

Measuring the quality and Impact of The digital transformation (Mawared Application) on Primary healthcare Professionals, Riyadh, November 2019.

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Abstract

Purpose:

This study aims to measure Quality and the impact of the Mawared Application on Primary Care Professionals in Riyadh city.

Methods:

This study is designed as a Descriptive study, aiming to measure the impact of the Mawared Application on Primary Care Professionals. Conducted in primary care centers in north of Riyadh city, November 2019. The study design was cross-sectional.

Results:

The results indicate that most of the respondents were aged between 26-35 years, and more than half of the sample was female also the majority of the sample was nursing and the type of job contract is MOH, about half of the respondents bachelor holder, and also the half of the sample use IOS.

Conclusion:

the need to work on the dissemination of technical culture among doctors, managers and staff and provide financial and moral incentives to encourage them to use the technology.

Key word: Mawared, Information Technology (IT), Information and Communication Technology ICT, human resource management (HRM), Electronic Human Resource Management E-HRM.

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I. Introduction

Background

Saudi Arabia has witnessed a major transformation in the digital use among its governmental organizations. The kingdom of Saudi Arabia ranked among the top five countries that offer different public services and those services met the population satisfaction. In regard to this, one of the main transformation programs of the Kingdom of Saudi Arabia transformation vision 2030 is digital transformation which is going to improve and empower the economy of Saudi Arabia. Electronic Human Resource Management E-HRM is a system that allows management and employees access to human resource related information and services through an organization's intranet or web portal. (E-HRM) is being used in most of the big companies and institutions and is among the leading organizational systems in human resource management (HRM) because its applications are considered to be very effective. Saudi Ministry of Health has launched a new service called Mawared which is responsible for determining who your bosses are and how to make any request to them, such as leave requests, assignments and other procedures. This study aims to measure the impact of the Mawared Application on Primary Care Professionals in Riyadh city.

Problem Statement

Saudi Ministry of Health has launched a new service called Mawared which helps to provide electronic services to the ministry's employees. Electronic applications are being developed at a rapid pace. But a thorough impact measurement is not routinely performed.

Research Questions

Q1. What are the services provided by Mawared application and its impact on employees?

Significance of the Study

This study will help healthcare managers understand employees' attitude to use of Mawared application and its impact on their performance. This study may also show which services should be available in the Mawared application.

II. Literature Review

Electronic Human Resource Management (E-HRM), is one of the newest topics in human resource management science that has been created aiming on optimizing procedures in order to run faster the human resources functions, reducing costs and freeing scientists from administrative constraints to implement the strategic role (Kariznoee, Afshani, & Moghadam, 2012). E-government or digital government are all terms referred to the use of information and communication technology in different forms among governmental organizations. Use of Information and Communication Technology (ICT) in government, popularly known as eGovernment, is on the rise with 19% of all government organizations worldwide offering online services (West, 2005). In recent years, E-Government has had a tremendous growth in last few years, there is a wide gap in the rate of growth among economically developed and developing countries (Chen, Chen, Huang, & Ching, 2006). These forms of communication can be organization to organization or within the same organization which means employee to employee (Naidu & Chand, 2018).

Governments worldwide recognize the importance of digital government in the management and delivery of public information and services at all level of government agencies in transformative and innovative ways (Fan, 2018). Internationally there is a growing body of research that explores the critical role of strategic Human Resource Management (HRM) in improving organizational outcomes with some evidence of a measurable and positive impact on organizational performance (Godard, 2004). In numerous countries around the world, E-Government penetration rate is quite low while e-government provision being high (Bhuiyan, 2010).

Senior citizens who are more likely to use government services in the developed countries are the ones who are least likely to be connected to e-government services (Dugdale, Daly, Papandrea, & Maley, 2005). Some the advantages of using e-government services are it reduces corruption, makes public service delivery faster, improves the accessibility (especially those living in remote areas) and transparency of public service delivery (Bailey & Ngwenyama, 2011; Bissessar, 2010). The human resources crisis in the health sector in low- and Middle-Income Countries (LMICs) is receiving increased global attention (Initiative, 2004). However, within a range of healthcare systems worldwide, attention is focused on Human Resource Management (HRM). Most of the studies on Electronic Human Resource Management (E-HRM) were undertaken in USA and Europe (Nivlouei, 2014).

Several definitions of Electronic Human Resource Management (E-HRM) exist in the academic literature. The two most cited definitions are provided by Strohmeier and Ruël and colleagues. Ruël, Bondarouk and Looise proposed an early popular definition in which Electronic Human Resource Management (E-HRM) was defined as a way of implementing Human Resource Management (HRM) strategies, policies and practices in organizations through the conscious and direct support of and the full use of channels based on web technology (Marler & Fisher, 2013). Ruël, Magalhaes, and Chiemeké (2011) claimed that the terms like Electronic Human Resource Management (E-HRM), web based Human Resource Management (HRM), and Information Technology (IT)-based HRM are considered as developments of human resource information system (HRIS). Notably, the rapid development of technology especially Internet not only leads to several impacts on human resource functions but also leads to the way people define the phenomenon. As stated by Stone and Dulebohn (2013), Human Resource Information System (HRIS) became known as Electronic Human Resource Management (E-HRM) because organizations enabled human resource transactions through the Internet. They also briefly described the evolution of Electronic Human Resource Management (E-HRM) in their article (Ibrahim & Yusoff, 2013). Generally, Electronic Human Resource Management (E-HRM) is the (planning, implementation and) application of information technology for both networking and supporting at least two individual or collective actors in their shared performance of Human Resource (HR) activities.

This concept highlights several crucial aspects of Electronic Human Resource Management (E-HRM) (Strohmeier, 2007). Electronic Human Resource Management (E-HRM) is mediated by information technologies to help the organizations to acquire, develop, and deploy the intellectual capital. Electronic Human Resource Management (E-HRM) is a good way of implementing Human Resource (HR) strategies, policies, and practices in organizations through a continuous and direct support by full use of web-based-technology channels and networks (Swaroop, 2012). Generally, recent attempts have been made to find a definition of Electronic Human Resource Management (E-HRM), as a conceptual umbrella to the complete approach for "doing HRM". This definition has traditionally touched upon the implementation and structuring process of technology driven Human Resource (HR) transformations and the consequence of these organizing activities in creating Human Resource (HR) network structures throughout the organization (Strohmeier, 2007).

Finally, The Electronic Human Resource Management (E-HRM) is a way to implement HR strategy, policies and practices in organizations by intentionally supporting and/or using web-based channels fully and directly. It encompasses all aspects of management of human resources, such as personal management, training, career development, business organization, job descriptions, recruitments, employee personal pages and annual employee interviews (Swaroop, 2012).

III. Methodology

Study Design

This study is designed as a Descriptive study, aiming to measure the impact of the Mawared Application on Primary Care Professionals. Conducted in primary care centers in north of Riyadh city, November 2019. The study design was cross-sectional

Study Population

The study target's population is all employees in (12) primary health care centers in north of Riyadh city including clinician and administrators.

Alfalah PHC, Almasif PHC, Alworod PHC, Alsahafa PHC, King Fahad PHC, Alnarjes PHC, Alrahmania PHC, Alwadi PHC, Alnozha PHC, Alezdihar PHC
Alrabea PHC, Almalga PHC

Sampling size

Convenience sample, distributing the questionnaires where the researchers Mobile and email survey through link to the Primary health center staff and data were collected from the date 14-11-2019 to the date 10-12-2019.

Study instruments:

Questionnaire:

A questionnaire consisting of three parts was designed. The first part Demographics data includes age - gender - job - education. The second part was available services in Mawared program was designed on (Likert scale). The final part was the importance of procedures provided by the Mawared program designed on (Likert scale).

Data collection

The questionnaire was distributed electronically by the researchers. Then all data was collected for analyzing through the SPSS (version 23.0)

Data Analysis

The SPSS was used (version 23.0) database and analyzed. Statistical analyses included means and standard deviations (SD) for continuous data as well as frequencies for categorical data.

