Author's details are given below the reference section

Mawid service (my health) and its impact on the health service provided to the residents of Mecca in light of the COVID-19 pandemic

Waleed S Alsaeedi, Mansour A Almasoudi, Fahad A Almsoudi, Khalid M Allihyani, Majed A Almasoudi, Majed M Alsuwayhery, Bassem M Alsoubhi, Jubaeer K Alhudale, Obaidullah O Almutairi, Musa F Aljehani, Omar S Alharbi, Salman S Alharbi, Obidallah M Altomiah, Abdullatif F Algethami, Sultan K Alzewehry, Abdullah M Qeys, Mohamed A Albuthe, Bejad H Alotibi, Ibraheem M Mardoum, Faisal A Hanif, Badr A Alkabkaby, Hisham E Alymani, Rahab M Alfaqeh, Fawaz S Almehmadi, Hashim A Saeed, Wajdi F Organji, Fazi M Almajnuni, Majed S Alhazmi, Ahmed, Majed S Alharthi, Hani S Alqarihi, Majed N Mia, Ahmed A Alqurashi, Atif S Alsuwayhery, Fawaz O Almutairi, Atef Mohammed Raffa, Aied A Almalky and Saeed S Alhashmi

Abstract
This research aims to determine the quality of health services provided by the application of Mawid, and its impact on improving the quality of health service on the population in the city of Mecca, as well as the extent of their satisfaction with it, and to identify any difficulties or obstacles as a result of using this application. The study was conducted online where the researchers did the work.
The researcher and his colleagues distributed an electronic questionnaire via telephone, online contacts, and social networks. over 1000 respondents (random sample) aged 16 years and over 65 from different backgrounds and neighborhoods were contacted within Mecca, and 400 answers were obtained due to difficulties conducting personal interviews during social distance regulations.

Keywords: Mawid services, Covid-19 pandemic

1. Introduction

By 2018, the ministry of health launched a national central health care appointment gateway through a mobile app and web-based implementation called (Mawid), which interpret appointment [14]. MAWID is an electronic service that enables the beneficiary to record his appointments in primary health care centers and manage these appointments by amendment or canceling them, as well as managing his other appointments in any hospital he is referred to through an electronic

application on smartphones. Application services: The (Mawid) application provides the beneficiary with a number of services, including, for example:

1. determining the nearest health center to the beneficiary.
2. Selecting the health center of the beneficiary as the center for providing health services.
3. Reserving the appointment at the health center according to the appropriate time for the beneficiary.
4. Add all the beneficiaries of the beneficiary to the same center, and the ability to book appointments for them. 5-Find out the location of the health center on Google Maps.
5. Possibility to book appointments at: 1-Family medicine. 2- Well Baby Clinic. 3-vaccinations.
6. Follow up pregnancy.
7. chronic diseases. All other services, according to the advisory services provided by the health center, which are reserved by the center in case the beneficiary needs to be transferred to them, such as: 1-laboratory. 2- X-rays. 3-Anti-smoking clinics, primary psychological care, social service, (reassurance), premarital examination, early detection of breast cancer, remote social counseling, and other clinics. 4-Referral to the hospital, and book an appointment via the application.

Corresponding Author:
Waleed S Alsaeedi
Ministry of Health, Makkah, Saudi Arabia

The (Mawid) application provides the feature of canceling and postponing the referral's appointment at the referring hospital. The application allows you to know the number of appointments available in all health centers, and the number of actual visitors to health centers; This makes it easier for the higher authorities to obtain a comprehensive dashboard that helps in strategic planning and improvement projects [9]. Soon after, in August 2019, Sehhaty (my health app) was launched in the pursuit of a wide range of health promotional campaigns that target healthy lifestyles, using gamification and community-wide challenges [4], However, both apps were updated to respond to the Covid-19 pandemic by introducing a symptom checker to enable people who suspect they have

COVID-19 to directly book appointments at dedicated COVID-19 clinics [11] and drive-through mass testing locations around the kingdom [8]. On February 5, 2022, the Saudi Ministry of Health announced the integration of each of the applications: Health, Reassurance, and Appointment within the Sehaty application under the slogan "All health is in my health" in order to facilitate access to health services without the need to download all three [10].

