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Knowledge and Attitudes of Employees in The Iraqi Ministry of Health regarding Total Quality Management

Sahar AE Al Shatari [1*], Ban Tahseen [2], Ghaidaa Hameed Mohammed Mahdi [3]
[1] MBCHB. FICMS. Associate Professor, Consultant Family Physician, retired from MOH, Iraq.
[2] BDS.-MSC. preventive-Dentistry, Specialist dentist, Iraqi MOH.
[3] M. Se., Ph.D. in philosophy in public administration sciences, Office of the Technical Agent / Ministry of Health, Iraq.

* Corresponding Author: **Sahar AE Al Shatari**

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Abstract
Background: Good Knowledge and attitude of the worker toward TQM are essential to achieve a high level of TQM,
Objectives: to study the knowledge and attitudes of employees in the Iraqi Ministry of Health regarding Total quality management
find the association between the knowledge and attitudes of employees in the Iraqi Ministry of Health regarding Quality Management with some demographic & work variables.
Method & subjects: An online survey was conducted from 9 May to 31 June 2024, collecting answers to an online questionnaire from employees working in IMOH, with a response rate of 9.94%.
Results: 2992 - IMOH employees enrolled in this study, the highest percentage Aged 30- 39 years 1073(35.9%) with Mean & SD 34±2.88, females 1666(55.7%), currently married 2171(72.6%), complete College 2412(80.6%), Working in General PHC 803(26.8%). Paramedical-staff 1143(38.2%), good overall-knowledge in 1846(61.7%), 1560(52.1%) had high overall-attitude. Only 637(21.3%) had TQM training courses. System failure or administrative mistakes 1048(35%), followed by financial instrument and material availability 868(29%), followed by lack of knowledge 516(17.5%), Corruption 355(11.9%), TMQ low attitude and Mis-Coordination 328(11%), both participants' overall-knowledge and overall-attitude had highly-significant association with their age, sex, marital status, institution type, AND TQM obstacles, but not with educational level, or with job description.
Conclusion: Participants' Knowledge and attitude towards TQM were moderate to good. A larger number of participants thought that there are many obstacles facing quality implementation in health care institutions, such the financial instruments and material availability, that can affect TQM implementation.

Keywords: Total Quality Management, TQM obstacles, IMOH, Iraq

Introduction

Total Quality Management is one of the modern administrative concepts that is somewhat of great importance in the efficiency of work in both the public and private sector [1]. TQM can be summarized as a management system for a customer-focused organization that engages all employees in continual improvement of the organization [2].
Its importance appears in the work of the public health sector in particular for its role in increasing the rate of recovery from diseases, reducing deaths, and improving the health service provided through) proper diagnosis and rapid recovery of patients in the hospital. Reducing the material cost of the health institution and the patient) by reducing the length of stay [3].

The importance of knowing the concept and philosophy of Total Quality Management and working with it among workers in the health sector appears in changing the prevailing organizational culture, spreading the spirit of teamwork, respecting the other guardian, and using modern technologies to facilitate the provision of health services and ensure their specialization [4].

Many research and studies worldwide, in the Arab world, and Iraq have addressed the concept of Total Quality Management and the impact of adopting its philosophy in developing and advancing the work of health institutions and achieving progress in their work through the principle of (Kaizen) and activities that are constantly improved and in a way that achieves continuous improvement of their operations and services to obtain the desired results in their work [5- 8].

This research is devoted to studying and measuring the knowledge and attitudes of employees in the Iraqi Ministry of Health towards Total quality management and finding the relationship between the knowledge and attitudes of employees toward the Total quality management.

Objectives

1. Study the Knowledge and Attitudes of Employees in The Iraqi Ministry of Health regarding Total Quality Management
2. Find the association between the Knowledge and Attitudes of Employees in The Iraqi Ministry of Health regarding Total Quality Management with some demographic & work variables.

Method & subjects

Study design: An online survey was conducted from 9th May to 31st June 2024, collecting answers to an online questionnaire from employees working in the Iraqi Ministry of Health.

Ethical approval

The study protocol has been approved by using the code of ethics of the Iraqi Ministry of Health. The study's goals were stated to every participant with consent notice at the start of the computerized questionnaire to clarify that the data would be kept private and anonymous.

Included criteria: any employees working in ministry of health and receive the electronic questionnaire link through working WhatsApp groups of electronic training groups and personal numbers (WhatsApp, Telegram, and Viber).

Excluded criteria: Anyone not answering the online (google form).

The questionnaire

The questionnaire consists of four parts: the first demographic feature consists of seven questions (age, married status, educational degree, monthly income, Job description, working department or health governorate, and institution type). Paramedical staff= medical assistant, community health assistant, anaesthetic assistants, radiologist assistant, and others.

