A STUDY TO ASSESS THE ATTITUDE TOWARDS E – HEALTHCARE: A CASE OF KERALA

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ABSTRACT
Aim: To assess the attitude of the general population towards the use of E healthcare among the residence of Kerala state, India. Method:A web-based cross-sectional survey was employed. The data was collected using a Google form. The reliability of the tool was found to be high, as it is a highly standardized internationally accepted tool that was used and administered in the month of May 2021. 515 participants joined the study. The researcher's examined the data using Measures of Central Tendency, Measures of Dispersion, Measures of Normality, and one-way ANOVA. Results: The study revealed that 59% of them have low attitudes, 18% average, and 23% high attitudes. Out of 324 males and 191 females, only 68 persons are having prior experience in E healthcare. Conclusion: the study declares that the residents of Kerala state is having a low attitude towards E healthcare and have no correlation with demographical variables selected.
Keywords: attitude, E-healthcare, Kerala

1. INTRODUCTION

As per the definition of The World Health Organization (WHO) e-health as "the transfer of health resources and healthcare by electronic means…It encompasses the delivery of health information, for health professionals and health consumers, through the Internet and telecommunications" (Eysenbach, 2001).The present research is concerned with the attitude of the general public towards the use of electronic healthcare in the state of Kerala, India. Novel Corona the pandemic disease has shown humanity new possible outreaching areas in the field of health. And also the dramatic change that had taken place is in the field of the healthcare industry. Within a couple of years, the whole world had opened the path of electronic healthcare delivery systems with including telemedicine and electronic handlings. Thus it's important to assess the attitude of the general population who are the end term users of E healthcareIntegration of telehealth and supplementarytechnologies, which are based on web into healthcare distribution is a swiftlygrowing field across the world (Weinstein, et al., 2014). "These technologies are usually mentioned to as e-Health or electronic healthcare, however, there is no agreed-

upon description of what e-Health entails" (Shaw et al., 2017). "The researchers found that E-Health explanations in the works ranged from simple descriptions like "the incorporation of the internet into hospital care" to more composite definitions like "E-Health is an evolvingturfconcentrated on... healthiness care facilitiesdistributed...through innovative Internet or associatedtools"Oh et al. (2005). (Shaw et al. 2017) recommend that e-Health descriptions be mountednearby three overlying areas, roughly characterized as (a) self-management, (b) interactive, and (c) data empowering, based on a recent assessment that finds this lack of consistency has continued. In this revision, we defined e-Health as expertise that empower evaluation and illness administration, either with provider-patient contact or fully patient-driven, in accordance with this paradigm. Direct contact between patients and healthcare professionals, as well as patient self-management, has been a rapidly increasing sector of e-Health, in response to patient demand for more convenient healthcare. Direct communication technologies can be synchronous (for example, telehealth or videoconferencing), or asynchronous (for example, email or instantaneous messaging). Self-management applications continue to emerge, with or without professional interaction, for anextensive range of illness groups and patient populations. By the aging inhabitants and rising rates of enduring disease, e-Health might be a potential technique for bettering treatment for complicated patients. As a result, e-Health integration is commonly recommended as a stratagem for the healthcare system's long-standing viability and eminence. "Despite its promise and the fast-expanding number of technologies available, there are still impediments to e-Health adoption and integration in practice" (Moore et al., 2017). Even telehealth, which has huge possibilities to overcome geographic entree constraints, has been difficult to catch on in certain areas. Physician workloads and financing arrangements, particularly in the circumstance of fee-for-service physicians, may play a role in adoption issues. Furthermore, there has historically been minimal e-Health instruction in the medical training programs, resulting in a lack of understanding of how to employ electronic-Health in one's training (Sunderji, Crawford, & Jovanovic, 2014).