There are many studies that mentioned the importance of these electronic applications, including (My Appointment or My Health) to help people improve the quality of their healthy lives, especially in light of the Corona pandemic, and they have not been completely completed yet [2, 6, 1].

2. Material and Methods
The research was conducted in the city of Mecca in Saudi Arabia from January 2022 to April 2022. Researcher Use descriptive analytical method which uses quantitative description or qualitative of the phenomenon of social, such as (Mawid app) and the extent of its effectiveness, which is considered very important in the humanitarian and social areas and is characterized by this kind of study on analysis and reason, objectivity and associated with reality, where cares by individuals and agencies and Institutions, governments, countries and described the past, as is the description qualitative which describes the phenomenon (Mawid app) described the effects of its absence and the means used and the extent of their impact on the lives of the individual and society and analysis are instrumental variables in the growth and creation, as for quantitative expression it gives us a description digitally shows how much the phenomenon It will be the study of the variables, the health of the individual, the community, the consumer, and the spread of diseases and their relation to demographic variables such as age, gender, nationality, marital status, profession, and how they influence of these factors on (Mawid app) and its effectiveness [3]. issue No. 15, to perform statistical analysis such as determining the averages and statistics descriptive been used contrast between the averages analysis and use Excel program Office Group 2010 graphics histogram to arrange results by dragging them on the statistical program [5].

3. Results and Discussion
The questionnaire is a convenient and essential tool to collect data. However, researchers cannot conduct personal interviews with Participants' answers to the online questionnaire, because of the social distancing regulations at that time conduction study to prevent infection between participants and researchers and vice versa. It is also it was enough to answer the questionnaire electronically only as the questionnaire consists of thirteen questions,11 questions are open and two questions are closed. The online approach has also been, used to generate valid samples in similar studies in Saudi Arabia others and other [8].

Regarding the first question, the application is easy to use, download and set up, 75.3% responded that they agree and 10.6% that they strongly agree, while 9.9% said I don't know, 3.2% disagree and 1% strongly disagree. As for the second question, which was about the application contributes to easily book an appointment in the primary health care center, 69.8% answered in agreement, 14.9% strongly agreed, while 5.5% said I do not know, 6.5% disagree, and 3.3% disagreed strongly. The third question, the application contributes to booking an appointment and managing appointments for dependents (family members) with ease in the primary health care center. 70.6% answered agree, 13.4% strongly agree, while 5.5% said I don't know, 8% disagree, and 2.5% strongly disagree. Regarding the fourth question, the application contributes to giving an alert if an earlier appointment is easily available. 56.3% answered agree, and 11.4% strongly agree. while 23.2% said I don't know,8% disagree, and 1.1% strongly disagree, In the fifth question, the application was contributing to giving an appointment to the clinics easily, 60.5% answered agree, 13.4% strongly disagree, 10.7% said I don't know, 12.3 disagree, and 3.1% strongly disagree, As for the sixth question, the application contributes to giving an appointment for vaccinations easily, 56.5% answered agree, 13.7% strongly disagree, 17.9% said I don't know, 8.4% disagree, 3.5% strongly disagree. In the seventh question, the application helps in adding a follower (family members) in primary health care centers, 64.9% answered agree, while those who strongly agree, and those who said I don't know are equal with 15.3%, and 4.4% disagree, and 0.1% strongly disagree. As for the eighth question, the application contributes to providing you with information about the dependents and clinics reviewed, 62.7% answered agree, while 13.3% strongly agree, 18.3% said I don't know, 4.7% disagree, and 1% strongly disagree. In the ninth question, the application contributes to giving you or providing you with information about health facilities that have a reassuring clinic, 63.9% answered agree, while 12.9% strongly agree, 18.3% said I don't know, 4.8% disagree, and 0.1% strongly disagree. Regarding the tenth question, the application contributes to conducting a self-assessment and booking an appointment for a corona examination, 65.3% answered agree, while 11.1% strongly agreed, 19.8% said I don't know, 3.6% disagree, and 0.2% strongly disagree. In the eleventh question, through the mental health questionnaire, the application contributes to providing you with advice or correct guidance through the examination of understanding and the examination of depression, 45.6% answered agree, while 9.7% strongly agree, 39.8% said I don't know, 3% disagree, and 1.9% Strongly disagree. The twelfth question, did you encounter any problem while using the application? If the answer is, yes? mention it? 74.9% answered yes, while 25.1% answered no. The thirteenth question, do you have suggestions regarding the application? If the answer is, yes? mention it? 15% answered yes, while 85% answered no.

