



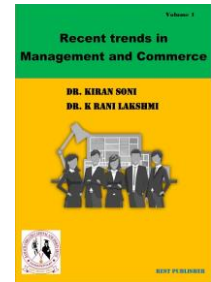
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The Impact of COVID 19 Pandemic on Service Quality Concerns and Expectations of Passengers towards Public transport Systems in Kerala

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Abstract

COVID 19 pandemic due to the coronavirus has caused a severe crisis situation all over the world to people especially passengers, who were highly dependent on public transportation facilities. This adverse condition at present had severely hit the smooth transportation modes of the entire state of Kerala. The current research paper focuses on framing the relationship between passenger's anxiety and worries and also their expectations towards the quality of services provided by the various modes of transportation in Kerala namely roadways, railways, airways and waterways during this pandemic condition. The scope of this study is limited to the passengers belonging to the three districts of Kerala each one from north (Kozhikode), central (Kottayam) and south (Thiruvananthapuram) zones and are using the busses, trains, metro, flights and boat services as the means of transport. The data have been collected through a structured Google form questionnaire from 100 frequent passengers of the three districts. The results of the study reveals that there is a high degree of positive correlation coefficient between the COVID 19 worries and anxieties towards the service quality concerns and expectations of passengers using public transportation systems.

Keywords: COVID 19 anxieties, Service quality, Quality concerns, Quality expectations, Public transport

I. Introduction

Public transportation is a form of travel offered locally that enables more people to travel together along designated routes. Typical examples of forms of public transportation include buses, trains, and trams. High-speed rails, airlines, and coaches dominate public transportation between cities. Public transportation systems include a variety of transit options such as buses, light rail, and subways. These systems are available to the general public, may require a fare, and run at scheduled times. The purpose of introducing or expanding public transportation is to increase access to and use of public transit while, at the same time, reducing motor vehicle miles driven and traffic congestion. The present research work is primarily aimed at finding the passenger's perceptions, expectations, concerns and worries in availing the services provided by the public transport systems namely busses, Kochi Metro, railways, domestic flights and waterways during this present and post COVID 19 pandemic conditions in Kerala. The current research work is an attempt to evaluate the consequences and influence of COVID 19 pandemic crisis towards the quality expectations and concerns of public transport service availing passengers in Kerala. Public transport Passenger's misunderstandings and overwhelming worries during this panic situation is the real focus of this study. This analytical research paper frames the relationship between the various inter related consequences of this pandemic with regard to its striking effect on the perception of frequent passengers. The COVID 19 pandemic phase is a critical situation for the entire world. The entire population is being drastically hit by its negative consequences each day, followed by the uncontrollable hike in the death rates across globe. The sudden break out of this pandemic had created a panic surrounding for each individual. It thus affected everyone's freedom to move from one place to another. Human resources are the movable factor of production that contributes to the generation of income and wealth into the economy. For every county especially India having population density and high growth rate, this free movement of passengers had severely affected due to this pandemic COVID 19. In addition to this extreme nervousness or worries during this pandemic period, public misconceptions and misinterpretations together had created psychological anxieties within the mental state of every passengers in the state of Kerala. Since passengers were frequently relying on public transport facilities and systems in their daily life for earning bread, their overwhelming anxieties and worries towards this pandemic need to be clearly identified and analysed. Hence this research paper intended to study the effect of COVID pandemic towards the worries and expectations of passengers depending on public transport systems is worthy at this point of time.

- To examine the quality concerns and worries of passengers regarding availing of service rendered by public transport systems during the COVID 19 period in Kerala.
- To identify the service quality expectations of passengers in Kerala during the post COVID 19 Phase.
- To provide further suggestions based on the findings of this study.

2. Research Methodology

Type of study: This study is partly descriptive and primarily analytical in nature. A sample survey is undertaken to complete this study.

Population: Kerala state passengers using public transport modes.

Sample size: 100 passengers.

Data source & collection: Purely primary data collected through Google form questionnaire.

Research instrument: A well-structured Google form questionnaire was developed for demographic variables and scaling instruments rated on a five point Likert scale were used to classify and evaluate COVID 19 concerns, worries and passenger's expectation variables to achieve the research objectives.

Pilot study: 30 questionnaires were pre tested with the passengers in Kottayam district using Google form questionnaire. Cronbach's alpha was used to check and establish the internal consistency and scale reliability of questionnaire. This pre-test helped to modify and eliminate vague and repeated statements and demographic components from the initially developed instrument.

Sampling methods: Multistage sampling, Random sampling, Convenient sampling

Sampling design: During the first stage the entire state of Kerala is divided into three zones namely north, central and south zone and three districts were selected one each from the zones. Thus (north) Kozhikode, (central) Kottayam and (south) Thiruvananthapuram districts were selected using simple random sampling lottery method. In the next stage, convenient sampling method was adopted to receive responses through google form questionnaire links form 100 passengers. Convenient sampling can be only practically adopted during this nationwide lock down.