The second part consists of 5 questions of information and practice about total management quality (TMQ) in this institution, ("Is there an assessments checklist for TMQ in your institution", "did you see TMQ checklist", "Did you do a self-assess TMQ checklist", "if you did that, where did you do the checking".

The third part consists of 12 questions about participants' knowledge on the TMQ based on an Iraqi study, by AL Hlaly (2011). [9] ("Quality is a major change in the thinking system of both managers and workers. It requires widespread participation at the organization level to control quality by training workers, involving them, and giving them authority", "Quality is an integrated approach to achieving high-quality outputs or results by focusing on continuous improvement of processes and preventing defects at all levels and in all functions of the organization to meet or exceed customer expectations", "Quality is the organization's focus with all its members on quality to achieve customer satisfaction by achieving the organization's goals efficiently", "Total quality management is the commitment and involvement of senior management to provide what the customer expects or exceeds his expectations", "Respecting time when providing the service so that the customer does not feel bored as a result of delaying the service and receiving it his conviction and satisfaction through providing the best services", "The application of comprehensive quality management in the hospital leads to the provision of a health service characterized by quality, and the most important thing in these dimensions of quality is (the speed, accuracy, and kindness) of those working in providing the service", " Quality is the conformity of the product or service to the established specifications by reducing the degree of uncertainty in both the design and the production process", " The customer is the most important part of the production line", "Among the diseases that kill institutions are the lack of stability in purpose and excessive legal burdens", "Among the characteristics of a successful employee are adherence to laws, group spirit, work policies, and professional ethics", "The organization's self-evaluation of TMQ takes place every 3 months", "Evaluating the satisfaction of beneficiaries of the health service in the institution is considered the most important assessment of the quality of health services".

The fourth part is about the attitude had 6 questions ("The goal of institutions is to obtain a percentage of 80-100%, and this is what quality evaluation processes seek", "Quality indicators enable us to identify weak points in the evaluated institution", "Evaluating quality indicators enables us to develop a corrective plan for deficiencies in the resident institution", " The numbers (0, 1, 2) represent (not achieved, partially achieved, fully achieved) respectively.", "It is possible to benefit from annual evaluations of quality indicators by developing a quality plan for the coming year", "In your opinion, what are the reasons that hinder your organization from reaching the highest levels of quality?". We have to change the public's perception that money is being wasted. (Perception is a belief or opinion, often held by many people and based on how things seem).

Lastly, one questions ("Your source of information about quality?").

A Pilot study was done for 20 employees and the reliability for knowledge questions was 0.811, and for attitude questions 0.727. Also, five expert opinions were taken into consideration (one community medicine, 2 doctors with PhD in Management and Economics, and 2 family medicine with TQM Experience).

Sampling technique

The online questionnaire link was distributed through the national center of training & human development, also through. To all employees in the ministry of health (except Kurdistan governates), also confirmation taken from the training unites managers in all the involved governorate about the distribution of the questionnaire link to all employees (and age, any level of education and any degrees), 2992 responses received out of 30 000 employees with response rate 9.97%).

Statistical analysis Outcomes and procedures:

The answers were downloaded from the electronic form of the Questionnaire (Google-form) to the computer as an Excel file and imported to SPSS ver. 26 to be analyzed frequencies and percentage calculated. Chi square test and ANOVA were used. The statistical probability considers significant if (p value <0.05).

Scoring of the knowledge & attitude

The knowledge answers & their score

("incorrect" = 1, "I don't know" =2, "correct" = 3) total score is a guide to knowledge (12 questions) as follows:

poor knowledge (12-20)

fair knowledge (21-28)

good knowledge (29- 36)

The attitude answers & its score

(Strongly agreed=4, agreed=3, disagreed=2, & strongly disagreed =1) of 5 questions (all with positive attitude)

low attitude (5-10)

accepted attitude (11-15)

high attitude (16-20)

We did not use neutral midpoints (Many researchers believe that respondents misuse neutral midpoints and are wary of using them. These individuals may falsely utilize the neutral option for statements they have an opinion on, whether they agree or disagree. [10-11]

Results:

Three thousand to eight Iraqi health ministry employees enrolled in this study, highest percentage 1144**(**38.3%) of them from Al-Resafa health directorate, followed by Kirkuk health directorate 481(16.1%), Aged 30- 39 years 1073(35.9%) with mean & standard deviation 34±2.88, females 1666(55.7%), currently married 2171(72.6%), complete College/institution 2412(80.6%), with monthly income 500000- less than million 1483(49.6%), paramedical staff 1143(38.2%), followed by medical staff 1006(33.6%), Working in General PHC 803(26.8%), followed by FM -PHC worker 521(17.4%). As seen in table (1)

