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The application of tawakkalna and its impact on health services during the corona pandemic (COVID-19) in the city of Mecca

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Abstract

This research aims to extrapolate the opinions of citizens and know the most important problems they face while using the Tawakkalna application in the field of health services and the availability of basic information offline (offline), and this research also aims to find out whether this application has a positive impact on the population in presenting Advanced health services in a correct and effective manner or not, The research also aims to know the quality of services provided by the application to the population. This is the research answered. The research was conducted online,

The researchers made an electronic questionnaire, where the researcher and his colleagues distributed an electronic questionnaire through the program (Google Drive) via phone, online contacts and social networks (what's app) for its ease and spread among the population, more than 1000 people were contacted (random sample) from 16 over 65 years old from various neighborhoods of Makkah (inside Makkah), answered by only 500 people for fear of infection with the emerging coronavirus, (Covid-19) because the disease has not completely ended yet, and also because of the difficulties in conducting interviews Personality through social distance systems.

Keywords: Tawakkalna: electronic health application via a mobile

1. Introduction

It has been one year and eight months since the COVID-19 pandemic began in December 2019, the SAR-COVID-2 virus is characterized by complexity, high transmissibility through human-to-human infection, and a high rate of asymptomatic carriers (Shereen *et al*, 2020) ^[9]. By September 2021, near 222 million people had been infected with COVID-19 worldwide, almost all countries, with 4.6 million deaths, according to the WHO. Reflecting the danger of the pandemic, the WHO and the Centre for disease control and prevention (CDC) declared that strict precautionary measures should be applied to governments to war against the spread of the virus (Anderson *et al*. 2020) ^[11], The WHO warned that successful control of pandemic rely on how and when governments apply such precautionary decisions. The importance for governments to scales strict precautionary measures with the passive impact on daily life activities and the economy has also been tired (Shim *et al*, 2020) ^[10]. In the implementation of the directives of the Custodian of the Two Holy Mosques King Salman bin Abdulaziz Al Saud and His Royal Highness Prince Muhammad bin Salman bin Abdulaziz, Crown Prince, Deputy Prime Minister, and Minister of Defense - may God preserve them - that government agencies - each according to his competence - work to strengthen precautionary and preventive measures to combat The novel "Corona" virus pandemic, and in the framework of close cooperation with the Ministry of Health, by 5 May 2020, the Saudi Data and Artificial

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Intelligence Authority “Sdaia” announced the trial launch of the “Tawakkalna” application, which comes within the framework of supporting government efforts to limit the spread of the emerging “Corona” virus. In its current version, the “Tawakkalna” application has been allocated to government and private agencies that are excluded from the curfew decision, to enable them to issue permits electronically to their employees through a platform for government agencies and others for the private sector, in addition to enabling those who have medical appointments and representatives of delivery applications to obtain the necessary permits to facilitate transport them during times of prohibition (SPA. 2020) ^[13].

Tawakkalna is A mobile application and computer program designed to run on smartphones, tablets, and other mobile devices. It is one of the applications of the Corona Virus 2019-20 epidemic that manages the process of granting permits electronically during the curfew period, and the application is provided by the Saudi Data and Artificial Intelligence Authority and comes within the framework of supporting government efforts to limit the spread of the emerging “Corona” virus. The number of its users has exceeded 27 million beneficiaries (<http://wikipedia.org>).

Where the Tawakkalna application provides the following health services:

1. Issuance of an automatic health verification permit
2. Make an appointment for a corona examination.
3. Create a new report or cancel it and review the current status of the report in the service of my assistance.
4. View the personal and family health passport
5. Health status service to inform family members and detainees
6. Activating the cautious mode of service by smartphone in public places (markets, health facilities, workplaces, gathering areas).
7. Asking for help if you or your family members have symptoms of the Coronavirus.
8. Organ donation service.
9. A distress call service, by sending a distress call to the Saudi Red Crescent with the possibility of canceling it and reviewing the status of the current distress call.
10. Provide the person with the requirements of health travel.
11. Giving and notifying the guardian of the school’s notification to the school director of the student’s health condition if symptoms of corona are observed on him.
12. Register an account for family members to follow up.
13. Determine family members and sponsored people who live with you.
14. Adding or linking family members to medical insurance for them by the head of the family.
(www.ta.sdaia.gov.sa).

There are many studies that indicated the extent of the impact of government applications, especially this application, on people in society in the Kingdom of Saudi Arabia in terms of the services provided to them from it (Alharbi *et al*, 2022) (Allam *et al*, 2021) (Hassounah *et al*, 2020) (AlFattani *et al*, 2021) ^[4, 2, 6, 3].

2. Material and Methods

The research was conducted in the city of Mecca in Saudi Arabia from January 2022 to May 2022.