IV. Result

Part 1 : Demographic characteristics of the sample:

Table (1): Frequency distribution of Age

Table 1

Age	Frequency	Percent
Less than 25 Years	56	12.8%
From 26-35 Years	166	37.8%
From 36-45 Years	163	37.1%
above 45 Years	54	12.3%
Total	439	100.0%

Figure 1

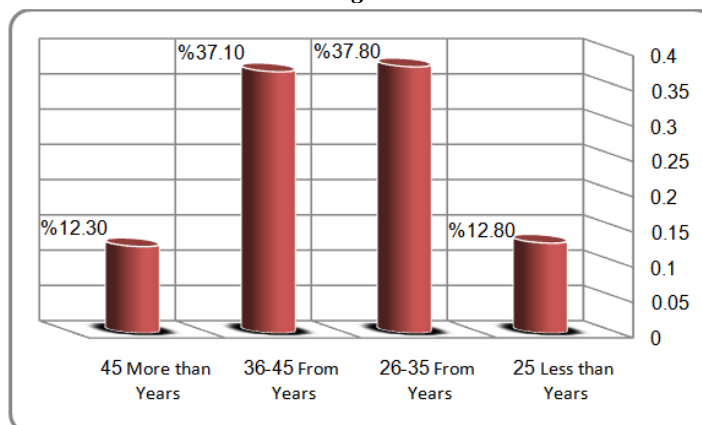


Table (2): Frequency distribution of Gender

Gender	Frequency	Percent
Male	252	57.4%
Female	187	42.6%
Total	439	100.0%

Figure 2

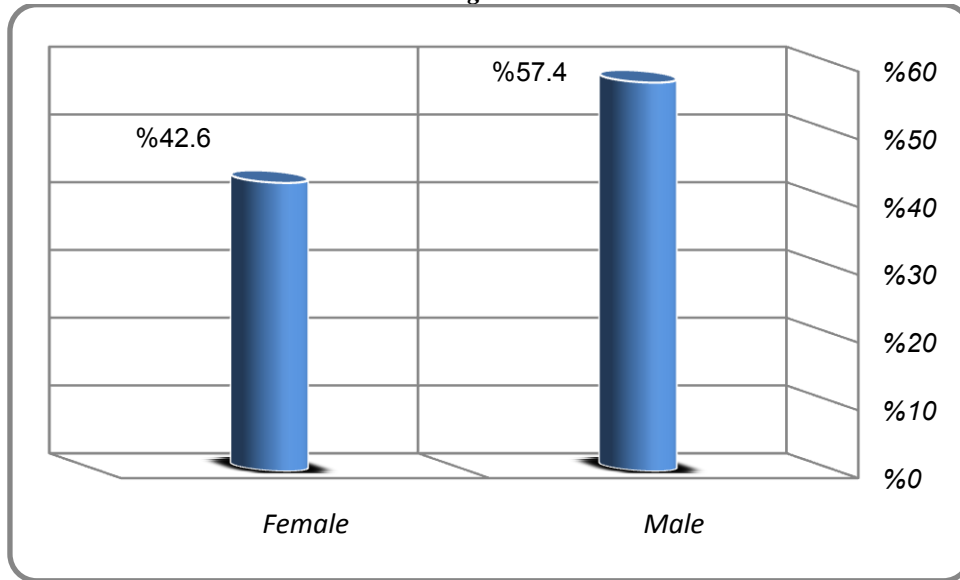


Table (3): Frequency distribution of job

job	Frequency	Percent
Doctor	80	18.2%
Administrative	145	33.0%
nursing	214	48.7%
Total	439	100.0%

Figure 3

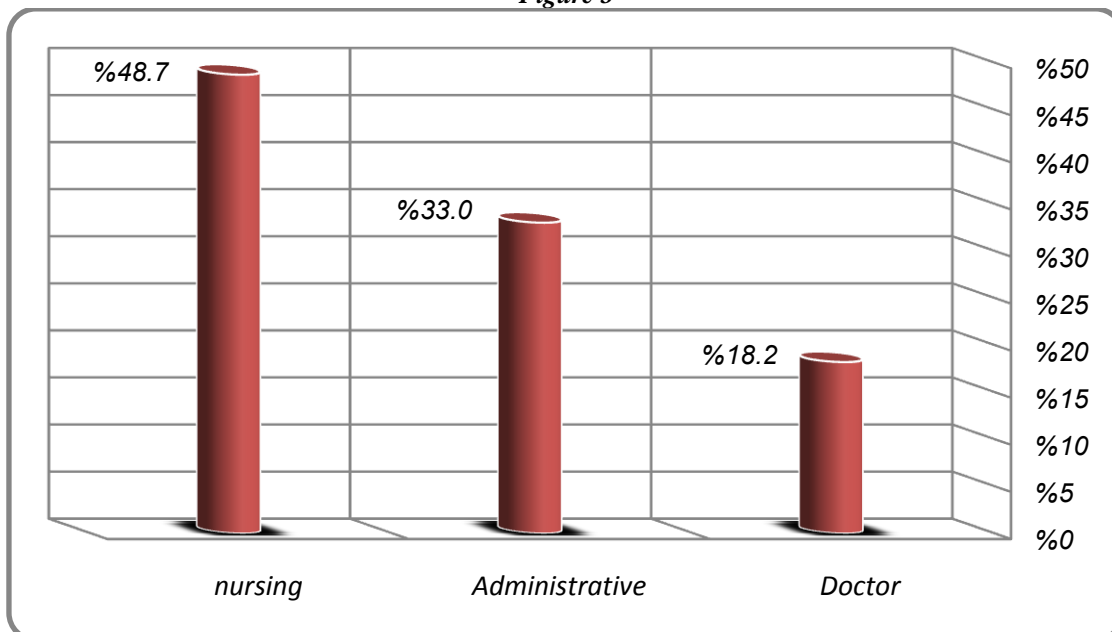


Table (4): Frequency distribution of job Contract

job Contract	Frequency	Percent
MOH	423	96.4%
HOP	16	3.6%
Total	439	100.0%

Figure 4

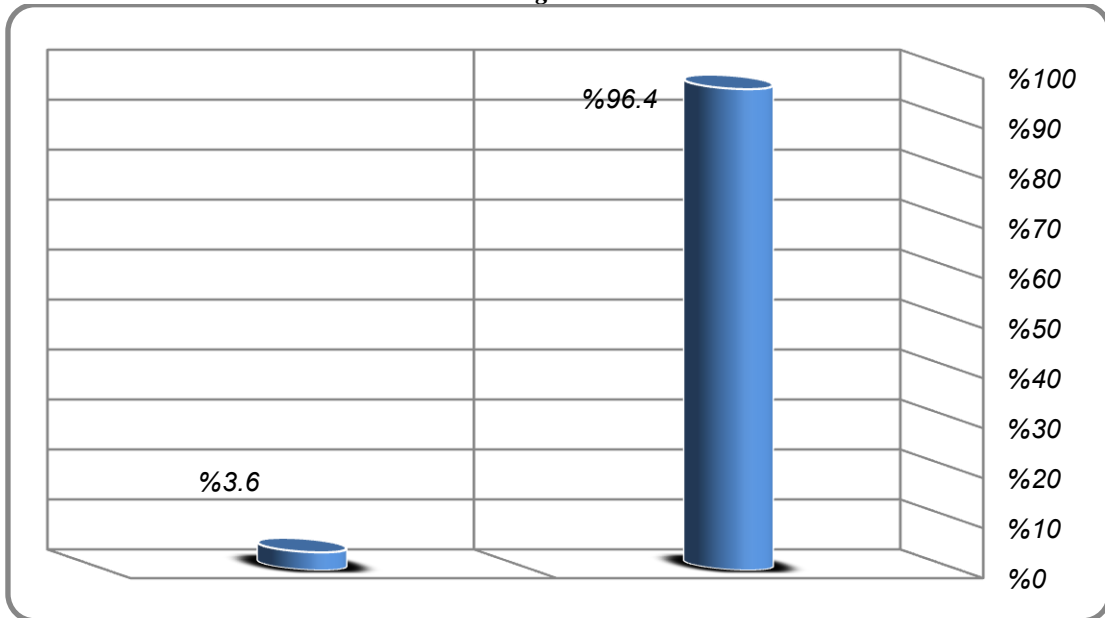


Table (5): Frequency distribution of Education Level

Education Level	Frequency	Percent
Less than high school	22	5.0%
High school	25	5.7%
diploma	175	39.9%
Bachelor's degree	203	46.2%
Postgraduate	14	3.2%
Total	439	100.0%