Table 1: Distribution of participants according to their demographic and work variables:

		Frequency N=2992	Percent %
Working department or health directorate	Resafa	1144	38.2
	Kirkuk	481	16.1
	Babil	313	10.5
	Diyalia	170	5.7
	Ninawa	155	5.2
	Basrah	112	3.7
	Al-Anbar	101	3.4
	Al-Karkh	125	4.2
	Salahaldeen	79	2.6
	Holly Karbala	73	2.4
	Maysan	47	1.6
	Holly Najaf	37	1.2
	Diwaniya	37	1.2
	The Qar	35	1.2
	Wasid	6	0.2
	Ministry	56	1.9
	Al-Muthana	21	0.7
Age 34±2.88	≥29 years	896	29.9
	30- 39 years	1073	35.9
	40- 49 years	665	22.2
	50 years & more	358	12.0
Sex	Female	1666	55.7
	Male	1326	44.3
Married status	Never married	651	21.8
	Currently married	2171	72.6
	Previously married	170	5.7
Educational degree	Complete secondary school and less	228	7.6
	College /institution	2412	80.6
	Higher education	352	11.8
Monthly income	less than 500000	70	2.3
	500000- less than million	1483	49.6
	million - less than 1500000	983	32.9

	1500000 - less than 2 million	284	9.5
	more than 2 million	172	5.7
Job description	medical staff	1006	33.6
	paramedical staff*	1143	38.2
	nursing staff	416	13.9
	administrative & Statisticians staff	277	9.3
	engineers and engineer's assistant	100	3.3
	Others	50	1.7
Institution type	General PHC	803	26.8
	FM -PHC	521	17.4
	Health Sector	437	14.6
	Specialized Dental Center	320	10.7
	Public hospital	247	8.3
	Teaching hospital	293	9.8
	Tertiary hospital or institutions	182	6.1
	Health Directorate Center	153	5.1
	Center of Ministry	36	1.2

The current study found that most of the participants knew the Present TMQ checklist in his/her current institution 1956(65.4%), only 1368(45,6%) used them now or previously, and 1014(33,9%) of participants Never worked in TMQ so they did not use TMQ checklist, while 195(6.5%) they mention that "there is No TMQ checklist in their workplace". As appeared in table (2).

Table 2: Distribution of participants according to their practicing of TMQ checklist:

		Frequency N=2992	**Percent %**
Present TMQ checklist in your current institution	No	226	7.6
	I don't know	810	27.1
	Yes	1956	65.3
Now or previously, did you use TMQ checklist	No	1262	42.2
	Yes	1368	45.8
	No answer	362	12.1
Where did you use TMQ checklist?	Current work	964	32.2
	Previous work	198	6.6
	Current & previous work	230	7.7
	No TMQ checklist in my work	195	6.5
	Never work in TMQ	1014	33.9
	No answer	391	13.1

When the participants were asked about the meaning of Total quality management, 1335(44.6%) chose they didn't know the meaning of Total quality management, but when the participants were asked in detail about that meaning 1846(61.7%) had good overall knowledge, followed by 1125(37.6%) with accepted knowledge and only 21(0.7%) had poor overall knowledge this showed in table (3) & figure (1) & (2).

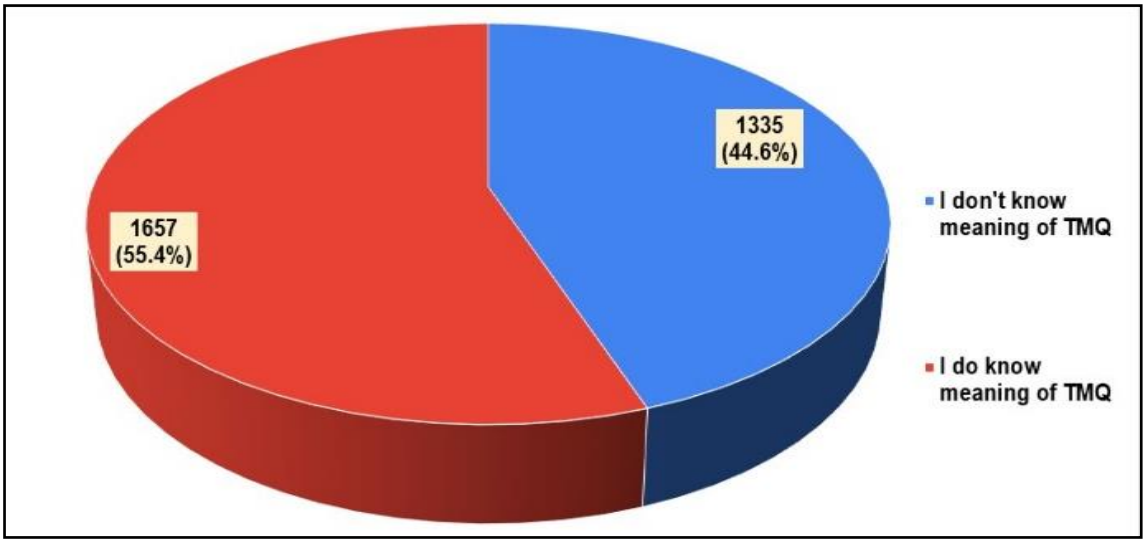

Fig 1: Distribution of participants according to their perception about Total Management of Quality meaning (N=2992)