The researchers used the descriptive-analytical method Uses a quantitative or qualitative description of the social phenomenon, such as the impact of the application of our

trust on the health services provided to people in light of the Corona Virus pandemic. It includes individuals, organizations, and institutions, Governments, states, and descriptions. The past, as the qualitative description describes a phenomenon, describing its effects on Absenteeism, the means used, and the extent of its spread Impact on the life of the individual and society, and Analysis of valuable variables in growth and creation. As for the quantitative expression, it gives us a numerical description that shows the amount of the phenomenon through the method of social survey taking a representative sample of the population under study, and this type of social survey is concerned with studying social phenomena such as population, traditions, economic, cultural political attitudes, guardians or analyses of the work and environment. In addition, the variables studied were the health of the individual, society, and consumer, the prevalence of diseases and their relationship to demographic variables such as age, gender, nationality, marital status, and occupation and how these factors affect them (Alserahy *et al*, 2008) ^[5], to perform statistical analysis such as averages and descriptive statistics Microsoft Excel Office Group 2010 was used. Determining to analyze the data (Al zoghbi & AlTalvah, 2000) ^[7].



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 twenty-six questions, 19 questions are open and one question is closed. The online approach has also been used generating valid samples in similar studies in Saudi Arabia countries and other (Kadasah *et al.*, 2020) ^[8].

The first question was about whether the application is easy to use, download and set up, and people’s answers were as follows, 60.9% of the participants answered strongly agreed, while 35.3% agree, and 3% of them answered “I don’t know,” and 0.4% both of those who answered “disagree and disagree” strongly. Regarding the second question that the application actually contributed to providing me with important information about the methods of disease transmission and prevention, 71.6% answered strongly agree, while 19.6% agreed, 3.8% answered “I don’t know” and 3.8% disagree, and finally 1.2% answered, “strongly disagree”. Regarding the third question about the Tawakkalna application that is easily accessible and always available at any time, 36.7% strongly agreed, while 18.3% answered with agree, 0.5% answered without knowing, 2% disagree, and 42.5% answered strongly disagree. As for the fourth question about providing the Tawakkalna app a guarantee that my information will not be shared with others, 49.2% strongly agree, while 11.9% answered agree, 9.2% answered I don't know, 2% disagree, and 27.7% strongly disagree. In the fifth question about the willingness

of the staff of the Tawakkalna application to help me, 22.3% Strongly agree, while 13% answered agree, 20.1% said I don't know, 43.2% disagreed, and 1.4% strongly disagree. Regarding the sixth question about the extent to which the employees of the Tawakkalna application are very cooperative and showed interest in solving my problem, 25.5% answered. Strongly agree, while 27.4% answered agree, 44.3% said I don't know, 2% disagree, and 0.8% strongly disagree. Regarding the seventh question about the extent to which the application contributes to the issuance of an automated health status verification permit, 56.2% answered. Strongly agree, while 36.2% answered with agree, and 5% said I don't know, while those who said they disagree and also strongly disagreed with the same percentage equalled 1.3%. As for the eighth question about the ease of giving (gathering) permits to automatically check the health status of the family, 45.1% answered. Strongly agree, while 38.5% answered agree, and 15.5% said I don't know, while those who said disagree, and also strongly disagree with the same percentage equals 0.45%. The ninth question asked about the application's easy contribution to taking an appointment for a corona examination, and 53.5% answered. Strongly agree, while 38% said they agreed, 5% said I don't know, 3% disagree, and finally, 0.5% strongly disagree. The tenth question, on the extent to which it is easy to create a new report in the service of my ambulance, 29.1% answered strongly agree, 27.7% agreed, while 41.8% answered "I don't know," 1% disagree, and 0.4% strongly disagree. Regarding the eleventh question, about the extent to which my paramedic service contributes to cancelling and reviewing the current status of the report, 25.4% answered strongly agree, 27.2% agreed, 46% answered "I don't know", 0.4% disagree, and 1% strongly disagree. As for the twelfth question, about the ease of accessing the personal and family health passport, 61.9% answered strongly agree, 33.5% agree, and 3% answered "I don't know", while equally strongly disagreed with disagreeing in the same percentage of 0.8%. The question thirteenth, about the application's contribution to the health status service in informing family members and the immunized, 60% answered strongly agree, 33.5% agreed, and 5.5% answered "I don't know", while 0.8% disagreed and 0.2% Strongly disagree. As for the fourteenth question, about the ease of activating the cautious mode service in the smartphone in public places (markets, health facilities, workplaces, gathering areas), 41.6% answered strongly agree, 33.2% agreed, and 23.8% answered "I don't know", 1.1% disagree and 0.3% strongly disagree. Regarding the fifteenth question, about the ease of answering for help or asking for help if you or family members have symptoms of coronavirus 37.4% answered strongly agree, 36.9% agreed, 23.8% answered "I don't know", 1.5% disagree and 0.4% Strongly disagree. As for the sixteenth question, about the