Utmost of the studies on stations towards E-health is conducted among healthcare professionals like doctors and nurses. "The investigators conducted a study on Stations of health professionals towards electronic health registers in primary health care backgrounds a questionnaire check, the revisionmeant to assess the stations of health professionals towards electronic health registers (EHRs) in primary health care situations in Turkey. Results declared total positive stations towards EHRs amongst medical care health specialists in Turkey suggest robust acceptance and use" (Secginli, Erdogan, &Monsen, 2013). (Kalayou, et al., 2021) "Conducted a study on Physicians' Station towards Electronic Medical Record Systems an Input for Unborn Device. And it was planted to be moderate. According to a modern evaluation of 54 explorations on web-grounded gears for textbook-grounded communication to prop in habitual illness operation, the maturity of studies concentrated on croaker and nanny druggies, with 30 reporting assorted groups of additional health professionals using the tool (Voruganti, Grunfeld, Makuwaza, & Bender, 2017). As a result, this research is noteworthy since it is critical to comprehend the general public's attitude concerning E healthcare (Alzoubi, Shahar, Manaf, Ariffin, & M, 2019).

2. METERIALS AND METHODS
2.1 Design
The design used was a cross sectional which was based on web for this revision. The study was directed to the general population of Kerala state of India. All those who are above the age of 18 years were allowed to participate in the study.The survey was fully anonymous and completely voluntary. The web-based poll took 10–15 minutes to complete and was hosted on Google Forms. The survey was open completely for the month of May 2021. Written consent was taken from all the participants.
2.2 Sample

The questionnaire in the form of Google forms was distributed among the residents of Kerala state through various modes like email, WhatsApp, Facebook, Instagram, etc. The response was open from 1st May to 31st May 2021. We received 515 responses that month. The exclusion criteria are those who are not willing to participate and those aged below 18 years.

2.3 Data collection

The researchers used the "E-Health Impact Questionnaire" developed by Laura Kelly, Crispin Jenkinson, Sue Ziebland in 2015 to assess the attitude of the people towards E healthcare(Kelly, et al., 2013). The scale is validated and it's reliable. The alpha score is more than 0.77. On a five-point scale, from strongly disagree to strongly agree, the questionnaire is graded. The demographic variables like age, gender, educational status, occupation, previous experience, and area of residence are also analyzed.

2.4 Data analysis

The investigators used SPSS 20.0 to analyze the data. The talents of the large quantity of data obtained from the defendants were labelled and abridged using descriptive statistics.. Descriptive measurements like Measures of Central Tendency, Measures of Dispersion, and Measures of Normality were calculated. One-way ANOVA was also used to interpret the data. Demographic details and prevalence were calculated using percentages and represented by appropriate diagrams

2. RESULTS

The attitude of the general Population towards E – healthcareThe investigator administered E-Health Impact Questionnaire to find the attitude of the general population towards E healthcare and the obtained data were tabulated. Descriptive data like Measures of Central Tendency, Measures of Dispersion, and Measures of Normality were calculated. The precipitate of the result is given in Table 1.

Variable	N	Mean	Median	Mode	SD	Skewness	Kurtosis
Attitude towards E - Healthcare	515	36.96	37.00	37.00	5.09	0.006	1.43

Table 1. Descriptive statistics of attitude of general population towards E healthcare

From Table 1, it is clear that the mean scores of the attitude towards E – Healthcare among the general population is 36.96 and that of Median and Mode are 37.00. It indicates that the data obtained are approximately normal. The value of Standard Deviation shows that the values of Attitude towards E – Healthcare is a little deviate from its mean scores. The distribution of data of the Attitude towards E – Healthcare is positively skewed and is flatter than the normal curve.

The whole sample of the general population is divided into high – average – low attitude groups based on the value of quartiles. The general population whose scores are less than 34 is grouped as low attitude groups and those who score greater than 40 are grouped as high attitude groups. The general population who scores between 37 and 40 is grouped as average attitude groups. The percentage of the general population belonging to high – average – low attitude groups is given in Table 2.

Level of Attitude	Number	Percentage
Low Attitude	302	58.6
Average Attitude	94	18.3
High Attitude	119	23.1

Table 2. Percentage of general population belonging to high – average – low attitude groups

From Table 2, it is clear that the majority of the general population (58.6%) possess a low level of Attitude towards E – Healthcare. Among the remaining 41.4% of the general population, 23.1% possess a high level of Attitude and the remaining 18.3% possess an average level of Attitude towards E – Healthcare. This result is graphically represented in Figure 1

<u>Comparison of the attitude of the general population towards E – Healthcare based on demographic variables</u>