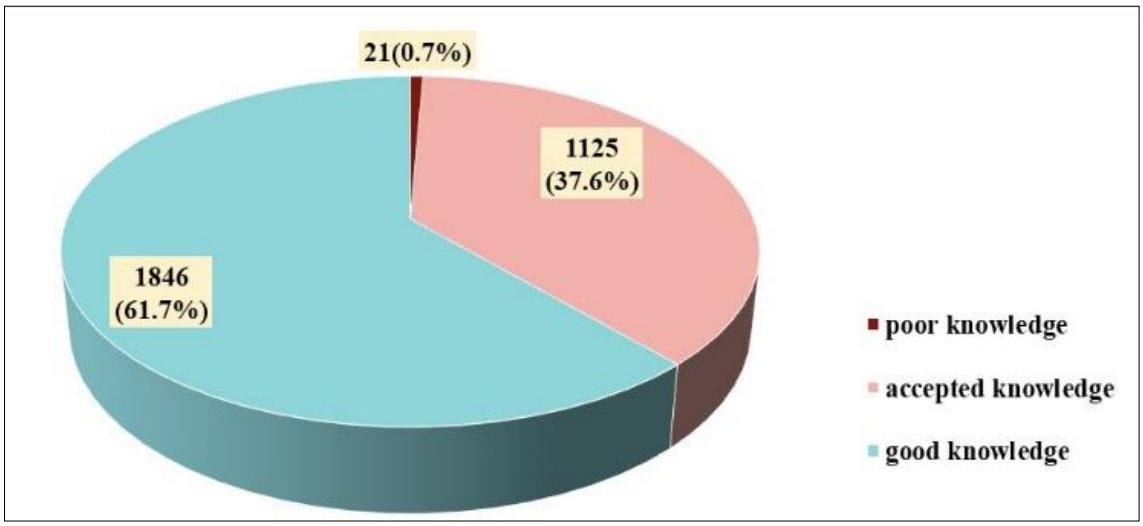

Fig 2: Distribution of participants according to their overall knowledge about Total Management of Quality (N=2992)

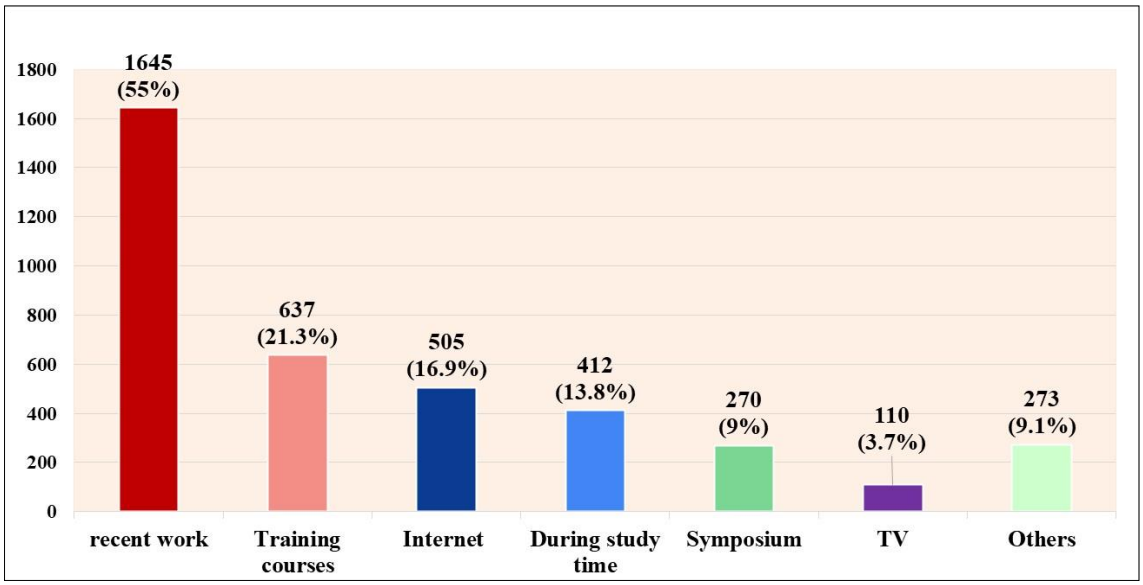

Fig 3: Source of information of participants about TMQ (out of 2992)

