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Assessment Of Awareness Regarding Covid-19 Pandemic Among Flight Attendants In India- An Observational Study

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Abstract

Objective: To assess the knowledge regarding awareness of COVID-19 infection among flight attendants in India.

Methodology: A observational study was conducted using a self structured, pre-tested, and closed ended questionnaire. Roll over or tracking (Snownball) technique was used for drawing the sample. The questionnaire consisted of 25 questions which assessed the knowledge of the flight attendants regarding COVID-19 pandemic. A google form was used to reach the study population. Data was analysed using SPSS version 16.0. Descriptive statistics were derived. T- test and ANOVA were used for data analysis.

Results: A total of 347 flight attendants answered the google form, out of which 98 (28.2%) were males and 249 (71.8%) were females. The mean gender wise comparison of knowledge regarding COVID-19 infection was found to be significant (p=.036). The mean age wise comparison of knowledge regarding COVID-19 infection was found to be significant among various age groups (p=.001). The mean knowledge regarding COVID-19 infection when compared with different designation was found to be significant (p=.039).

Conclusion: Most of the flight attendants had consistent awareness regarding various aspects of COVID-19 pandemic. The flight attendants in the age group of 25-30 had a better knowledge when compared to others.

Keywords: COVID-19, flight attendants, knowledge, observational study, pandemic

Introduction:

India, being the second largest populated country in the world hosts to 1.3 billion people and has encountered a variety of epidemics and pandemics through time. Several accounts of influenza, cholera, dengue, smallpox and several others have been recorded throughout history; while we have been able to control some; many diseases still continue to pose a threat to the community. It is not uncommon for sudden and rapid outbreaks to occur in India because of high density of population, poverty, ignorance, diversity in cultural values and beliefs.[1] Pandemics refer to the worldwide spread of diseases. As far as India is concerned, there have been only two major, significant pandemics throughout history. While cholera had been predominant throughout the 19th century with increasing death tolls every year, the influenza pandemic came later on in the early 20th century. [2, 3] The influenza pandemic was short but devastating and after a long time, quite recently, came yet another flu pandemic by the H1N1 strain.[4] Though, it is almost impossible to analyze all epidemics and pandemics throughout Indian

history, effort has been made to include most of the significant ones. [5] These pandemics show trends of developing microbial resistance and as a result, the death toll is usually high in pandemics than epidemics.[6]

Coronavirus disease 2019 (COVID-19) is a pandemic which has called for people to acquire and apply health information, and adapt their behaviour at a fast pace. [7] The origin of the infection with coronavirus was ascertained as bats. [8] The virus is mainly spread during close contact and via respiratory droplets produced when people cough or sneeze. People may also contract COVID-19 by touching a contaminated surface and then their face. It is most contagious when people are symptomatic, but substantial transmission occurs from asymptomatic individuals. The virus can survive on surfaces up to 72 hours.[9]

According to the World health organization report more than 4,006,257 cases of COVID-19 has been registered. Countries like Africa, America, Europe and Spain have the maximum number of positive cases, where as India stands as the 12th position with more than 50,000 positive cases.[10]

The global travel industry, dominated by air travel, has expanded rapidly over the past 30 years with total passenger numbers approaching 2 billion year. In India, everyday there are 3500

domestic flights flying from one place to the other. Flight attendants perform activities associated with routine passenger service, the critical public safety role of flight attendants and the concomitant demands often go unrecognized. These demands include unobtrusive and highly disciplined responses to medical and other emergencies, vigilance for activities within the cabin environment that may accidentally or deliberately threaten their own safety. [11]

Current evidence suggests that the virus that causes COVID-19 is transmitted between people through close contact and droplets. This virus became a pandemic as people travelled from country to country being unaware of this infection. People mostly at risk of acquiring the disease are those who are in contact with or care for patients with COVID-19. This inevitably places health care workers (HCWs) and flight attendants at high risk of infection. [12]

The flight attendants are vulnerable group in this situation of COVID-19 as they are exposed to more than 500 passengers per day from around the world. We hypothesize that knowledge regarding awareness of COVID-19 and personal protective measures used to by flight attendants might help them to safeguard themselves from the spread of infection. Hence, the present study aims to assess the knowledge regarding awareness of COVID- 19 infection among flight attendants.