Period of study: April to May 2020

3. Data Analysis and Interpretation

Cronbach's Coefficient Alpha

Table: 1: Internal Consistency and Reliability Analysis Results

Variables	N	Number of Items	Item to total correlation	Cronbach's Alpha
COVID 19 pandemic worries and concerns	100	4	0.385	0.833
COVID 19 pandemic anxieties	100	5	0.425	0.878
Service quality concerns	100	5	0.568	0.705
Quality expectations	100	4	0.763	0.847
Overall Scale Reliability	100	18		0.815

Source: Primary Survey

The table above describes the reliability and consistency of COVID 19 pandemic concerns, worries, anxiety, service quality concerns and expectation variables tested using Cronbach's coefficient alpha. The overall coefficient alpha for the scale is 0.815, which had met the minimum benchmark of 0.7 proposed by Lee Cronbach 1951, Jum Nunnally & Ira Bernstein 1994. The item to total correlation figures of COVID 19 pandemic concerns, worries, anxiety, service quality concerns and expectation variables scale ranges from 0.385 to 0.763 and it is clear that all the item to total correlation figures have attained the minimum benchmark of 0.3. Thus it can be inferred from the results of Cronbach's alpha that, all the sub scales and its individual items have validated with regard to its reliability measure.

Table: 2 : Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
COVID 19 pandemic worries and concerns	100	3.00	5.00	3.9444	0.79962
COVID 19 pandemic anxieties	100	3.00	5.00	3.9750	0.47467
Service quality concerns	100	2.50	5.00	4.4063	0.53101
Quality expectations	100	3.29	5.00	4.6786	0.33940

Source: Primary survey

Table above depicts about the descriptive statistics of the various components of study with an average value and its deviation from that. It is observed that COVID 19 pandemic concerns and anxieties mean values are almost equal and consistent. But their standard deviation scores are entirely different, where the worries and concerns having a greater deviation of 0.79962 as compared to pandemic anxieties. It is clear that, passengers quality expectations in the post COVID 19 period is having a mean value of 4.6786 with a standard deviation of only 0.33940.

Table: 3

Karl Pearson Correlation Coefficient Analysis

Components	COVID 19 concerns and worries		COVID 19 anxieties		Service Quality Concerns		Service Quality Expectations	
	r	Sig.	r	Sig.	r	Sig.	r	Sig.
COVID 19 concerns and worries	1							
COVID 19 anxieties	.458	.000	1					
Service Quality Concerns	.705	.000	.500	.000	1	.000		

Service Quality Expectations	.824	.000	.638	.000	-.448	.000	1	.000
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Source: Primary survey

Correlations are significant at 0.01 level (2 tailed)

Karl Pearson's correlation coefficient is applied to validate the correlation pattern among the concerns and anxieties of COVID 19 pandemic towards the service quality concerns and expectations. It is clear from the above multiple correlation matrix that, all the four components have higher degrees of correlation between them and are found to be significant. Thus from the above correlation coefficient table it can be concluded that, all the r values are significant in correlation with all P values at 0.000 and hence there is statistically enough evidence to suggest that the correlation observed between variables does exist in the population also. As $P < 0.05$ and even below 0.01, the test below is significant and there is a significant relationship between the components of COVID 19 pandemic and Service quality concerns and expectations of passengers.

4. Findings of the Study

There is high degree of positive correlation between COVID 19 concerns (0.824) and anxieties (0.638) towards the passenger's service quality expectations. Majority of the lower and middle income passengers that is 80 % shared their worries related to future rise in fare rates in all modes of transportation especially busses. 30 % of the daily passengers using public transport modes shared their views about may be switching to private vehicles. Almost every passenger had mentioned their worries to travel again in the post pandemic period. Passengers 95% also expressed their concern in exchanging physical currency notes and coins between each traveller. Daily passenger train travellers, 70 % were reported to be more concerned and worried about the poor hygiene and cleanliness in general compartments. Busses and train passengers that is 85 % also shared their worries about overcrowding beyond the seating limits in post COVID 19 phase. 90 % of the passengers using busses and trains mentioned about the lack of adequate number of busses and compartments respectively will result in crowding of passengers, which will be critical at this point of pandemic period. 80 % of passengers who were using domestic flights shared their worries about a next fly in any airways. Among the various passengers, 95 % those who were using busses and trains as the means of public transport reported to be more anxious and nervous about their next journey to any place. 95 % Passengers mentioned about compulsory sanitizing of busses daily after and before the trip. Majority of the respondents 85% also made suggestions not to allow full seating capacity in all means of public transport at least for the next 6 months.

5. Conclusion

The current research work is aimed at framing an association between the various concerns and worries regarding the quality of service and the impact of COVID 19 pandemic towards the passengers availing public transport systems in Kerala. The overall results of the study communicates that, the passengers in Kerala who were highly dependent on the public transport facilities were extremely cautious and worried about their future decision to travel. The post COVID 19 phase even disturbs the passenger's perceptions towards the public transport systems in Kerala especially high concern and anxieties were reported towards busses and train travels. The physical exchange of currency notes between passengers was noted to be of critical concern. This study has been made fruitful as much as possible within the scope and limitations of pandemic time period.

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