THE ANALYSIS OF HEALTHCARE DYNAMICS IN EGYPT

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INTRODUCTION:

HEALTHCARE IN EGYPT VARIES IN FEES, WAITING TIMES, AND QUALITY RATINGS. THIS POSTER EXAMINES THESE DIFFERENCES, FOCUSING ON FEES AMONG SPECIALIZATIONS, THE LINK BETWEEN RATINGS AND WAITING TIMES, AND THE IMPACT OF FEES ON RATINGS. UNDERSTANDING THESE FACTORS CAN IMPROVE PATIENT EXPERIENCES AND GUIDE HEALTHCARE POLICY.

SECOND HYPOTHESIS:
WE USED PEARSON R TO IDENTIFY IF THEIR S A RELATION BETWEEN THE FEES AND THE DOCTOR VIEWS AND AFTER THAT WE CALCULATED THE P VALUE TO SEE IF THE RESULT IS STATISTICALLY SIGNIFICANT AND REJECT THE NULL HYPOTHESIS.
PEARSON CORRELATION COEFFICIENT: 0.19768085354297604 AND SINCE IT IS POSITIVE THAT MEANS THAT THERE IS A POSITIVE RELATION BETWEEN THE DOCTOR VIEWS AND THE FEES.
P-VALUE: 4.007676045122018E-09 IS SMALLER THAN 0.05 AND THAT MEAN THAT WE WILL REJECT THE NULL HYPOTHESIS.

ANALYSES:

FIRST HYPOTHESIS:
AFTER DOING THE ANOVA TEST THE P VALUE TURNED TO BE LESS THAN 0.05 SO WE REJECTED THE NULL HYPOTHESIS
THEN WE MADE THE BOXPLOT AND AS YOU COULD SEE THERE'S SIGNFIICANT DIFFERENCE IN FEES BETWEEN DIFFERENT SPECIALIZATIOS
SPECIALIZATIONS WITH THE HIGHEST FEES: NEUROSURGEON, HAEMATOLOGIST AND SPINAL SURGEON
SPECIALIZATIONS WITH THE LOWEST FEES: PHYSIOTHERAPIST, FAMILY DOCTOR AND INFERTILITY SPECIALIST

Box Plot of Fees by Specialization
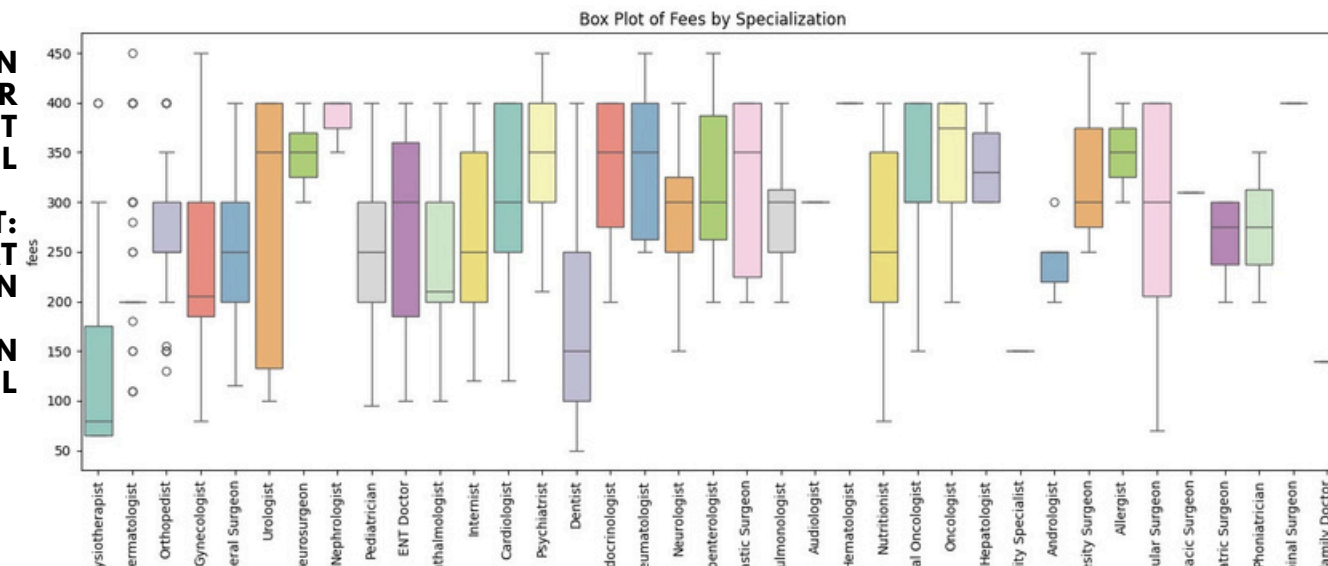
THIRD HYPOTHESIS:

- WE USED PEARSON R TO IDENTIFY IF THEIR S A RELATION BETWEEN THE FEES AND THE DOCTOR VIEWS AND AFTER THAT WE CALCULATED THE P VALUE TO SEE IF THE RESULT IS STATISTICALLY SIGNIFICANT AND REJECT THE NULL HYPOTHESIS.
- PEARSON CORRELATION COEFFICIENT: 0.07502645417816026AND SINCE IT IS POSITIVE THAT MEANS THAT THERE IS A POSITIVE RELATION BETWEEN THE DOCTOR VIEWS AND THE FEES.
P-VALUE: 0.0268167145793388IS SMALLER THAN 0.05 AND THAT MEAN THAT WE WILL REJECT THE NULL HYPOTHESIS.

- THIS IS A REGRESSION LINE THAT SHOW THE RELATION BETWEEN THE FEES AND THE DOCTOR VIEWS.

Scatter Plot of doctor_views vs fees
Pearson r=0.20, p-value=4.01e-09

FOURTH HYPOTHESIS:

AFTER CALCULATING THE P-VALUE FROM THE ANOVE TEST IT TURNED OUT TO BE LESS THAN 0.05 SO WE REJECTED THE NULL HYPOTHESIS AND AFTER GETTING THE BOX PLOT AND SCATTER PLOT IT TURNED OUT THAT THERE'S SIGNIFICANT DIFFERENCE BETWEEN LOCARIONS AND FEES

Scatter Plot of waiting_time vs fees
Pearson r=0.08, p-value=2.68e-02

RESEARCH QUESTION:
WHAT'S THE KEY FACTORS THAT AFFECT THE FEES OF DOCTORS IN EGYPT?

HYPOTHESIS

-1- Effect of specialization on fees
2- Fees and the doctor views
3- Fees and the waiting time
4- location and fees

DATASET

THE DATASET CONTAINS 1200 DOCTORS, AND AFTER THE DATA WAS FILTERED, IT BECAME 870. THE DATA CONTAINS THE SPECIALIZATION, AVERAGE RAITING , WAITING TIME, LOCATION, PRICE, RATE COUNT AND DOCTOR VIEWS.

CONCLUSION

OUR FINDINGS SHOW THAT IN EGYPT, DOCTORS' FEES ARE SIGNIFICANTLY INFLUENCED BY THEIR SPECIALIZATION, VISIBILITY (NUMBER OF VIEWS), WAITING TIME, AND CLINIC LOCATION. DOCTORS WITH SPECIALIZED SKILLS, MORE VIEWS, LONGER WAITING TIMES, AND CLINICS IN CERTAIN LOCATIONS TEND TO CHARGE HIGHER FEES. THESE INSIGHTS ARE BASED ON A SAMPLE OF DOCTORS LISTED ON A BOOKING WEBSITE AND MAY NOT REPRESENT THE ENTIRE POPULATION OF EGYPTIAN DOCTORS.

Box Plot of Fees by Clinic Location