Material And Methods:

An observational study was conducted among the flight attendants in India to assess their knowledge regarding COVID-19 infection. The subjects were recruited from various commercial airlines in India like Air India, Go Air, Spice Jet, and Indigo. A time bound data collection technique was used in which the period for obtaining data was 60 days starting from March (01/03/2020) to April (30/04/2020). Snowball sampling technique was used for enrolling the study population. Initially a pool of 25 to 30 flight attendants known through a source was used. Google forms were used to complete the data collection. The google form link was sent to this pool of study participants and were requested personally by the investigator to circulate it in their various other professional groups all over India which had various flight attendants working for different domestic airlines. All the questions were marked as required in the google form so that

none of it remained unanswered. The study was approved by the Ethical Committee in Rungta College of Dental Sciences and research ethics committee.

Inclusion Criteria:

•   All those who were willing to participate in the study

•   All those who gave an informed written consent Exclusion Criteria:

•   All those who had undergone similar survey

•   All those who have attended webinar or online courses regarding COVID-19

•   All those who did not give an informed written consent

A pilot study was done on 20 flight attendants to know the feasibility, for training and calibration of examiner. These flight attendants were asked to give feedback regarding the understanding of questions and the time taken to fill the questionnaire. The feedback stated none of them took more than 10-12 mins and found all questions to be easy. The Kappa value for intra examiner reliability was obtained 0.81. A structured questionnaire was made in English language as all the study participants were acquainted with this language. The Cronbach's alpha value was obtained as 0.79. The questionnaire was given to an epidemiologist and a public health dentist to check its reliability. A total of 28 questions were made, out of which 25 questions were found to be essential by the subject experts.

The questionnaire consisted of demographic details, questions regarding COVID- 19 infection and the precautionary measures required in overcoming it. The questionnaire took between 10 and 15 minutes to complete. Internal comparison was done among the flight attendants, as they were categorized according to different age groups and designation.

The study was completed within a period of 2 months and at the end of 60 days, a total of 347 completed google forms were available for analysis.

Statistical Analysis:

Data was analyzed using Statistical Package for the Social Sciences version 16.0 manufactured by IBM Corporation –Armonk, New York, US. All the collected data was entered in the Microsoft Office Excel Sheet 2007 version. Coding was done in numerical format as the correct answer was coded to be 1 and the wrong answer as 0. Descriptive statistics were used to assess the frequency of correct and incorrect responses. Independent sample 't' test was used for gender wise. Intergroup comparison of intervention groups was done using one-way analysis of variance (ANOVA) test and Tukey post hoc. The level of significance was kept as $p < 0.05$ and the normality of the data was tested by Shapiro–Wilk test.

Results:

A total of 347 participants were included in the study of which 98 (28.2%) were males and 249 (71.8%) were females. The age groups of the flight attendants was determined which represents maximum participants i.e. 158 (4.5%) were in the age group of 25-30 years and minimum participants i.e. 2 (0.6%) were in the age group of less than 25 years. The socio demographic characteristics of the schoolchildren are shown in Table 1.

Table 1: Sociodemographic Characterisctics Of Flight Attendants

VARIABLES	FREQUENCY (%)
AGE <25 25-30 31-35 36 and above	2 (0.6) 158 (45.5) 118 (34.0) 69 (19.9)
GENDER Male Female	98(28.2) 249 (71.8)

AIRLINES Air India Go Air Spice Jet Indigo	95 (27.4) 91 (26.2) 63 (16.2) 98 (30.2)
DESIGNATION Pilot Co-Pilot Airhostess Ground staff	20 (5.8) 13 (3.7) 235 (67.7) 79 (22.8)

Mean comparison of knowledge among gender was found to be statistically significant (p=0.03). Out of 347 flight attendants, 98 (28.2%) were male and 249 (71.8%) were female (Table 2).

Table 2: Mean Comparison Of Gender Wise Knowledge Regarding Covid-19 Infection

Gender	N (%)	Mean	t-value	p- value
Male	98(28.2)	14.88	- 2.105	0.036
Female	249 (71.8)	15.49		

Statistical test: independent sample t test, significance level p value <=0.05

Comparison of knowledge was done among the 4 age groups using ANOVA which showed significant difference (p=.001) (Table 3)

Table 3: Mean Comparision Of Age Wise Knowledge Regarding Covid-19 Infection

AGE	N	MEAN	SD	F-VALUE	p- VALUE
< 25	2	17.50	0.70		
25-30	158	15.46	2.45	5.928	.001

31-35	118	15.69	2.20		
36 and above	69	14.30	2.48		

Statistical test: ANOVA; (p<0.05 significant, CI=95%), N= number of study subjects

