

THE IMPACT OF IMPLEMENTING TELEHEALTH ON PREGNANCY RELATED TOPICS

A WHITEPAPER BY ALTIBBI.COM, THE LEADING TELEHEALTH PLATFORM IN THE MENA REGION

Introduction

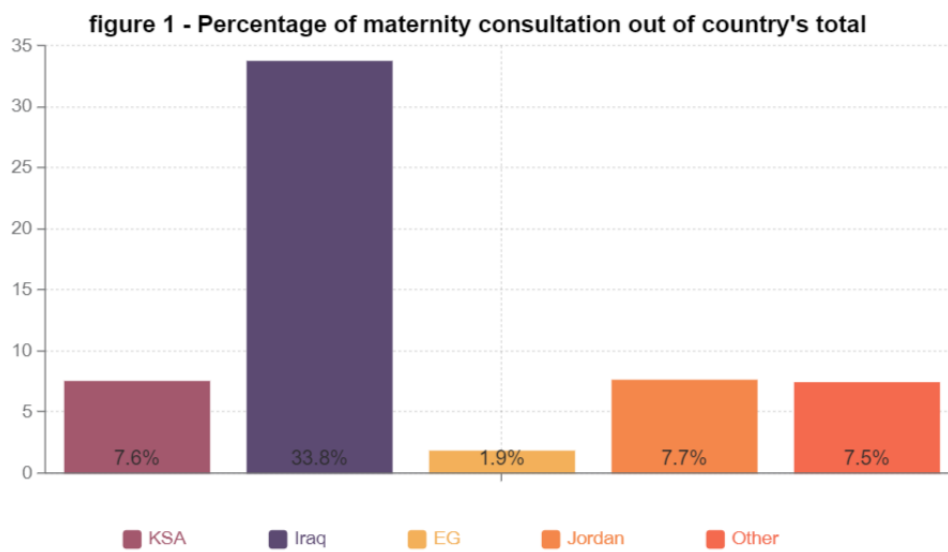
Pregnancy and childbirth are some of the most important events in a woman's health, starting from conception and to the actual birth event. During pregnancy, women are concerned with so many things, including her fetus development, how she will perceive different pregnancy-related changes, and prepare herself for labor and delivery. Females seek health advice starting from planning the pregnancy, the conception, delivery, and the puerperium which is the 6 weeks duration after delivery. Interaction with the health care system like the telehealth system creates opportunities to address all the concerns a woman might face during her pregnancy by laying a strong base for the ongoing health of the woman and her fetus. Telehealth services have a major impact on women's healthcare during these phases, by educating and providing the necessary advice to walk through the changes that a woman might experience once planning the pregnancy or the pregnancy itself

Most women in the MENA region find some difficulties in presenting themselves to a general practitioner or obstetrician especially in the early phases of pregnancy. Last year, Altibbi telehealth service contributed to the reduction of doctor's visits in 17,540 maternity cases, which made up 5.6% of the total consultations held by Altibbi telehealth service. In this paper, we will show Altibbi users' interest in implementing telehealth services in the maternity-related topics. We will breakdown the consultations based on the country, the age median, and the average age of the users, the preferred way to consult a doctor, and any educational or complications concerns.

Numbers and Statistics

Upon analysis of the consultations related to pregnancy, we found that most users who made the consultations were from the following countries: (As shown in Figure 1)

- Iraq
 - Pregnancy consultations were 33.8% of the total consultations in Iraq.
- Jordan
 - Pregnancy consultations were 7.7% of the total consultations in Jordan.
- KSA
 - Pregnancy consultations were 7.6% of the total consultations in KSA.
- EG
 - Pregnancy consultations were 2% of the total consultations in Egypt.
- Other countries
 - Pregnancy consultations were 8.5% of the total consultations in other countries.