Table 1: The extent of people's satisfaction with the application of the service (Mawid)

Health services provided by Mawid	Agree	S. agree	Don't know	Disagree	S. disagree
Easily book an appointment at the health centers	69.8%	14.9%	5.5%	6.5%	3.3%
Easily book an appointment and manage appointments for dependents (family members) in the health center	70.6%	13.4%	5.5%	8%	2.5%
Give an alert if an earlier appointment is easily available	56.3%	11.4%	23.2%	8%	1.1%
Make an appointment for clinics easily	60.5%	13.4%	10.7%	12.3%	3.1%
Make an appointment for vaccinations easily	56.5%	13.7%	17.9%	8.4%	3.5%
Adding a follower (family members) in the health center	64.9%	15.3%	15.3%	4.4%	0.1%
Providing information about dependents and clinics that have reviewed been	62.7%	13.3%	18.3%	4.7%	1%
Giving and providing information about health facilities have tatamin clinic	63.9%	12.9%	18.3%	4.8%	0.1 %
Conduct a self-assessment and book an appointment for examination a corona	65.3%	11.1%	19.8%	3.6%	0.2%
Providing advice or proper guidance through an understanding check and a depression check	45.6%	9.7%	39.8%	3%	1.9%

4. Conclusion

The Kingdom of Saudi Arabia has become in the ranks of developed countries in electronic transactions over the Internet, in order to keep pace with global development through the use of technology (applications) through smart phones anywhere at work, home or public places, according to the vision of the Kingdom 2030, we believe that this pandemic did not provide Not only an opportunity to demonstrate the quality and functionality of applications related to Covid-19, but it also allowed the discovery of the comprehensive digital healthcare system in the country.

4.1 Therefore, the results of the study came as follows

The majority of the participants answering the electronic questionnaire were satisfied with the health services provided by the appointment service application, while there is a small group of them who are not satisfied and they had some problems such as the lack of reservation for the dental clinic for additional numbers for adults and children on the same day, and the absence of two clinics, one for men and another for women, lack of appointments for clinics during the coming days or week in more than one health center until after months, sometimes the lack of appointments for the elderly, especially in clinics, such as pressure and diabetes. There are also recommendations that I would like to make, such as:

Despite the positive results of the study, there are still some shortcomings in terms of seeking to develop and improve the quality of health services provided to people in health centers and hospitals (health facilities) by using digital technology to support, direct and create more effective applications for the benefit of the public using these applications.

5. Acknowledgement

Praise be to God, prayer and peace be upon our prophet Muhammad and his family companions, to begin with, we would like to offer big thanks to my brothers who are with me in the research to help me to finish this research, may God to keep them safe to their family and I wish them a lot of good in this world and the hereafter amen.

6. References

1. Alharbi NS, Alsubki N, Altamimi SR, Alonazi W, Fahlevi M. Covid-19 mobile App in Saudi Arabia: systematic identification, evaluation, and features assessment, department of health administration, college of business administration, King Saud University, Riyadh, Saudi Arabia. Frontiers in public research. 2022;10:803677.
2. Allam Ahad Abdulqader, AbuAli Amer Nizar, Ghabban, Fahad Mahmoud. Citizens Satisfaction with E-Government mobile services and M-health Application during the covid-19 pandemic in Al-Madinah region: college of computer science and engineering, information system department, Taibah University. 2021;14:636-650
3. Alserahy Hassan Awad, *et al*. The thinking and scientific research, Scientific Publishing Center, King Abdul-Aziz University in Jeddah, the first edition, 2008.
4. Al-Rabiah Highlights Updates of Transformation Programs and Initiatives 2020. Saudi Ministry of Health. 2019 September 10.URL: http;//www.moh.gov.sa/en/Ministry/Media center/News/Pages/News-2019-09-10-003aspx, accessed 2022-5-22
5. Al Zoghbi Muhammad, AlTalvah Abas. Statistical system understanding and analysis of statistical data, first edition, Jordon- Amman 2000.
6. Hassounah M, Raheel H, Alhefzi M. Digital response during the covid-19 pandemic in Saudi Arabia, Prince Sattam chair for epidemiology and public health research, department of family and community medicine, college of medicine, King Saud University, Riyadh, Saudi Arabia. Journal of medical internet research. 2020;22(9):19338.
7. Public Health; Expanding Testing. Saudi Ministry of Health.URL: http;//www.moh.gov.sa/en/HeathAwareness/Educational_Testing.aspx, accessed 2022-5-22.
8. Kadasah NA, Chirwa GC, *et al*. Knowledge, Attitude and Practice Toward COVID-19 Among the Public in the Kingdom of Saudi Arabia: A Cross-Sectional Study. Front. Public Health. 2020;8:217.
9. Ministry of Health website - e-services <https://www.moh.gov.sa.accessed 22 May 2022.
10. The free encyclopedia<http://www. ar.wikipedia.org. accessed 22 May 2022.
11. Tetamman Clinic at Health Center and Hospitals. Saudi Ministry of Health.2022.URL; http://www.moh.gov.sa/en/Health Awareness/Tetamman-Clinic/Pages/default.aspx, 2022-5-22.

