



A STUDY ON THE IMPACT OF RAIL AND ROAD TRANSPORTATION DURING PANDEMIC SITUATION

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Abstract: The COVID-19 pandemic crisis has greatly impacted public transport ridership and service provision across the world. As many countries start to navigate their return to normality, new public transport planning requirements are devised. These measures imply a major reduction in service capacity compared to the pre-COVID-19 era. At the time of writing, there is a severe lack of knowledge regarding the potential impact of the pandemic on public transport operations and models that can support the service planning given these new challenges. In this literature review, we systematically review and synthesis the literature on the impacts of COVID on public transport to identify the need to adjust planning measures, and, on the other hand, the existing methods for public transport planning at the strategic, tactical and operational level. We identify intervention measures that can support public transport service providers in planning their services in the post-shutdown phase and their respective modelling development requirements.

I. INTRODUCTION

The rapid spread of the COVID-19 virus, which became a worldwide pandemic in a matter of weeks, has been attributed to the hypermobility of our current lifestyle, globalization, and the connectivity and accessibility of Wuhan, the first epicenter. Since then, the COVID-19 pandemic rapidly evolved into a situation with profound effects on lifestyle and travel worldwide, ranging from a dramatic decrease in air travel to an unprecedented increase in teleworking. These impacts resulted from governmental measures (e.g., travel restrictions and shutdowns of whole sectors in the economy) as well as individual choices to refrain from traveling in order to reduce exposure to other people and the risk of contamination.

II. LITERATURE REVIEW

Paul Lewis ,28 Feb 2020, United states are close to the covid -19. With increase in cases and death counts, the stock market and global transport system was already affected in covid-19.

Hesham Rakha ,24 Jul 2020, A transport sector observed during the covid-19, this paper talks about the reduced traffic and air pollution.

Shri Iyer ,2 oct 2020, White paper looks at the impact on transport system during covid-19, in the area of NEWYORK. Which was the epicenter of corona virus

Prachee Mishra ,14 Apr 2020, Travel ban extends from march 23 till April 14 ,2020. In this paper we discuss about the railways finance system and railways revenues.

S. Velmurugan, Sep 2020, this report discusses about the level of lockdowns as well as restriction are had major impact on economy during the ongoing covid-19, in India.

objective of the study

PRIMARY OBJECTIVE: To make people know about the importance of public transportation such as railways and road ways during pandemic period.

SECONDARY OBJECTIVE: To compare the use of transportation in pandemic period and before that. To make people be aware of the ways by which the dangerous viruses like corona spreads. To enable people be aware of the transportation as the major cause to spread disease like COVID 19.

III. RESEARCH METHODOLOGY

A research design is a collection and analysis of data. Descriptive research design was adopted in order to achieve the objectives of the study. The research study used both the primary and secondary data. Convenience method was adopted and data collection was done through questionnaire method for 115 samples.

IV. DATA ANALYSIS

The Descriptive Analysis Method, Chi Square Test and ANOVA Test Were Used for the Analysis of the Data.

4.1 Percentage Analysis**Table 1.** Demographic representation corresponding to the respondents

S. No.	Particulars	No. of Respondents	Percentage
1	Age		
	18-30 Years	77	67
	31-50 Years	24	20.9
	Above 50	14	12.2
	Total	115	100
2	Usage of transportation during pandemic situation		
	Extremely satisfied	12	10.4
	satisfied	34	29.6
	Neither satisfied	27	23.5
	Dissatisfied	34	29.6
	Extremely dissatisfied	8	7
	Total	115	100
3	Work affected during pandemic period		
	Strongly Agree	51	44.3
	Agree	40	34.8
	Neither Agree nor Disagree	17	14.8
	Disagree	4	3.6
	Strongly Disagree	3	2.5
	Total	115	100

4.2 Chi-Square Test

Null Hypothesis (H0): There is no significant relationship between age of the respondents and the job satisfaction to balance the work and personal life

Alternate Hypothesis (H1): There is a significant relationship between age of the respondents and the job satisfaction to balance the work and personal life

Table-2. Showing the relationship between the age of the respondents and the rate and usage of transportation during pandemic situation

	Value	Df	Asymptotic. Sig. (2-sided)
Pearson Chi-Square	20.283 ^a	8	.009
Likelihood Ratio	23.098	8	.003
N of Valid Cases	115		
a. 7 cells (46.7%) have expected count less than 5. The minimum expected count is .97.			

Significance value (0.000)>0.05.

The results of the "Pearson Chi-Square" say that $\chi (8) = 20.283, p = 0.97$. This tells us that there is no statistically significant association between age of the respondents and the rate and usage of transportation during pandemic situation.

4.3 One Way ANOVA

Null hypothesis (Ho): There is no statistically significant relationship between age of the respondents and their opinion on the most suitable parameters to motivate the employee for better outcome (promotion)

Alternate hypothesis (H1): There is a statistically significant relationship between age of the respondents and their opinion on the most suitable parameters to motivate the employee for better outcome (promotion)

Table-3. Showing the relationship between Public transport needs precaution measurement at any cost met by government And Work affected during pandemic period

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	22.152	4	5.538	3.375	.012
Within Groups	180.509	110	1.641		
Total	202.661	114			

This is the table that shows the output of the ANOVA analysis and we have no statistically significant difference between our group means. We can see that the significance level is 0.012 ($p = .012$), which is more than 0.005, therefore, there is no statistically significant relationship between age of the respondents and their opinion on the most suitable parameters to motivate the employee for better outcome (promotion)

IV. RESULTS

The first chi-square test denotes that there is no statistically significant association between age of the respondents and the rate and usage of transportation during pandemic situation. The second ANOVA test denotes that there is there is no statistically significant relationship between Public transport needs precaution measurement at any cost met by government And Work affected during pandemic period.

V. CONCLUSION AND SUGGESTIONS

To provide information about transportation in the pandemic situation. Let government motivate people to adopt with new rules of transportation (social distancing, use of mask, to sanitized). transportation needs precaution measurement for safe travel. To give correct information for taking regular travel. Public transport needs on safe while traveling to long distance. The objective of this study was to provide an overview of the impact of rail and road transportation during pandemic situation. Mainly research about the challenges and the risk of Transportation. A survey was conducted to 115 respondents and data was collected on march 2021.conclusively what I am coming to say is that the pandemic situation of covid 19 has instilled the minds of people starting from

aged to children that transport is more than the basic needs. Without food and water, there is no life. without transport, nothing of those shots are possibly impossible.

REFERENCES

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- Hesham Rakha (24 July 2020) “Preliminary Investigation of COVID-19 impact on Transportation System Delay, Energy Consumption and Emission Levels”
- Shri Iyer (2 Oct 2020) “Initial Impacts of COVID-19 on Transportation Systems”
- Prachee Mishra (11 Apr 2020) “Impact of COVID-19 on Railway’s finances”
- Velmurugan S (28 Sep 2020) “Impacts of COVID-19 on the transport sector and Measures as well as Recommendations of Policies and Future Research: Report on India”