Figure 5

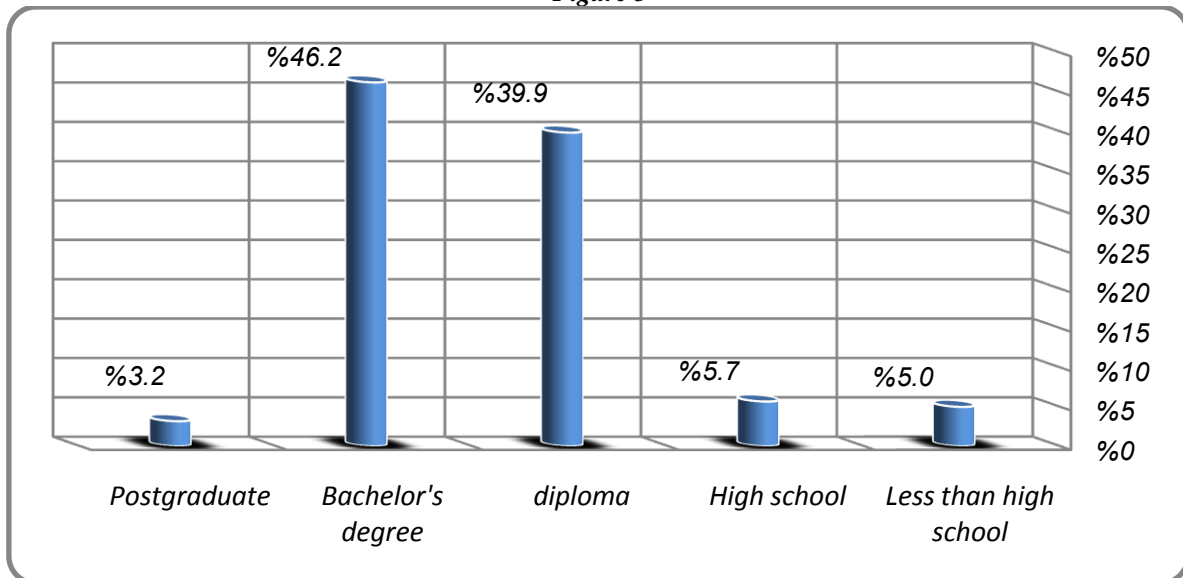


Table (6): Frequency distribution of what type of system does it use in your computer? .

Table 6

what type of system does it use in your computer?	Frequency	Percent
<i>IOS Apple Drive</i>	233	53.1%
<i>Android</i>	141	32.1%
<i>Windows</i>	65	14.8%
Total	439	100.0%

Figure 6

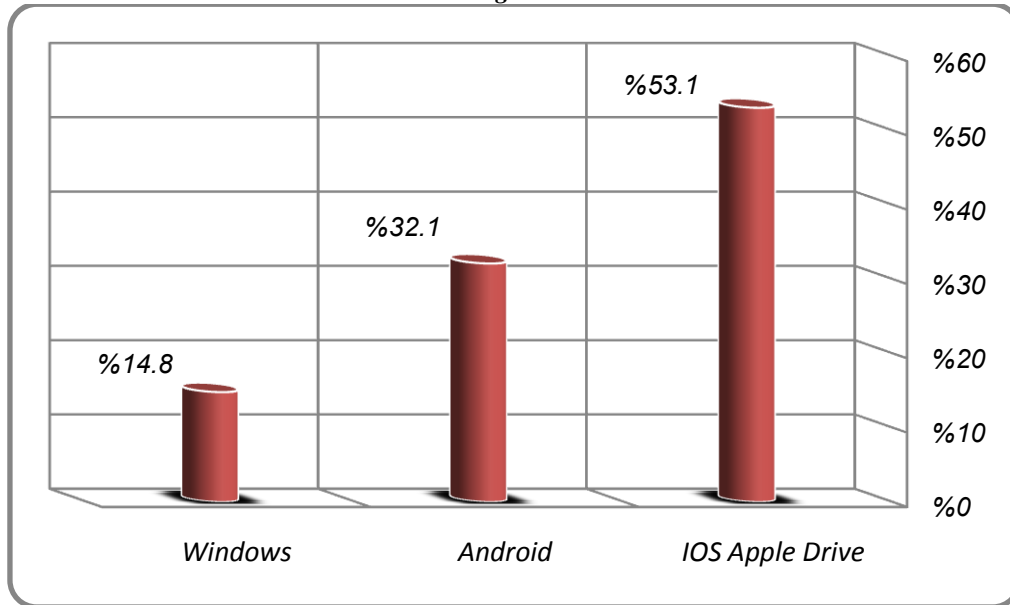


Table (7) How did you know about a program?

Table 7

How did you know about a program?	Frequency	Percent
<i>Recommendations of colleagues within health facilities</i>	168	38.3%
<i>Signs inside health facilities</i>	81	18.5%
<i>Internal communication system for ministry employees</i>	128	29.2%
<i>Your direct manager</i>	62	14.1%
Total	439	100.0%

Figure 7

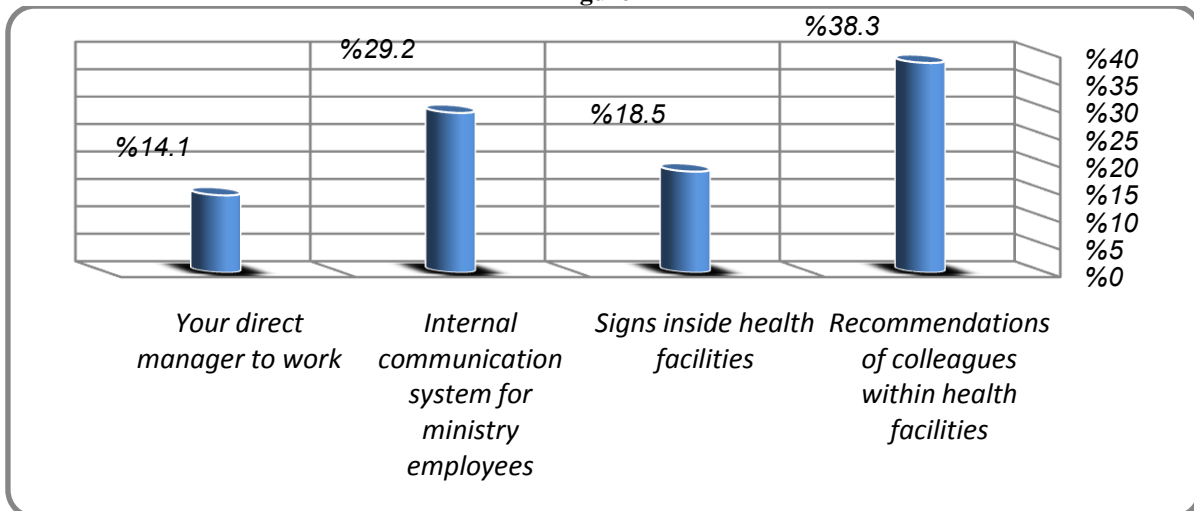


Table (8) Information is sufficiently available to the employee

Table 8

Information is sufficiently available to the employee	Frequency	Percent
Strongly Disagree	4	0.9%
Disagree	24	5.5%
Neutral	17	3.9%
Agree	204	46.5%
Strongly Agree	190	43.3%
Total	439	100.0%
Mean ± SD	4.257 ± 0.841	

