



## The Statistical Analysis of Societal Behavior During COVID -19 Outbreak in Basra

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**Abstract**— The rapid spread and highly contagious nature of COVID-19 created a health crisis threatening the whole world. This research was devoted to studying the factors affecting on people's psychological state and. In this work, data and responses of the participants were statistically describe and two null hypotheses were tested (there is no effect of health administrative and disease cognitive factors on people's commitment with preventive and precautionary measures and their psychological state). The data were analyzed by descriptive statistic after calculating Cronbach Alpha coefficient, which was 0.7, and the research hypothesis was then tested using a one-way multivariate analysis of Variance and Wilk's Lambda. Results showed the opposite of the null hypothesis. The health administrative factors and COVID-19 cognitive factors significantly affected the psychological state for the people and their commitment with the preventive and precautionary measures.

**Keywords**— *One-Way Multivariate Analysis, Wilks Lambda, COVID-19, Basra, SPSS.*

### I. INTRODUCTION

COVID – 19 has become the most serious threat to humans' health in today's world [1]. The disease is caused by severe acute respiratory syndrome coronavirus 2(SARS-CoV- 2) {also called 2019 novel coronavirus (2019-nCoV)} [2].

The virus started in Wuhan City of Hubei Province of China in December 2019and and spread at a very fast rate to many countries in the world [3]. The World Health Organization declared it to be a pandemic disease on 21 March 2020 [4].

In Basra, the first infected case was reported on 9th March 2020. Being a country with an undeveloped health system and weak public health infrastructure is difficult withstanding a sudden crisis. There is neither treatment nor vaccine for COVID-19, Prevention is the only solution to control the virus [5]. Therefore, it is very important to address public knowledge and understanding about the disease to ensure the success of the employed safety and management protocol.

The aim of the present research was to statistically describe data of the participant and analyze the

effect of health administrative measures and disease cognitive factors on people's commitment with preventive and precaution measures taken against COVID-19 and their psychological state. This study could provide product information to the ministry of health in order to fill in the gap in case of lack of knowledge by organizing public health awareness campaigns.

### II. STATISTICAL ANALYSIS

In this paper, the statistical analysis of data was divided into two parts. In the first part, demographic data of the participants and their responses were analyzed through descriptive statistics, by comparing and discussing the averages for variables. All statistical analysis was performed by SPSS [6].

In the second part, a one-way multivariate variance was utilized for analyzing the data. The main purpose of the one-way variance analysis is to compare the averages of more than one group or to know the relationship between the independent variable and the levels and the dependent variable or to test the effect of a number of treatments that represent the levels of one characteristic in the observations that we get



**Table 1:** Demographic information of the participants

	Number	Rates
Age		