ease of use of the organ donation service in the app, 41.8% strongly agreed, 32.9% agreed, and 22.5% answered "I don't know", while those who disagreed strongly disagreed equalled 1.4% with the same percentage. The question on the seventeenth, about the application's contribution through a distress call service by sending a distress call to the Saudi Red Crescent Authority, 30% strongly agreed, 23% agreed, and 45.5% answered "I don't know", while 1.3% disagreed and disagreed Strongly agree 0.2%. With regard to the eighteenth question, the application's contribution to cancelling and reviewing the status of the current distress call, 26.2% strongly agreed, 20.1% agreed, and 51.9% answered "I don't know", while the percentage of disagreeing and strongly disagree equalled 1.4%. Regarding the nineteenth question, about the application's easy contribution to the provision of travel health requirements, 36.4% strongly agreed, 36% agreed, 22.9% answered "I don't know", while the percentage of disapproval was 3.7%. Strongly disagree 1%. As for the twentieth question, about the application's contribution to giving and notifying the guardian by the school principal of the student's health status if symptoms of coronavirus are observed in him, 32.4% strongly agreed, 30% agreed, and 34.3% answered "I don't know", while 3% disagreed and 0.3%. Strongly disagree. With regard to the twenty-first question, the application's easy contribution to registering the account of the individual and the family to follow up on their health, 41.8% strongly agree, while 39.9% agree, and 15% answered "I don't know", while 2.3% disagree and 1% strongly disagree.

Regarding the twenty-second question, the application's easy contribution to identifying family members and sponsored people who live with you, 44.1% answered strongly agree, 42.7% agreed, and 10% answered: "I don't know". While 2.5% disagree and 0.7% strongly disagree. In the twenty-third question, the application contributes to adding or linking family members to medical insurance for them by the head of the family, 33.6% answered strongly agreeing, 23.7% agreed, and 41.7% answered: "I don't know". While those who disagree with those who strongly disagree are equal by 0.5%. Regarding the twenty-fourth question, the application is easy to download, set up, and easy to use, 65.6% strongly agree, 29.7% agree, 4% don't know, 0.5% disagree, and 0.2% strongly disagree.

As for the twenty-fifth question, on the question "I encountered problems while using the health services in the application", 12.7% strongly agree, 23.1% agree, 22.2% answered I don't know, 29.2% disagree, and 12.7% strongly disagree. As for the twenty-sixth question about the question: do you have suggestions and solutions to solve the current application problems? If yes, mention it, 7.1% answered yes, and 92.9 said No. (Table 1).

Table 1: The extent of people's satisfaction with the health services provided by the Tawakkalna application in light of the emerging coronavirus pandemic

Agree	Strongly agree	Health services provided by Tawakkalna
36.2%	56.2%	Issuance of automatic health verification permits
38.5%	45.1%	Issuing assembly permits and automatic verification of the health status of the family
38%	53.5%	Make an appointment to get tested for Corona Virus
27.7%	29.1%	Create a new report with the service Asefini
27.2%	25.4%	Cancellation and review of Asefini service
33.5%	61.9%	View the personal and family health passport
33.5%	60.9%	Inform the health status of family members and immunized persons

33.2%	41.6%	Activate Caution Mode on your smartphone in public places
36.9%	37.4%	Asking for help in case of personal and family symptoms of corona
32.9%	41.8%	Organ donation service
23%	30%	Sending a distress call to the Saudi Red Crescent Authority
20%	26.2%	Cancel and review an existing distress call
36%	36.4%	Giving and providing information on health travel requirements
30%	32.4%	Notification to the parent by the school principal to know if the student has symptoms of corona
39.9%	41.8%	Register the account of the individual and the family to follow up on their health
42.7%	44.1%	Determine the family members and sponsored people who live with you

Conclusion

The importance of digital transformation in the health sector in particular, and all sectors in general, and the Kingdom is the best evidence of this, as the Kingdom of Saudi Arabia is working to digitally transform many of its sectors from the launch of Vision 2030, and the use of technology is easy to reach most people, digital transformation helps in the health sector is also in very strong fields to combat any epidemics in the future. It also contributes to modifying and solving data collection problems and taking what is necessary to give humanity a better opportunity to modify the level of health for the better.

Therefore, the recommendations from the study are as follows:

Through this study, we found that the majority of the participants are informed, aware and satisfied with the health services provided by the Tawakkalna application, which was established by the Saudi Authority for Data and Artificial Intelligence and contributed to its development by the Saudi Ministry of Health, which was easy for citizens to use.

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