Figure 8

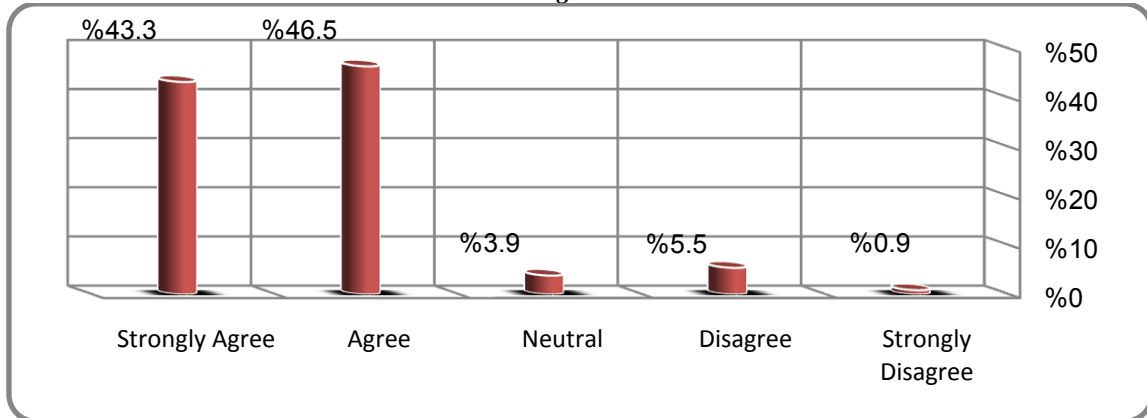


Table (9): There is a user guide to explain how to use it

Table 9

There is a user guide to explain how to use it	Frequency	Percent
Strongly Disagree	4	0.9%
Disagree	140	31.9%
Neutral	35	8.0%
Agree	134	30.5%
Strongly Agree	126	28.7%
Total	439	100.0%
Mean ± SD	3.542 ± 1.232	

Figure 9

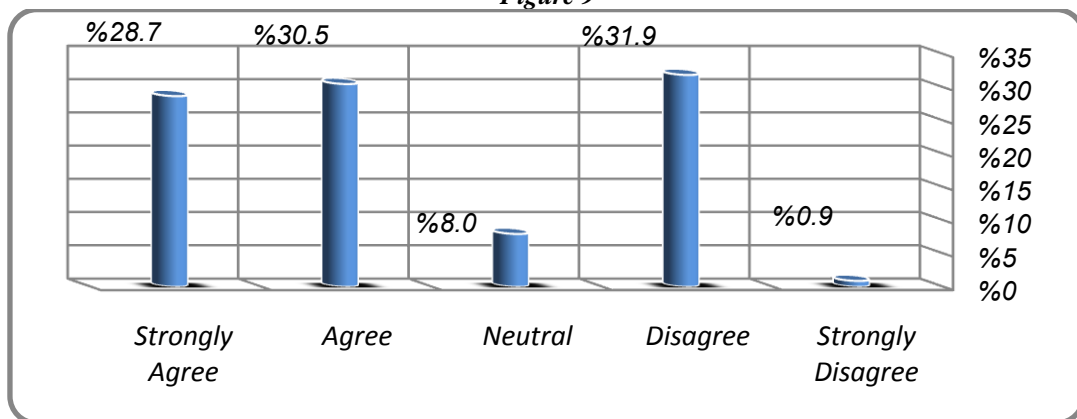


Table (10): The response of the program is high

Table 10

The response of the program is high	Frequency	Percent
Strongly Disagree	6	1.4%
Disagree	138	31.4%
Neutral	57	13.0%
Agree	115	26.2%

Strongly Agree	123	28.0%
Total	439	100.0%
Mean ± SD	3.481 ± 1.235	

Figure 10

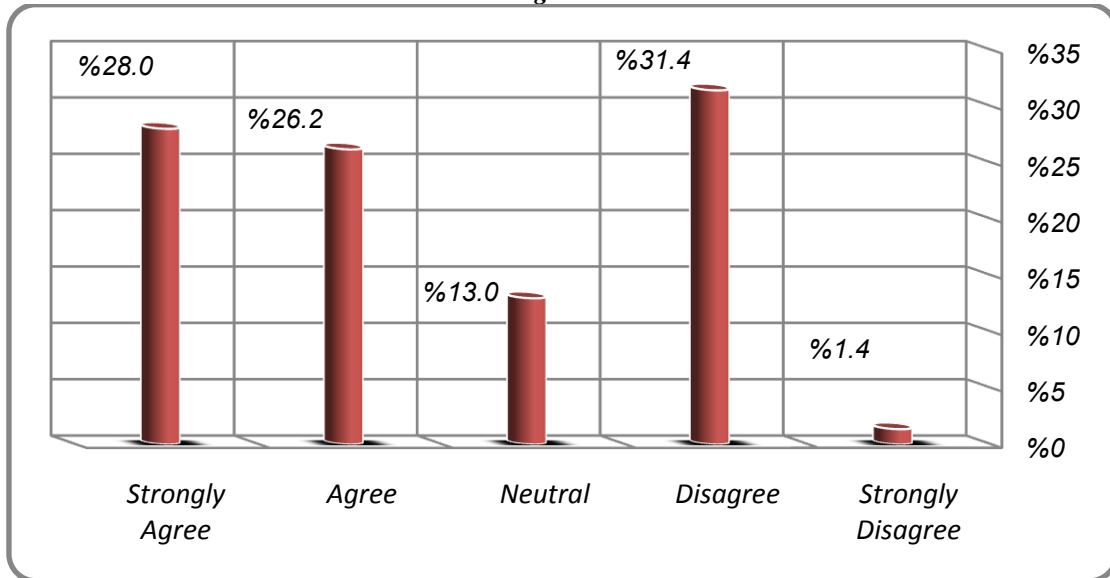


Table (11): Easy access to the services provided

Table 11

Easy access to the services provided	Frequency	Percent
Strongly Disagree	8	1.8%
Disagree	144	32.8%
Neutral	43	9.8%
Agree	112	25.5%
Strongly Agree	132	30.1%
Total	439	100.0%
Mean ± SD	3.492 ± 1.273	

Figure 11

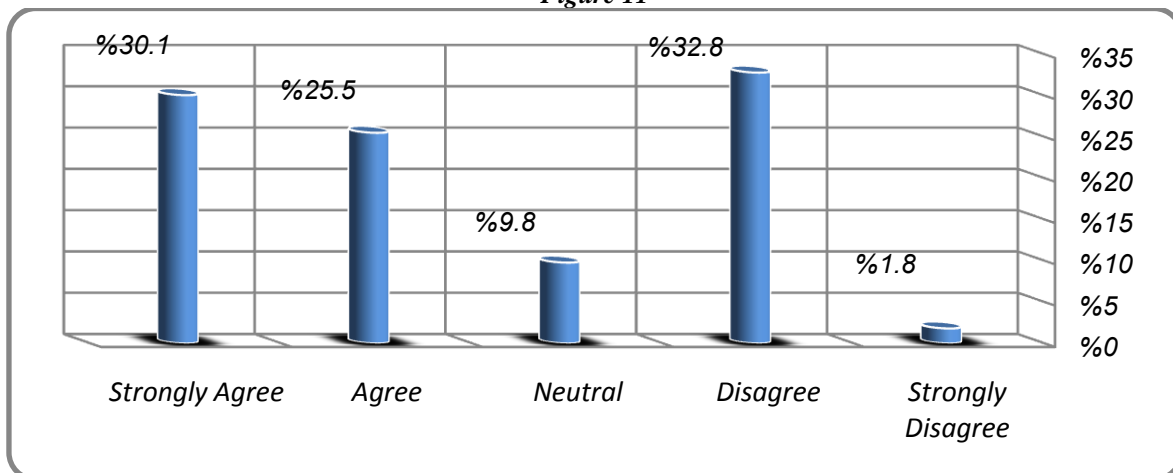


Table (12): The services provided meet my needs

Table 12

The services provided meet my needs	Frequency	Percent
Strongly Disagree	118	26.9%
Disagree	34	7.7%
Neutral	31	7.1%
Agree	129	29.4%
Strongly Agree	127	28.9%
Total	439	100.0%
Mean ± SD	4.257 ± 1.595	