63% of the users preferred to use the chat consultation feature over the phone call consultations. This is due to the fact that female patients feel more comfortable chatting with doctors when discussing topics related to maternity and childbirth. Taking into consideration that about 80% of the consultations were made by a female patient. 70.2% of the consultations were made by the patient herself, of which 86% were married. 8.2% were made by the female partner, 7.5% were made by the females' sisters, and 14% were made by others related to the female patients. Furthermore, the median age of the patients making the consultations was 25 years old, and the average was 22.7 years old.

Figure 2 - Consultation medium percentages

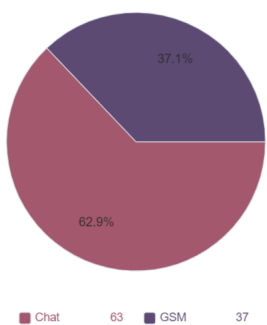


Figure 3 - Gender percentages

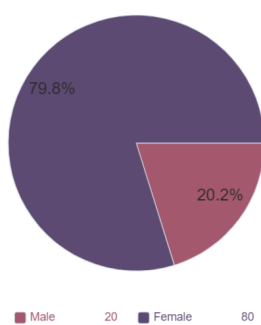


Figure 4 - Relation percentages

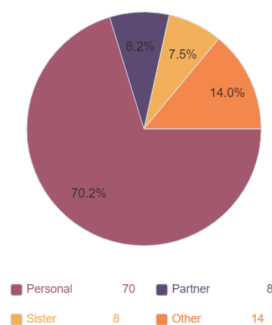
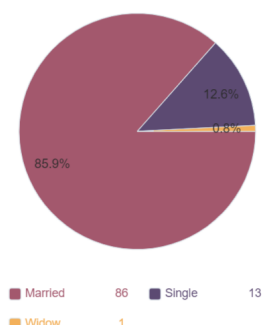


Figure 5 - Marital status percentages



About 93% of the consultation were made by female users who are non-smoker, those who were smokers took only 7.4% of the total female patients.

The BMI of patients who made the consultation through Altibbi telehealth services were within the normal range, while 25.5% and 9.8% were overweight and underweight, respectively.

Since the patient history used in this whitepaper was gathered from the patient herself, we lack the data about current morbidity in 42.7%. 3.5% were diagnosed with other chronic diseases before the pregnancy, and the rest were healthy.

Figure 6 - BMI ranges percentages

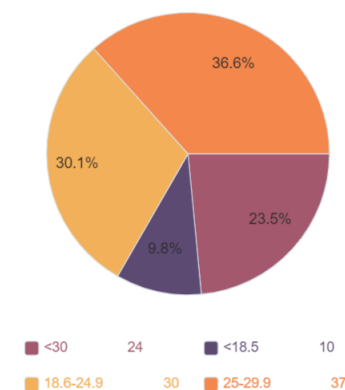


Figure 7 - Smoking percentages

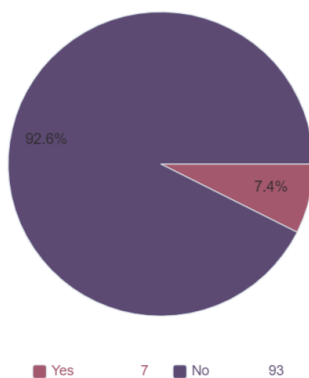
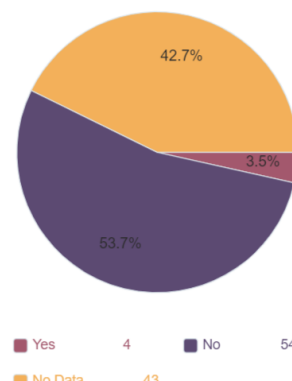