Table 3: Distribution of participants according to their knowledge about TMQ

	Incorrect	I don't know	Correct
	N %	N %	N %
Quality is a major change in the thinking system of both managers and workers. It requires widespread participation at the organization level to control quality by training workers, involving them, and giving them authority	241 8.1%	790 26.4%	1961 65.5%
Quality is an integrated approach to achieving high-quality outputs or results by focusing on continuous improvement of processes and preventing defects at all levels and in all functions of the organization to meet or exceed customer expectations	85 2.8%	618 20.7%	2289 76.5%
Quality is the organization's focus with all its members on quality to achieve customer satisfaction by achieving the organization's goals efficiently	85 2.8%	543 18.1%	2364 79.0%
Total quality management is the commitment and involvement of senior management to provide what the customer expects or exceeds his expectations	121 4.0%	636 21.3%	2235 74.7%
Respecting time when providing the service so that the customer does not feel bored as a result of delaying the service and receiving it his conviction and satisfaction through providing the best services	45 1.5%	373 12.5%	2574 86.0%
The application of comprehensive quality management in the hospital leads to the provision of a health service characterized by quality, and the most important thing in these dimensions of quality is (the speed, accuracy, and kindness) of those working in	35 1.2%	417 13.9%	2540 84.9%
Quality is the conformity of the product or service to the established specifications by reducing the degree of uncertainty in both the design and the production process	298 10.0%	848 28.3%	1846 61.7%
The customer is the most important part of the production line	223 7.5%	485 16.2%	2284 76.3%
Among the characteristics of a successful employee are adherence to laws, group spirit, work policies, and	15	146	2831

professional ethics	0.5%	4.9%	94.6%
Among the diseases that kill institutions are the lack of stability in purpose and excessive legal burdens	62 2.1%	469 15.7%	2461 82.3%
The organization's self-evaluation of TMQ takes place every 3 months	277 9.3%	1032 34.5%	1683 56.3%
Evaluating the satisfaction of beneficiaries of the health service in the institution is considered the most important assessment of the quality of health services	145 4.8%	489 16.3%	2358 78.8%

More than half of the participants 1645(55%), had information about TQM from their recent work, while only 637(21.3%) had training courses in TQM, or 412(13.8%) during their study time, 270(9%) during symposiums, while 505(16.9%) from internet, 110(3.7%) from TV, and 273(9.1%) from others (friends, books, magazine, etc.) as appeared in figure (3)

Figure (4) showed that the participants according to their believed causes of TMQ obstacles mostly because of System failure or administrative mistakes 1048(35%), followed by financial instrument and material availability 868(29%), followed by lack of knowledge 516(17.5%), Corruption 355(11.9%), TMQ low attitude and Mis-Coordination 328(11%), Carelessness 258(8.1%), Decrease training and efficiency 204(6.8%), Misdistribution or decrease numbers of workers 201(6.7%), Infrastructure 166(5.5%) and other causes 161(5.4%) - Catchment area mismatch, Community education, client dissatisfaction about MOH, fight changing, general & political conditions, employees disrespect clients)