Figure 12

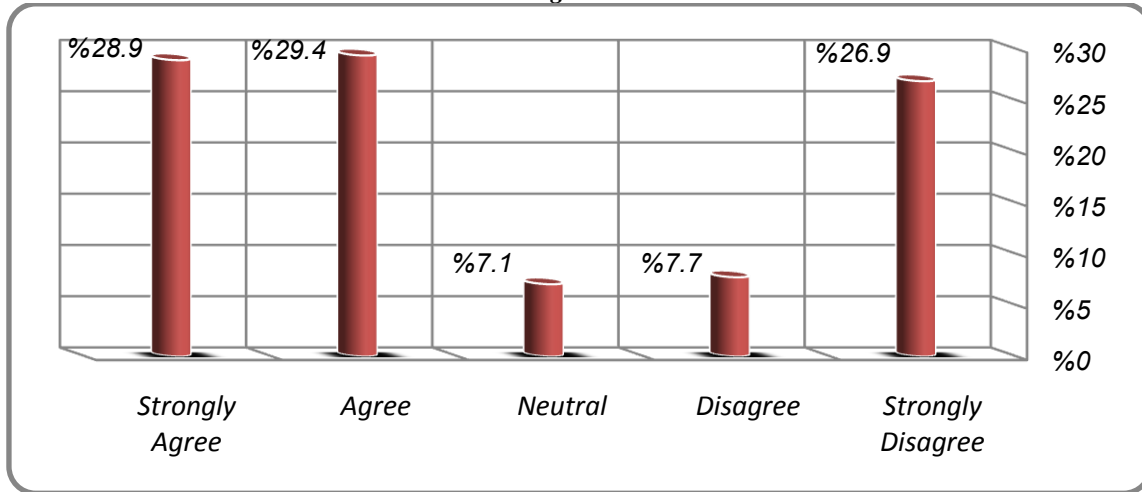


Table (13): Using the electronic program is better than dealing with paper

Table 13

Using the electronic program is better than dealing with paper	Frequency	Percent
Strongly Disagree	5	1.1%
Disagree	29	6.6%
Neutral	36	8.2%
Agree	220	50.1%
Strongly Agree	149	33.9%
Total	439	100.0%
Mean ± SD	4.091 ± 0.884	

Figure 13

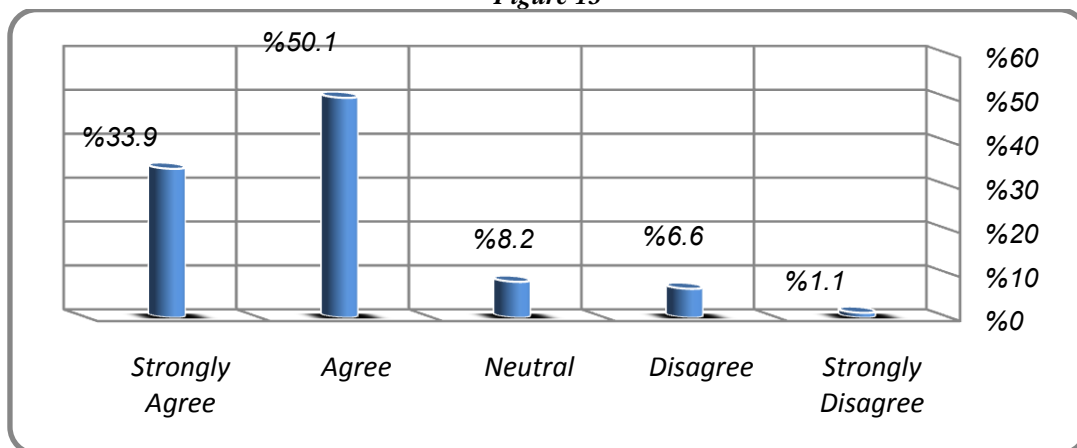


Table (14) previous vacations

previous vacations	Frequency	Percent
Not important at all	1	0.2%
not important	8	1.8%
I do not know	15	3.4%
important	150	34.2%
very important	265	60.4%
Total	439	100.0%
Mean ± SD	4.526 ± 0.675	

Figure 14

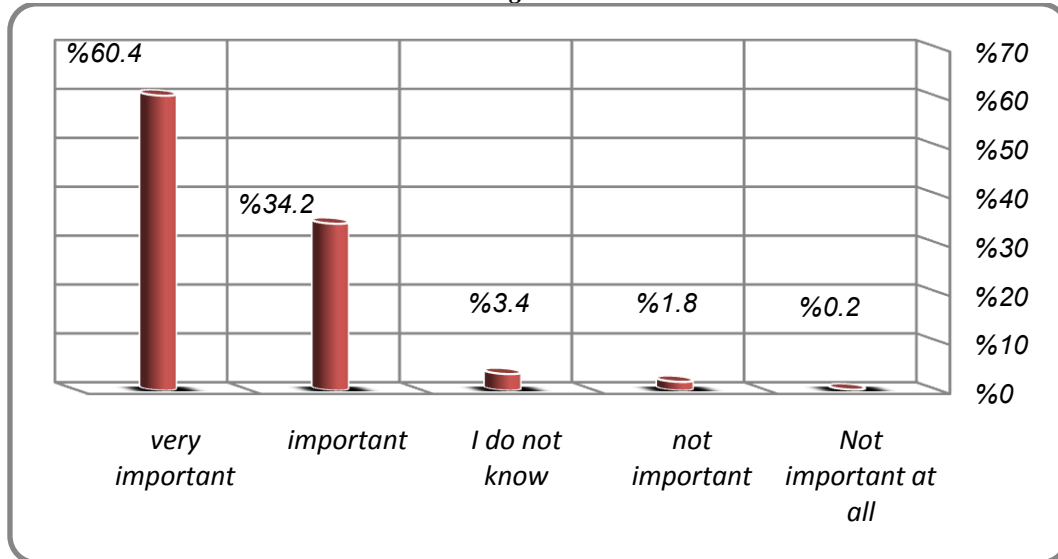


Table (15): Total vacation days available

Total vacation days available	Frequency	Percent
Not important at all	0	0.0%
not important	8	1.8%
I do not know	32	7.3%
important	163	37.1%
very important	236	53.8%
Total	439	100.0%
Mean ± SD	4.428 ± 0.708	

Figure 15

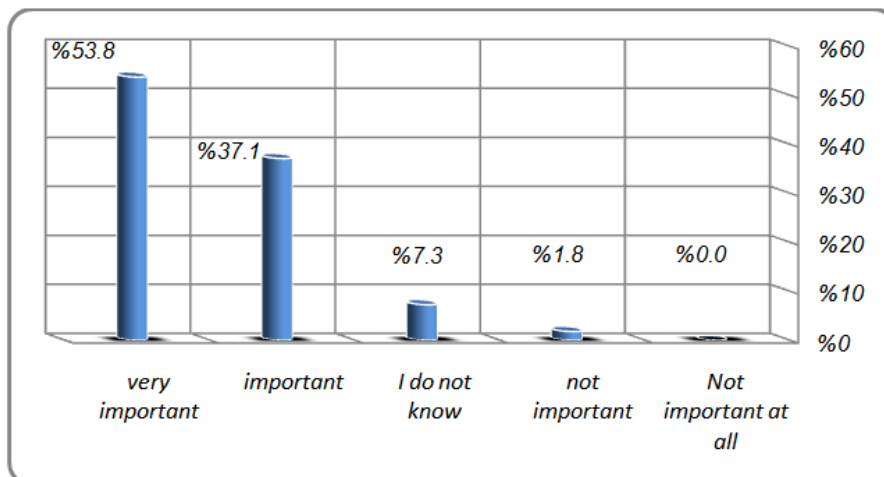


Table (16): Submit a vacation request

Submit a vacation request	Frequency	Percent
Not important at all	2	0.5%
not important	8	1.8%
I do not know	40	9.1%
important	142	32.3%
very important	247	56.3%
Total	439	100.0%
Mean ± SD	4.421 ± 0.769	