The investigator compared the mean scores of the Attitude of the general population towards E – Healthcare based on the demographic variables such as gender, Area of Residence, and previous experience with Online Healthcare by using the Test of Significance of difference among means and the summary is given in Table 3

H0: There will be no significant alteration in the mean totals of the Attitude of the general population towards E – Healthcare based on the demographic variables

Demographic Variables	Sub groups	N	Mean	SD	t
Gender	Male	324	37.12	5.19	0.95
	Female	191	36.68	4.91	
Area of Residence	Rural	219	37.85	4.91	3.47**
	Urban	296	36.30	5.13	
Previous Experience	Yes	68	36.96	6.60	0.006
	No	447	36.96	4.83	

Table 3. Comparison of mean scores of the Attitude of general population towards E – Healthcare based on the demographic variables such as gender, area of residence and previous experience

From Table 3, the obtained t values (t = 0.95, p > .05 based on gender; t = 0.006, p > .05 based on Previous Experience) are not significant at .01 level of significance. It designates that there exists no significant alteration in the mean scores of the attitude of the general population towards E – Healthcare based on the demographic variable – gender and Previous Experience. Table 3 also shows that there is a significant alteration in the mean scores of the attitude of the general population towards E – Healthcare based on Area of Residence as the obtained t value (t = 3.47, p < .01) is significant at .0 level of significance. Since the obtained mean scores of the attitude of the general population from a rural area (M = 37.85) is comparatively higher than that of the urban area (M = 36.30) towards E – Healthcare, it can be concluded that the general population from rural area possess comparatively higher attitude towards E – Healthcare than that of the urban area. This result is graphically represented in Figure 1.
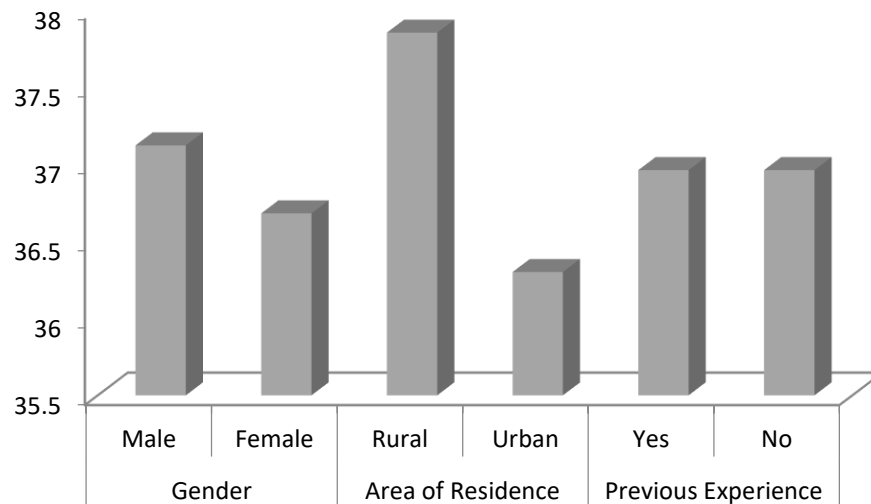
Figure 1. Graphical representation showing the comparison of mean scores of Attitude of general population towards E – Healthcare based on the demographic variables.

The investigator tried to compare the mean scores of Attitude towards E – Healthcare of general population based on the demographic variables such as Age, Education, and Occupation by using one-way ANOVA. The summary of one-way ANOVA is given in Table 4.

Demographic Variables	Sub groups	N	Mean	SD	F
Age	18 – 30 years	191	37.07	5.24	3.75*
	31 – 50 years	311	37.01	4.75	
	Above 51 years	12	33.00	8.57	
Education	Below Graduation	105	37.56	4.80	1.71
	Graduation	211	36.47	5.10	
	Masters	181	37.03	4.67	
	Above Masters	18	38.50	9.12	
Occupation	Central Government	55	35.89	6.08	2.25*
	State Government	101	36.68	4.94	
	Private Job	186	36.54	5.08	
	NGO	32	37.84	4.04	
	Entrepreneur	85	37.58	5.02	
	Not Employed	56	38.46	4.69	

Table 4 Comparison of mean scores of Attitude of general population towards E – Healthcare based on demographic variables Such as Age, Education and Occupation