Tukey post hoc was applied for intergroup comparison, which showed significant difference among age groups 2-4, 3-4 (p=.004, p=.001) whereas group 1-2,1-3, 2-3 and 1-4 were not

significant. (Table 4)

Table 4: Inter Group Comparison Of Age Wise Knowledge Regarding Covid-19 Infection

GROUP	MEAN DIFFERENCE	p-value
1-2	2.03	.624
1-3	1.80	.711
1-4	3.19	.241
2-3	-0.23	.852
2-4	1.15	.004
3-4	1.39	.001

Statistical test: tukey's post-hoc; (p<0.05 significant, CI=95%), N= number of study subjects

Comparison of knowledge was done among the 4 designation groups using ANOVA which showed significant difference (p=.039). (Table 5)

Table 5: Mean Comparision Of Designation Wise Knowledge Regarding Covid-19 Infection

DESIGNATION	N	MEAN	SD	F-VALUE	p- VALUE
Pilot	20	14.60	2.60		
Co-Pilot	13	13.84	3.02	2.825	.039
Airhostess	235	15.51	2.32		
Ground Staff	79	15.17	2.48		

Statistical test: ANOVA; (p<0.05 significant, CI=95%), N= number of study subjects

Discussion:

Flight attendants at their job site have to ensure that all passengers are safe and comfortable at all times. To ensure this, they have to perform various duties like making sure that the safety equipment is working at all times, greet passengers, provide them food and beverages as and when required and monitor, manage and secure the cabin. At their

jobsite i.e. during the flight, they spend maximum time along with the passengers as they have to travel to and fro from one destination to the other. [11] Owing to their frequent travel for durations ranging from one to several days, this unique population has an occupational risk for COVID-19 infection and needs to understand those risks while remaining vigilant in practicing appropriate preventive measures.

As coronavirus disease is caused by the severe acute respiratory syndrome. It is primarily spread between people during close contact and via respiratory droplets from coughs and sneezes. The disease spreads faster where people are close together or travel between areas. It has been stated by World Health Organization (WHO) that travel restrictions can reduce the basic reproduction number from 2.35 to 1.05, allowing it to be more manageable. [12]

In the present study it was observed that 96% of the study population thought this virus is infectious whereas 4% of them thought it to not infectious. The spread of this infection has covered all the areas from slums to villages and from towns to cities; it is even spread from one country to the other. 98% of the study population feared of suffering from this infection because of its rapid transmission from one person to another. The flight attendants during their working hours remain unaware of the different types of people they come across in a single day, as it is a part of their job. Hence, their fear is justified because the spread of this infection cannot be determined only through the symptoms.

Airports are commonly viewed as serving the social good in much the same manner as and gloves as their protective measures.

Flight attendants are vulnerable population in the current situation; they are at same risk as the health care workers. In this study; 62% study participants responded as they feel vulnerable during this situation and 73.8% also responded as this pandemic has hindered their daily routine. 89.8% flight attendants responded that they are having difficulty in facing this situation, 89.6% responded that they are at a higher risk of getting the infection, 72% responded that they feel depressed

during this situation and 81.6% responded that they feel safe at home.

The mass media has become one of the most important means of getting information in recent times. However, social networking exist so as to provide communication among people regardless of the distance, making it open to people easily share information, files and pictures and videos, create blogs and send messages, and conduct real-time conversations. These media updates can engage the viewer's emotions and empathy; mostly television is viewed at home as people feel safe after receiving the updates. It also strengthens the ties between people of those systems. [14] There are various updates regarding the actions taken by government in controlling

the pandemic as well as in saving people through different modes, whereas these updates might also create havoc among the population who are unable to interpret the messages given by government in correct form. 73.8% study participants feel the measures taken by government are helpful, whereas 26.2% feel the measures taken are not helpful to a certain extent and needs modification. 79.3% of the study participants also think that the media updates are creating panic rather than awareness amongst the people.

A limitation of this study is that it was conducted only for a duration of 2 months, long term value of the improvement need to be confirmed by further longitudinal studies with an increase in sample size. Hence, it is recommended that such studies should be done for a longer duration of time as more valuable information can be obtained and there could be more awareness spread regarding this infection which could result in better knowledge among flight attendants.

Conclusion:

The present study revealed that most of flight attendants had consistent awareness regarding various aspects of COVID-19 pandemic. The flight attendants in the age group of 25-30 had a better knowledge when compared to others regarding the origin, transmission and the basic precautionary measures like sanitation, social distancing, use of mask and gloves used for overcoming the infection.

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