Figure 16

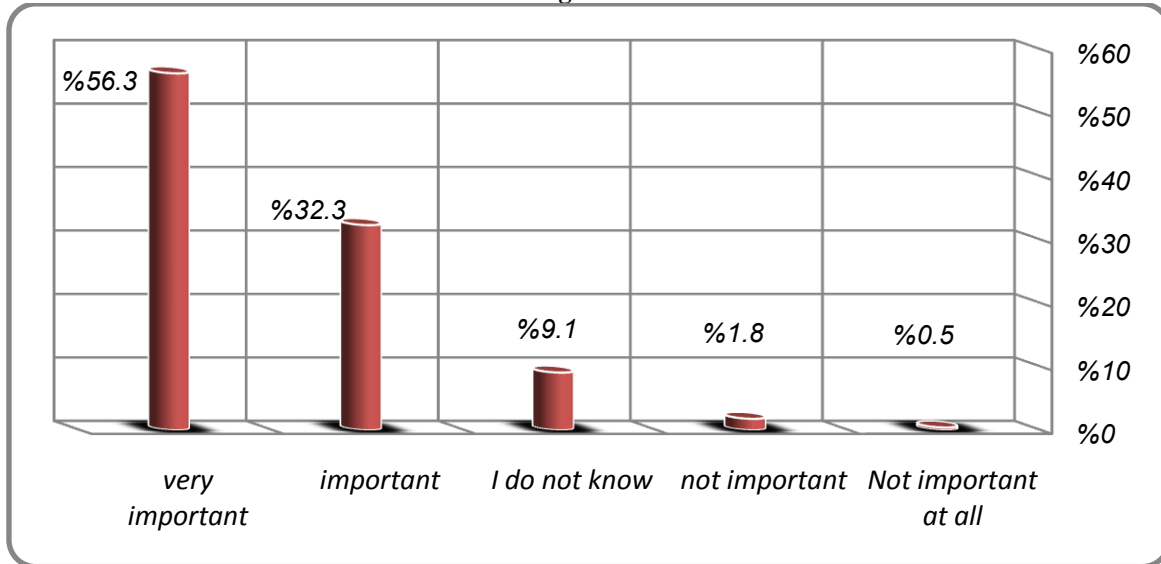


Table (17): request for retirement

request for retirement	Frequency	Percent
Not important at all	2	0.5%
not important	11	2.5%
I do not know	30	6.8%
important	144	32.8%
very important	252	57.4%
Total	439	100.0%
Mean ± SD	4.442 ± 0.768	

Figure 17

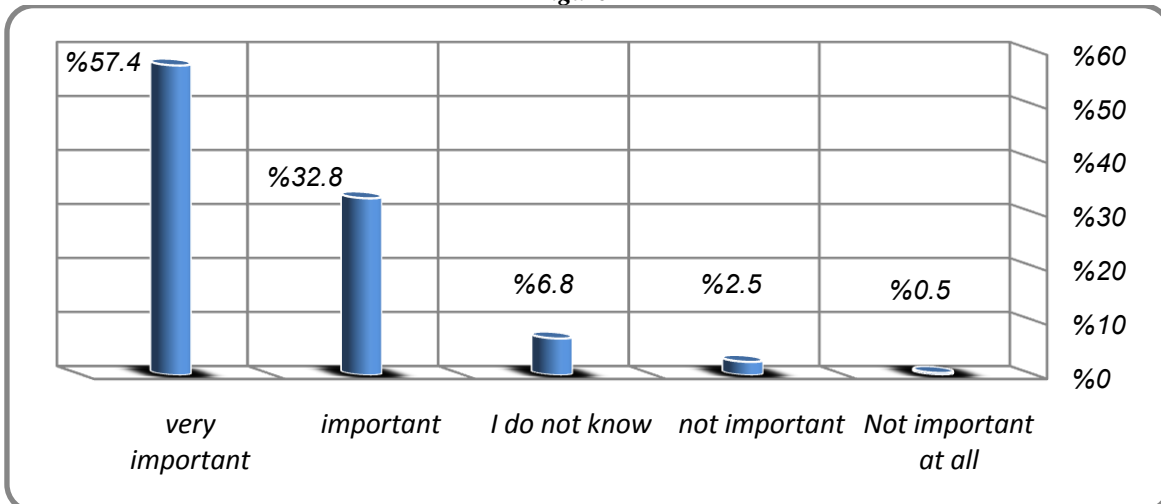


Table (18): Submit a request to start work after the vacation

Table 18

Submit a request to start work after the vacation	Frequency	Percent
Not important at all	0	0.0%
not important	8	1.8%
I do not know	36	8.2%
important	122	27.8%
very important	273	62.2%
Total	439	100.0%
Mean ± SD	4.503 ± 0.724	

Figure 18

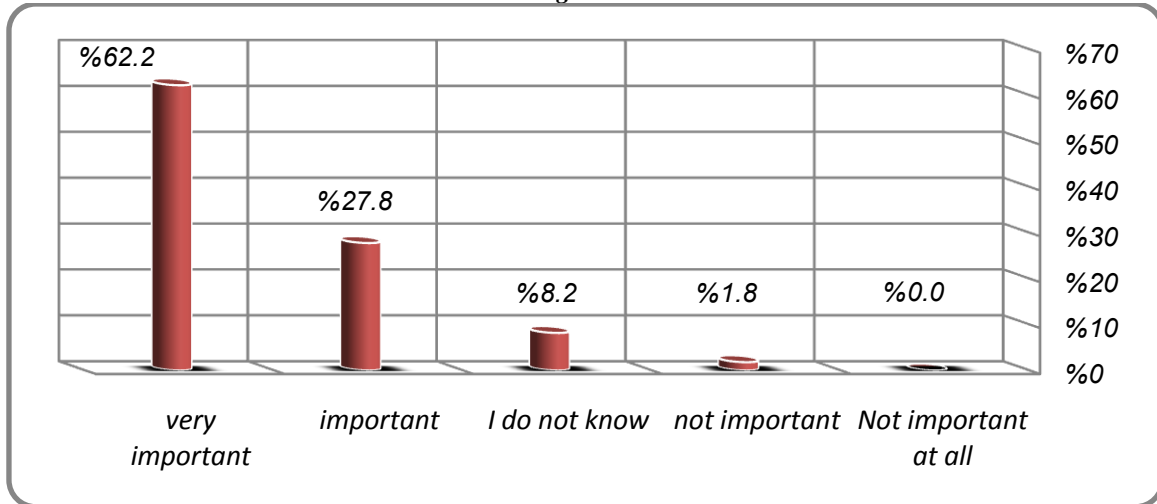


Table (19): Previous salary and current salary

Table 19

Previous salary and current salary	Frequency	Percent
Not important at all	0	0.0%
not important	8	1.8%
I do not know	40	9.1%
important	151	34.4%
very important	240	54.7%
Total	439	100.0%
Mean ± SD	4.419 ± 0.732	

Figure 19

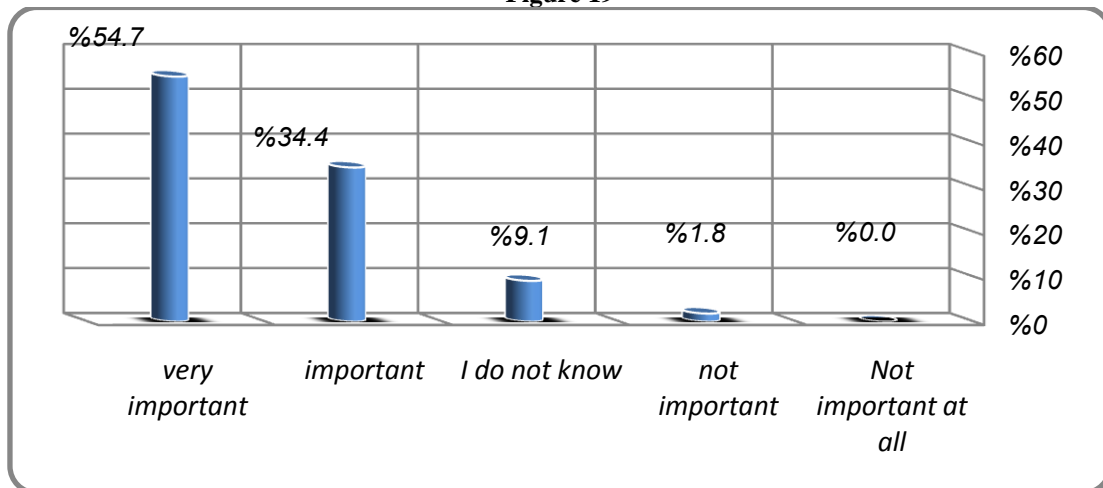


Table (20): amounts of the overtime

Table 20

amount of overtime	Frequency	Percent
Not important at all	0	0.0%
not important	14	3.2%
I do not know	37	8.4%
important	128	29.2%
very important	260	59.2%
Total	439	100.0%
Mean ± SD	4.444	± 0.780