From Table 4, it is clear that the obtained F values (F = 3.75, df (2, 512), p < .05 based on Age; F = 2.25, df (5, 509), p < .05 based on Occupation) are significant at .05 level of significance. It designates that there is significant difference in the mean scores of Attitude of general population towards E – Healthcare based on Age and Occupation. From Table 4, it is also clear that, the mean

scores of Attitude towards E – Healthcare of general population with age in between 18 to 50 years (M = 37.07 for age in between 18 to 30 years; M = 37.01 for age in between 31 to 50 years) are comparatively higher than that of general population with age above 51 years (M = 33.00). Also, the mean scores of Attitude towards E – Healthcare of general population who are not employed (M = 38.46) is the highest among other populations. From Table 4, it is clear that the obtained F values (F = 1.71, df (3, 511), p > .05 based on Education) is not significant at .05 level of significance. It designates that there is no significant alteration in the mean scores of Attitude of general population towards E – Healthcare based on Education. This result is graphically represented through Figure 2.
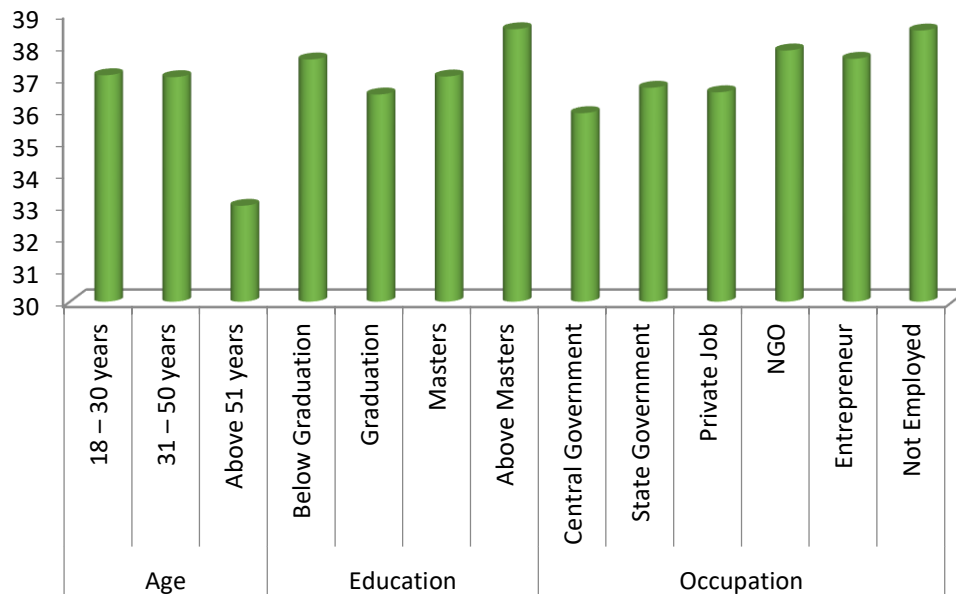

Figure 2. Graphical representation showing the comparison of mean scores of Attitude of general population towards E – Healthcare based on the demographic variables.

4. DISCUSSION AND CONCLUSION

This pandemic era had put forward the importance of E-services and the hospital industry plays a pivot role in the service sector. The health care sector is a vital area where it plays an extraordinary role in the upliftment of the people. Thus the attitude of the people towards the use of E- health care must be tapped.

To our knowledge, this is the first study conducted in India to assess the attitude of the general public towards E healthcare. As the results of the study imply the attitude of the public towards E healthcare is low (58.6%) whereas those having a high attitude is of 23.1 %

Out of 515 participants of the study, 324 were males and 191 were females. 296 participants lived in the urban area whereas the rest 219 are from rural areas. 68 participants are having previous experience in handling E healthcare facilities whereas the majority, 447 are ignorant of that. The education status and employment status of the participants are randomly distributed.

Thus this study was conducted to assess the attitude of the general population about E- healthcare, which is the most important aspect of healthcare services nowadays. Until and unless we know the attitude of the people towards the E- healthcare setup it's difficult to implement the structure.

Limitations of the study

The study only assessed the attitude of the general population towards E healthcare. More psychological variables shall be incorporated. The study focused only on a specific state of India. The study could have been widened to other states too.

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