Authors Details

Waleed S Alsaeedi
Ministry of Health, Makkah, Saudi Arabia

Mansour A Almasoudi
Ministry of Health, Makkah, Saudi Arabia

Fahad A Almsoudi
Ministry of Health, Makkah, Saudi Arabia

Khalid M Allihyani
Ministry of Health, Makkah, Saudi Arabia

Majed A Almasoudi
Ministry of Health, Makkah, Saudi Arabia

Majed M Alsuwayhery
Ministry of Health, Makkah, Saudi Arabia

Bassem M Alsoubhi
Ministry of Health, Makkah, Saudi Arabia

Jubaeer K Alhudale
Ministry of Health, Makkah, Saudi Arabia

Obaidullah O Almutairi
Ministry of Health, Makkah, Saudi Arabia

Musa F Aljehani
Ministry of Health, Makkah, Saudi Arabia

Omar S Alharbi
Ministry of Health, Makkah, Saudi Arabia

Salman S Alharbi
Ministry of Health, Makkah, Saudi Arabia

Obidallah M Altomiah
Ministry of Health, Makkah, Saudi Arabia

Abdullatif F Algethami
Ministry of Health, Makkah, Saudi Arabia

Sultan K Alzewehry
Ministry of Health, Makkah, Saudi Arabia

Abdullah M Qeys
Ministry of Health, Makkah, Saudi Arabia

Mohamed A Albuthe
Ministry of Health, Makkah, Saudi Arabia

Bejad H Alotibi
Ministry of Health, Makkah, Saudi Arabia

Ibraheem M Mardoum
Ministry of Health, Makkah, Saudi Arabia

Faisal A Hanif
Ministry of Health, Makkah, Saudi Arabia

Badr A Alkabkaby
Ministry of Health, Makkah, Saudi Arabia

Hisham E Alymani
Ministry of Health, Makkah, Saudi Arabia

Rahab M Alfaqeh
Ministry of Health, Makkah, Saudi Arabia

Fawaz S Almehmadi
Ministry of Health, Makkah, Saudi Arabia

Hashim A Saeed
Ministry of Health, Makkah, Saudi Arabia

Wajdi F Organji
Ministry of Health, Makkah, Saudi Arabia

Fazi M Almajnuni
Ministry of Health, Makkah, Saudi Arabia

Majed S Alhazmi
Ministry of Health, Makkah, Saudi Arabia

Ahmed
Ministry of Health, Makkah, Saudi Arabia

Majed S Alharthi
Ministry of Health, Makkah, Saudi Arabia

Hani S Alqarihi
Ministry of Health, Makkah, Saudi Arabia

Majed N Mia
Ministry of Health, Makkah, Saudi Arabia

Ahmed A Alqurashi
Ministry of Health, Makkah, Saudi Arabia

Atif S Alsuwayhery
Ministry of Health, Makkah, Saudi Arabia

Fawaz O Almutairi
Ministry of Health, Makkah, Saudi Arabia

Atef Mohammed Raffa
Ministry of Health, Makkah, Saudi Arabia

Aied A Almalky
Ministry of Health, Makkah, Saudi Arabia

Saeed S Alhashmi
Ministry of Health, Makkah, Saudi Arabia