Figure 20

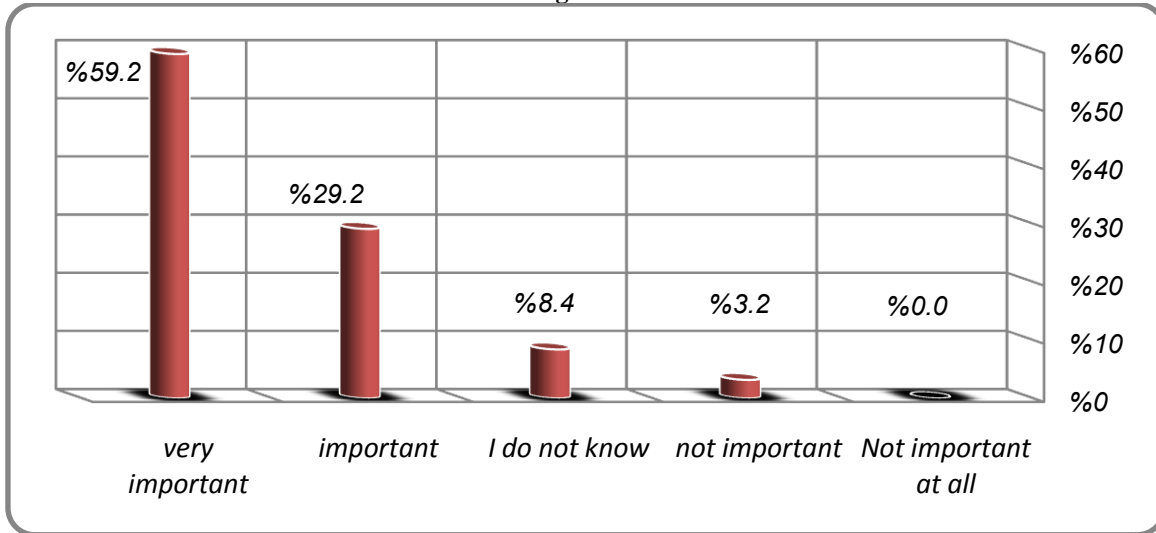


Table (21): Requesting the transfer without attend

Table 21

Requesting the transfer without attend	Frequency	Percent
Not important at all	1	0.2%
not important	13	3.0%
I do not know	34	7.7%
important	145	33.0%
very important	246	56.0%
Total	439	100.0%
Mean ± SD	4.417	± 0.777

Figure 21

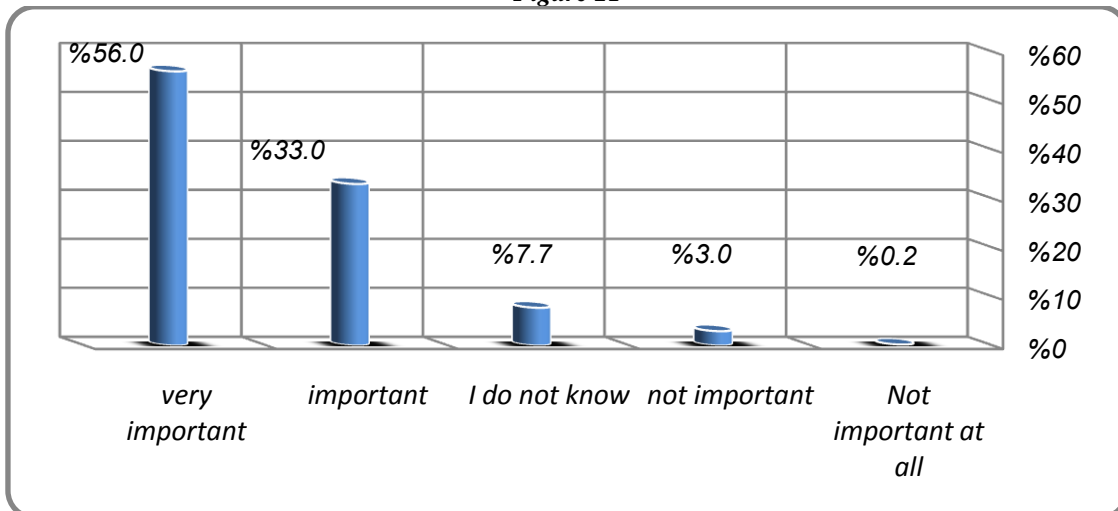


Table (22): The annual allowance

The annual allowance	Frequency	Percent
Not important at all	2	0.5%
not important	10	2.3%
I do not know	36	8.2%
important	126	28.7%
very important	265	60.4%
Total	439	100.0%
Mean ± SD	4.462 ± 0.778	

Figure 22

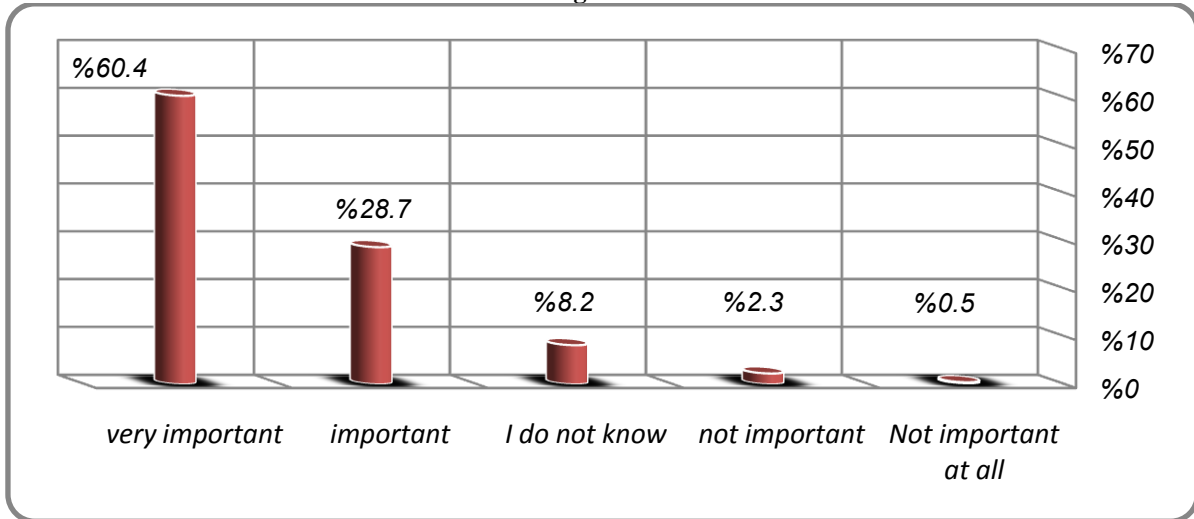


Table (23): employee requests for the promotion

employee requests for the promotion	Frequency	Percent
Not important at all	0	0.0%
not important	8	1.8%
I do not know	38	8.7%
important	139	31.7%
very important	254	57.9%
Total	439	100.0%
Mean ± SD	4.456 ± 0.729	

Figure 23

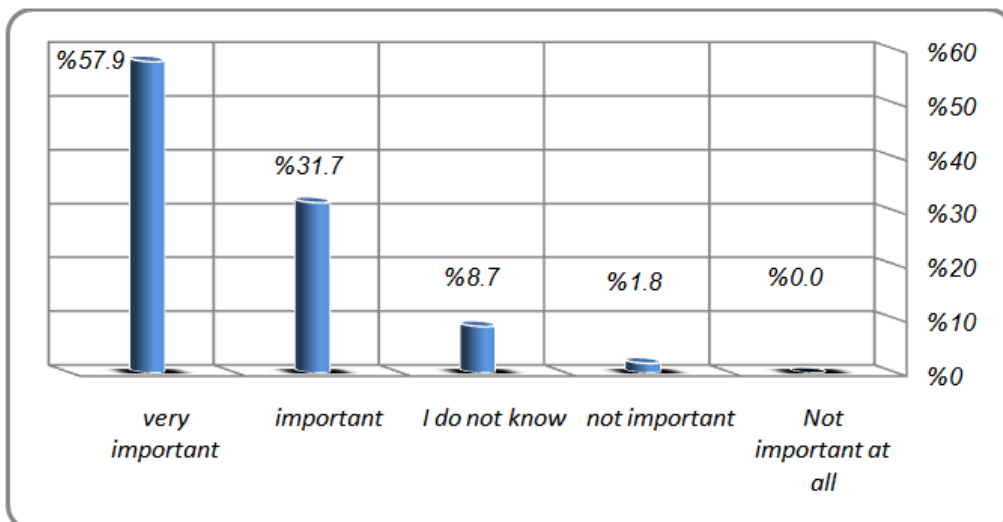


Table (24): employee requests for commissioning

Table 24

employee requests for commissioning	Frequency	Percent
Not important at all	2	0.5%
not important	10	2.3%
I do not know	37	8.4%
important	122	27.8%
very important	268	61.0%
Total	439	100.0%
Mean ± SD	4.467 ± 0.781	