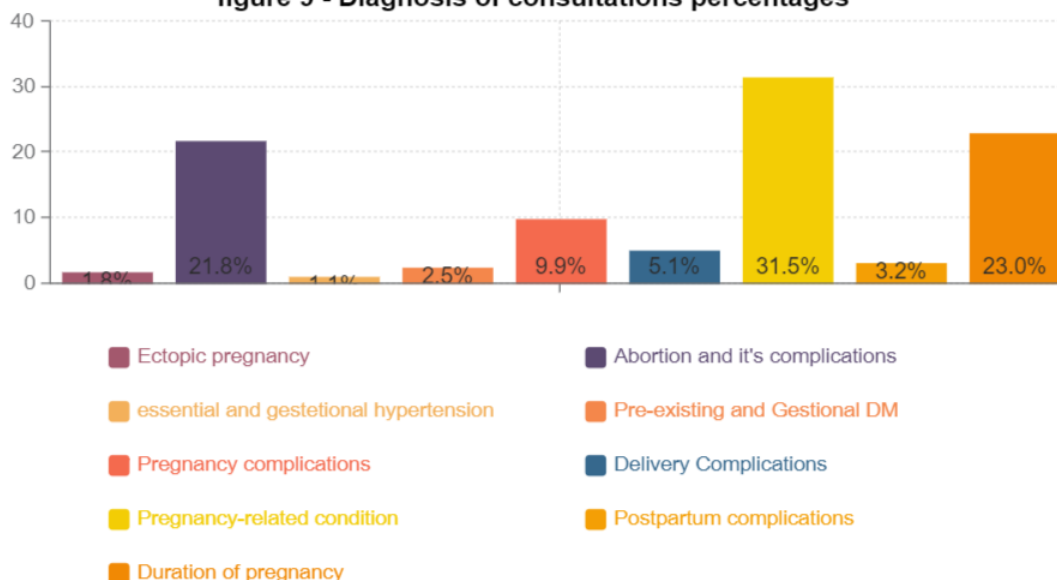
Figure 8 - Diseases percentages



Altibbi telehealth service doctors diagnosed the 17541 consultations into 43 different diagnoses, gathered into 9 categories as shown in the below chart.

- 31.5% of the consultations were diagnosed by different pregnancy-related conditions such as hyperemesis gravidarum, low back pain, lactation during pregnancy, and GERD.
- 23% of the consultations were about the duration of pregnancy which was mainly educational and routed to use Altibbi pregnancy calculators and content.
- 21.8% of the consultations were about abortion and it's complications, the highest percentage of those were threatened abortion and the lowest percentage was for failed medical abortion.
- 23.7% of the consultations were for other diagnoses, divided as the following:
 - 9.9% were diagnosed with pregnancy complications such as Antepartum hemorrhage and prolonged pregnancy.
 - 5.1% were diagnosed with delivery complications such as premature labor, and PROM.
 - 3.2% were diagnosed with postpartum complications such as lacerations and mastitis.
 - 2.5% were diagnosed with pre-existing diabetes complicating pregnancy and gestational diabetes.
 - 1.8% were diagnosed with Ectopic pregnancy, 11% of those were consulting about reports from their practitioners.
 - 1.1% were diagnosed with essential hypertension complicating pregnancy or gestational hypertension and pre-eclampsia.

figure 9 - Diagnosis of consultations percentages



Thoughts and Recommendations

Based on the data currently available, we were able to measure how important it is to implement telehealth services to cover all the pregnancy-related topics including preconception education, dealing with pregnancy-related conditions, pregnancy stages, and normal physiological changes. Data analyzed showed that the most interested users in using telehealth services to consult about their pregnancy were from Iraq followed by Jordanian users. Most of our users were around 23 years old with a normal BMI.

The majority of the consultations were made by female users consulting about themselves, with no history of alcohol taking. furthermore, these users were non-smokers.

Most of the diagnosed cases by our doctors were pregnancy-related conditions followed by consulting about the duration of the pregnancy, and abortion. This requires to have a tailored service that will cover all the pregnancy-related topics that a user might seek advice for, including calculators for the doctors and a user-friendly one for detecting the possibility of preterm labor, recurrent miscarriages, the risk of undergoing a cesarean section, and different pregnancy complications.

Therefore, due to the lack of data about other comorbidities, we proposed the more dynamic, informative recommendation which is a report filled by the Altibbi doctor after finishing the consultation, to gather a more reliable history of the patient, which should be specific for the patient's concern and symptoms provided.