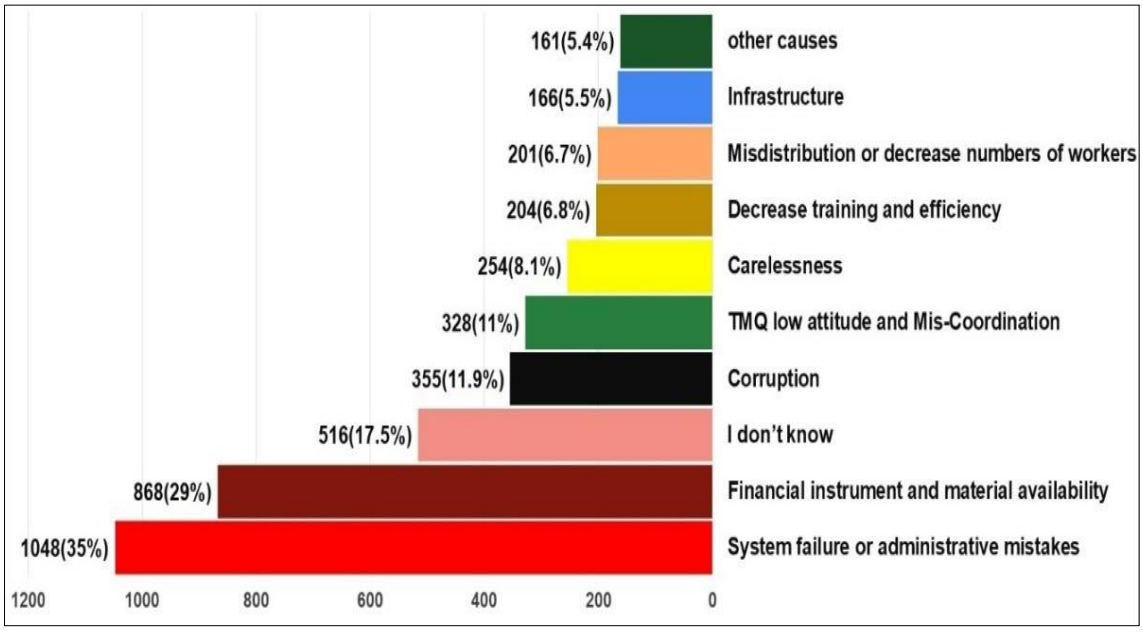

Fig 4: Distribution of participants according to their believed causes of TMQ obstacles

The current study found that the highest percentage of the participants had agreed 1615(54.0%) for Q1, 2088(69.8%) for Q2, 2096(69.8%) for Q3, 2038(68.1%) for Q4, and lastly, for Q5 2145(71.7%) and most of the participants, 1560(52.1%) had a high overall attitude toward TMQ, followed 1398(46.7%) had medial overall attitude, and only 34(1.1%) had a low overall attitude toward TMQ, as seen in figure (5) and table (4).

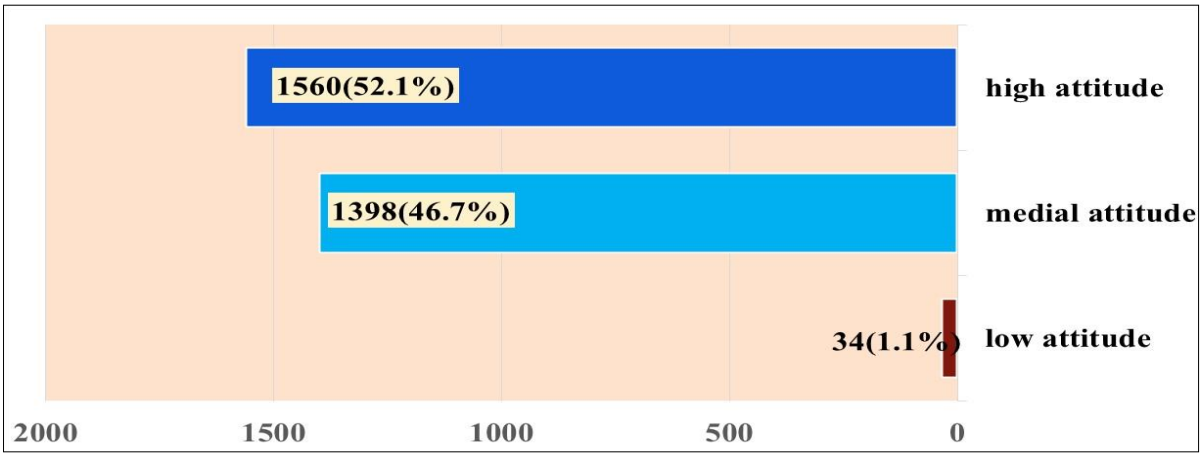

Fig 5: Distribution of participants according to their attitude towards Total Management of Quality

Table 4: Distribution of participants according to their attitude toward TMQ

		strongly disagreed	disagreed	agreed	Strongly agreed
Q1	The goal of institutions is to obtain a percentage of 80-100%, and this is what quality evaluation processes seek	19 (0.6%)	112 3.7%	1615 54.0%	1246 41.6%
Q2	Quality indicators enable us to identify weak points in the evaluated institution	68 2.3%	117 3.9%	2088 69.8%	719 24.0%
Q3	Evaluating quality indicators enables us to develop a corrective plan for deficiencies in the resident institution	53 1.8%	89 3.0%	2096 70.1%	754 25.2%
Q4	The numbers (0, 1, 2) represent (not achieved, partially achieved, fully achieved) respectively	56 1.9%	301 10.1%	2038 68.1%	597 20.0%
Q5	It is possible to benefit from annual evaluations of quality indicators by developing a quality plan for the coming year	42 1.4%	97 3.2%	2145 71.7%	708 23.7%

The study found a highly significant association between participants' overall knowledge and their age, sex, marital status, and institution type they work in (p-value = 0,000, 0.000, 0.007 & 0.007 correspondingly), but not with educational level (p-value = 0.966), or with job description (p-value = 0.656). table (5)