Figure 24

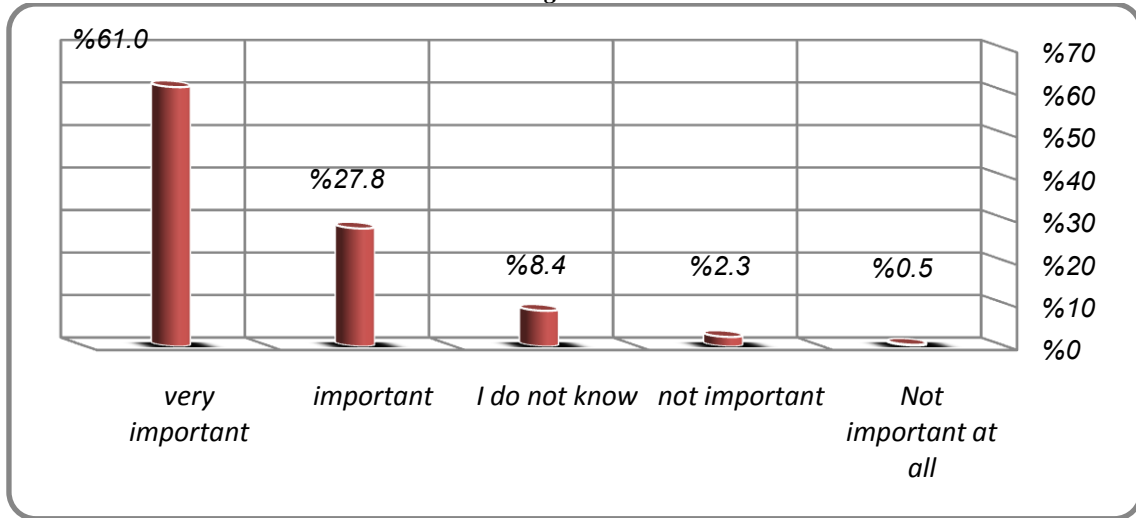


Table (25): Informing the employee of the annual job performance evaluation

Table 25

Informing the employee of the annual job performance evaluation	Frequency	Percent
Not important at all	2	0.5%
not important	7	1.6%
I do not know	38	8.7%
important	139	31.7%
very important	253	57.6%
Total	439	100.0%
Mean ± SD	4.444 ± 0.756	

Figure 25

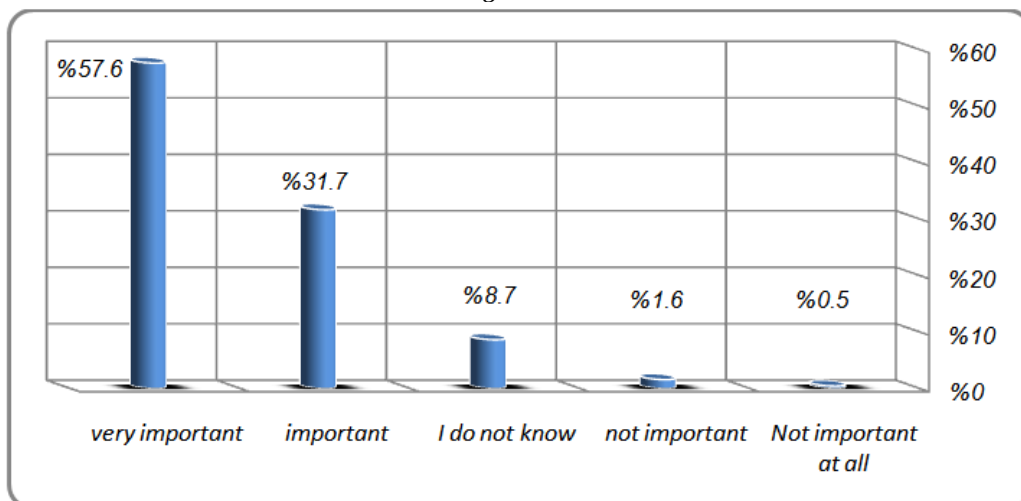
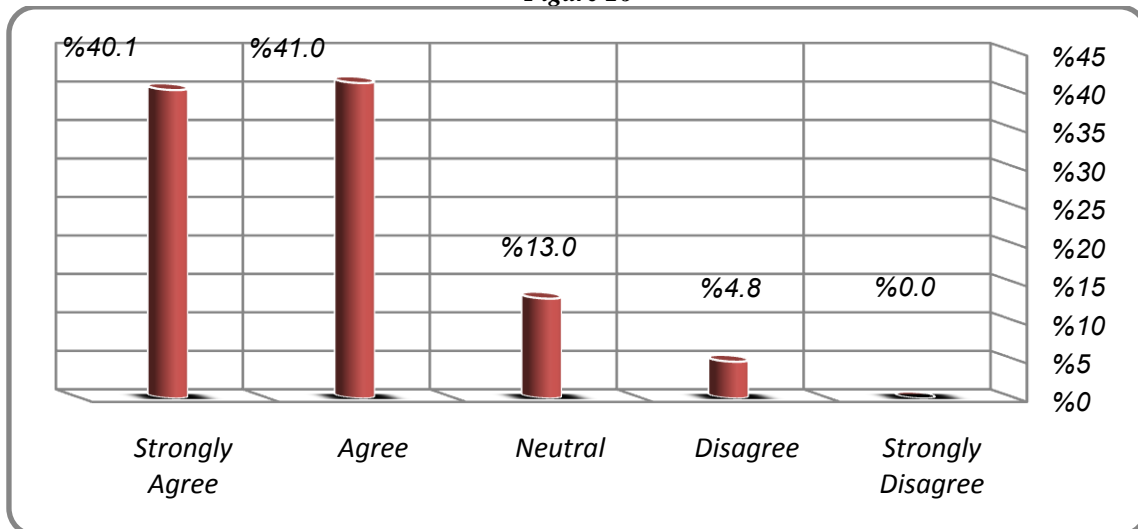


Table (26) Maward system generally meets all my needs

Maward system generally meets all my needs	Frequency	Percent
Strongly Disagree	0	0.0%
Disagree	21	4.8%
Neutral	57	13.0%
Agree	180	41.0%
Strongly Agree	176	40.1%
Total	439	100.0%
Mean ± SD	4.141 ± 0.898	

Figure 26



V. Discussion

The results indicates to the most of the respondents were aged between 26-35 years, And more than half of the sample was female also the majority of the sample was nursing and the type of job contract is MOH , about half of the respondents bachelorholder , and also the half of the sample use IOS .

The results of this study indicate that most respondents agree on the adequacy of information about mawared, and that the services provided through mawared meet all needs, and the results also show that most respondents agree to use the electronic program better than paper handling, as respondents disagree about the availability of a user guide for the program .The results also showed the speed of the program's response, as well as the ease of access to the services provided through it.

In the third part of the questionnaire, the results of the participants clarified the importance of providing an employee notification service about previous vacation , as well as the importance of providing the vacation service, as well as the result of the importance of providing an overtime service, and the results also indicate the importance of informing the employee of the annual performance evaluation through the program.

VI. Recommendation

1. The need to pay attention to information technology and use it as a possible strategic basis and work to reduce the costs of health institutions and accelerate the provision of services and provide them in the best and easiest way
2. the need to work on the dissemination of technical culture among doctors, managers and staff.
3. The need to support medical and administrative staff and provide financial and moral incentives to encourage them to use the technology.

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