also found as one of the main motivating factors in another paper studying motivation level (Dieleman, 2003), which shows that appreciation and incentives give staff a sense of involvement in the organization (Cadwallader, 2010).

As a matter of fact, many health workers are left demotivated and frustrated when there is inadequately provided or management of available resources (4). However, an important contributing motivating factor was that these training programs have a positive effect on patient outcomes, which is very important in a healthcare setting. The effectiveness of an in-service program plays a vital role in enhancing skills, knowledge, and adherence to best practices (Bluestone, 2023; CHAGHARI, 2017).

The current study showed that about half of the contributing factors studied had a significant moderate correlation with the motivational statements and overall motivation ( $p < 0.01$ ). Other correlation coefficients were found to be weakly correlated with motivation level and motivational statements. There was a weak positive relationship between regular supervisory feedback encouraging staff to attend training programs and actual motivation by the healthcare workers. Supervisory support was seen to positively affect healthcare workers, especially the nurses' category (Karaferis, 2022), which was the largest category of participation in this study.

Furthermore, there was a significant weak correlation between the limited training opportunities in the healthcare institution and the level of overall motivation ( $p < 0.01$ ). Hence, an increase in training opportunities made available in healthcare institutions would lead to an increase in motivation levels among healthcare workers (Karaferis, 2022; Momanyi, 2016). Regression analysis showed that the level of motivation accounts for about 35% of the variation seen in the contributing factors affecting participation in in-service training programs.

Further analysis of this variation shed light on the complex interplay of factors influencing participation, showing a significant correlation between the level of motivation and contributing factors ( $\alpha \leq 0.05$ ).

Results showed that there is a significant relationship between the contributing factors and the level of motivation influencing participation in in-service training ( $B = .044, p < 0.01$ ). Multiple regression furthermore showed that a 35% variation in the

motivation contributing factors is accounted by variation in the 3 motivation statements, namely, positive work environment, overall motivation, and intrinsic motivation.

The study also showed that the three motivation statements can be used to explain the substantial association with the motivation contributing factors. These results prove that there is a fair influence of intrinsic and extrinsic motivation on healthcare engagement in these training programs, which cannot be ignored (Zeng, 2022; Cerasoli, 2014). Thus, these contributing factors pertaining to the healthcare providers, such as a sense of achievement, recognition, career advancement and working environment, have been revealed to have a positive impact on their commitment, performance, satisfaction and timely and quality service delivery (Lambrou et al. 2010).

Moreover, there is a significant relationship between the contributing factors and each of the 3 motivation statements in the study ( $p < 0.01$ ). These findings are consistent with other findings involving staff performance and certain motivators related to work in terms of participation in in-service training (Aarabi, 2013). Furthermore, studies show that increased motivation and increased training are interlinked together with work engagement and overall productivity (Karaferis, 2022).

### **5.1 Limitations**

The results of this study cannot be generalized to the country since the study was only conducted in one governorate. Also, a majority of the participants were from primary healthcare institutions.

### **5.2 Recommendations for Further Research**

While this cross-sectional (quantitative) study provided insight into the level of motivation and determining factors among health care providers in health care settings in the South Sharqiya governorate, future studies are needed. First, experimental or non-experimental intervention studies are needed to examine the effectiveness of strategies that could improve the level of motivation in pertaining training among health care workers. Examples of strategies and interventions that need to be studied for their effectiveness on the level of motivation are financial and nonfinancial incentives, supportive supervision and feedback systems and leadership training. Second, comparative studies might be needed to explore the impact of pay and incentives on the level of motivation in training in healthcare settings similar to or different from Oman. Further studies are needed to investigate the impact of family commitment and job rotation on the level of motivation in training, as these two variables are rarely studied in health care workers' literature.

## **6. Conclusions**

The importance of fostering intrinsic and extrinsic motivators for healthcare providers to participate in in-service training to achieve optimal performance and service delivery has been highlighted. In-service training that is tailored to the specific needs of health workers should be conducted along with more opportunities at various institutions. A more supportive supervision and feedback system should also be developed that includes experienced leadership and dedicated healthcare workers' management. The value of training should be recognised at the healthcare provider level as well as the management level in order to unlock their full potential, resulting in a dedicated workforce delivering high-quality, timely services with greater public satisfaction.

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