Same as for the association between the overall attitude of participants and their age, sex, marital status, educational level, and institution type they work in (p-value = 0,000, 0.000, 0.003, 0.002 & 0.001 correspondingly), but not with job description (p-value = 0.309). table (6)

Table 5: Association between overall knowledge of participants and their demographic & work variable:

		Overall knowledge			Total	P value
		poor	accepted	good		
Age	≥29 years	8	420	468	896	0.000
	30- 39 years	6	388	679	1073	
	40- 49 years	5	219	441	665	
	50 years & more	2	98	258	358	
Sex	Female	9	689	968	1666	0.000
	Male	12	436	878	1326	
Married status	Never married	7	280	364	651	0.007
	Currently married	14	779	1378	2171	
	Previously married	0	66	104	170	
Educational level	Secondary school & less	2	83	143	228	0.966
	College/ institution	16	906	1490	2412	
	Higher education	3	136	213	352	
Job description	Medical staff	5	374	627	1006	0.656
	Paramedical staff	12	443	688	1143	
	Nursing staff	3	162	251	416	
	Administrative & Statisticians staff	1	95	181	277	
	Engineers & engineer's assistant	0	34	66	100	
	Others	0	17	33	50	
Institution type	General PHC	8	265	530	803	0.007
	FM -PHC	5	219	297	521	
	Public hospital	0	108	139	247	
	Teaching hospital	2	122	169	293	
	Specialized Dental Center	2	124	194	320	
	Tertiary hospital or institutions	2	67	113	182	
	Health Sector	2	163	272	437	
	Health Directorate Center	0	40	113	153	
	Ministry of health	0	17	19	36	

Table 6: Association between overall attitude of participants and their demographic & work variable:

		Overall attitude			Total	P - value
		low	medial	high		
Age	≥29 years	14	469	413	896	0.000
	30- 39 years	11	517	545	1073	
	40- 49 years	5	267	393	665	
	50 years & more	4	145	209	358	
Sex	Female	10	839	817	1666	0.000
	Male	24	559	743	1326	
Married status	Never married	13	331	307	651	0.003
	Currently married	21	979	1171	2171	
	Previously married	0	88	82	170	
Educational level	Secondary school & less	4	121	103	228	0.002
	College/ institution	27	1143	1242	2412	
	Higher education	3	134	215	352	

Job description	Medical staff	10	452	544	1006	0.309
	Paramedical staff	13	539	591	1143	
	Nursing staff	6	214	196	416	
	Administrative & Statisticians staff	3	123	151	277	
	Engineers & engineer's assistant	0	46	54	100	
	Others	2	24	24	50	
Institution type	General PHC	12	389	402	803	0.001
	FM -PHC	8	256	257	521	
	Public hospital	4	117	126	247	
	Teaching hospital	1	141	151	293	
	Specialized Dental Center	3	156	161	320	
	Tertiary hospital or institutions	4	88	90	182	
	Health Sector	0	189	248	437	
	Health Directorate Center	2	43	108	153	
	Ministry of health	0	19	17	36	

Participants' overall knowledge associated significantly with TQM obstacles (System failure or administrative mistakes, Financial instrument and material availability, Infrastructure, He /she don't know as p-value = 0.005, 0.000, 0.038, and 0.000 respectively) while participants' overall attitude had significant association with TQM obstacles (system failure or administrative mistakes, financial instrument and material availability, misdistribution/decrease numbers of workers, decrease training and efficiency, infrastructure, He /she don't know, and TMQ low attitude and miscoordination as p-value less than 0.05). as it's appeared in table (7)

Table 7: only significant ANOVA test between the participants believes about TMQ obstacles & Overall TMQ knowledge & Overall TMQ attitude

ANOVA					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Overall knowledge					
System failure or administrative mistakes	2.436	2	1.218	5.365	0.005
Financial instrument and material availability	10.586	2	5.293	26.123	0.000
Infrastructure	.344	2	.172	3.287	0.038
He /she don't know	21.932	2	10.966	80.916	0.000
Overall attitude					
System failure or administrative mistakes	11.181	16	.699	3.104	0.000
Financial instrument and material availability	16.568	16	1.036	5.138	0.000
Misdistribution/decrease numbers of workers	3.241	16	.203	3.271	0.000
decrease training and efficiency	2.020	16	.126	1.997	0.010
Infrastructure	3.917	16	.245	4.764	0.000
He /she don't know	8.152	16	.510	3.619	0.000

Discussion

Current study enrolled by nearly 10% of employees of Iraqi ministry of health, that greater number of participants who's Working department of health governorate are from AL Resafa area which is the most populated area [12].

Most participants were female; maybe women are more likely to respond to surveys due to altruism [13] line according to Green [14] who mentions that women were more communicative and interested in sharing opinions with others. Also, most participants aged (30- 39) years old, due to younger people participating more than older people [15]; also, the demographic table shows that most of the participants are currently married. the educational level of participants greater number is post-graduated (College /institution) because the survey was conducted among employees working in the Ministry of Health who's most of them are college graduates, most of the participants are paramedical staff working in General PHC with Monthly incomes less than a million who represent the largest category of the ministry of health employees according to annual statistical report [16]

The study revealed that most of the employees were aware of the Presence of the TMQ checklist in their current institution also most of them used the list during their work in their institution, in spite that most of them never worked in the TMQ field, otherwise, most participants answered correctly when they asked about TMQ that means they had good knowledge about definition and topics related to TMQ. that Knowledge is affected by the implementation of quality standards when more quality standards are applied, more knowledge related to healthcare quality is attained [16] that's most of the health care employees are involved with the implementation of TQM in their institution same results reached by the same results were reached by Al-Shdaifat 2015 and Al-Neyadi 2005 [17-18] Poor implementation may be attributed to deficient knowledge about the importance of TQM and insufficient training programs and financial support for improving health services and patient satisfaction The current study shows that the majority of participants with good to moderate attitudes toward TQM with percentages of (57,1%) and (47,7%) respectively responded positively towards TQM. This finding makes sense as individual attitudes would be affected depending on past experiences or current procedures that the institution management would implement. Since attitudes refer to the beliefs, thoughts, and attributes that individuals would associate with an object or an idea [19]. In other words, while affective attitudes are feelings, cognitive attitudes are beliefs and thoughts.

Finally, evaluative attitudes refer to past behaviors or experiences regarding an attitude object or idea. This is

because many individuals are guided by their previous experiences which might have a great deal of influence on accepting or rejecting an attitude object or idea [20].

Regarding obstacles facing quality implementation from the participant's point of view; a larger number of participants thought that systemic failure or administrative mistake is the main obstacle facing TQM implementation while about thirty percent of participants suggested that the financial instrument and material availability can affect TQM implementation, that's most participants are para medical staff and thus they distance themselves from responsibility since TQM can be achieved by participation in improving processes by all members of an organization. Based on previous studies, Lee and Lee suggested five key components of TQM: The role of leadership, the role of the quality department, employee participation, education and training, and process and operational procedure [21].

According to the findings of this study, more than half of the participants got information about TQM from recent work. this means there is employees' involvement, and engagement during TQM implantation in their institutions, as the motivation and participation of all employees passively affect their effectiveness [22- 23].

The Employees' performance is strongly linked to the overall productivity of institutions through several factors. Most likely, these factors can mutually influence and interact with each other confirming that the effect of all TQM practices (leadership, customer focus, human resources management, process management, information analysis, and continuous improvement) on employee effectiveness was significant. This confirmation agrees with other studies that have treated this subject as [23- 24].

Concerning the Association between the overall knowledge of participants and their demographic & work variable, the results indicate a positive relation between (the ages, gender, married state, and institution type) of participants and overall knowledge, on the other hand, the results findings showed no significant correlation between the level of education and the job description with the overall knowledge about TQM, as Ministry of Health and other healthcare institutions have started the implementation of quality standards, Knowledge is affected by the implementation of quality standards, when more quality standards are applied, more knowledge related to healthcare quality is attained. [25, 26] TQM practices also encourage employees' participation, promote empowerment, recognize that employees play an important role in achieving the organizations' objectives, and treat employees as primary resources [27 – 28].

Concerning association between the overall attitude of participants and their demographic & work variables. The result showed a positive effect of (Age, Sex, Married status, educational level, and Institution type) on the attitude of participants about TQM (significant relationship) while the findings showed no significant correlation between Job description and the altitude of participants, a similar study conducted by Aomari F et. al (2015) [25], that found the attitude of participants was not influenced by age, gender, nationality, number of hospital beds or attending quality training, this difference in result may be due to sampling size differences. The only factor that influenced the attitude towards healthcare quality was the job title application of quality standards. The application of quality standards is the most consistent influential factor in knowledge, attitude, and perception of quality among healthcare workers. [29]

Conclusion

The knowledge and attitude of participants towards TQM were moderate to good. Most employees were aware of the presence of the TMQ checklist in their current institution also, and most of them used the list during their work in the institution, most of them got their information about TQM from recent work however highes number of participants thought that there are many obstacles facing quality implementation in the health care institutions such the financial instrument and material availability that can affect TQM implementation. Application of quality standards has the greatest impact on knowledge, and attitude of healthcare workers.

Recommendations

Reviewing the solving of problems and obstacles that prevent the implementation of Total quality management. This is done in cooperation between the Total Quality Management Department and coordination with the rest of the health departments and divisions.

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