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IMPACT OF COVID-19 PANDEMIC ON HOSPITAL MANAGEMENT

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ABSTRACT

This study aimed to determine the impact of COVID-19 at the hospital management level and highlight the need for preparedness and effective management during pandemics and other crises. The study considered relevant areas that were significantly affected by the pandemic, such as human resources management, material supply, maintenance, hospital services, cost impact, social impact, and financial impact. The research population consisted of healthcare professionals who had experienced the pandemic and worked in hospitals across India. The sample size for this research was 324 healthcare workers. The Data was collected through a self-designed questionnaire. The study utilized the SPSS version 25 for data analysis. The regression analysis reveals that human resources management, material supply, maintenance, hospital services, cost impact, social impact, and financial impact significantly impact hospital management during the pandemic.

Keywords: Hospital management, pandemic, human resource management, maintenance, hospital services, social impact.

1. INTRODUCTION

COVID-19 is a highly contagious respiratory illness caused by the SARS-CoV-2 virus and primarily spreads through respiratory droplets from infected individuals. The pandemic has profoundly impacted virtually all aspects of society, including healthcare systems, economies, education, and social interactions. [*World Health Organization, 2020*] The pandemic has caused a public health crisis of global proportions, leading to numerous national and international responses aimed at mitigating its impact. These responses have included lockdowns, social distancing measures, widespread testing, contact tracing, and vaccination campaigns. [*Center for Disease Control and Prevention, 2021*] The pandemic has also highlighted disparities in access to healthcare and other resources, with marginalized communities often bearing the brunt of the disease's impact. [*Braveman et al., 2020*]

In addition to the pandemic's health consequences, it has had far-reaching social and economic effects. Many businesses and industries struggled to stay afloat due to shutdowns and reduced consumer demand. Governments worldwide have

implemented various measures to support their economies, including financial aid programs, tax breaks, and other forms of economic stimulus. [*International Monetary Fund, 2020*]

The pandemic has had a profound and ongoing impact on virtually every aspect of human society, with significant implications for how we live, work, and interact. When an infection outbreaks and spreads a large geographical area and covers a large population, it is called a pandemic. Such infection outbreaks increase mortality and morbidity and cause substantial social, economic and political distraction.

The integration, urbanization, global travel, and exploitation of the natural environment are the main reasons for the increased frequency of pandemics over the past century *(Jones et al., 2008; Morse, 1995).* They also apprehended that the trend, frequency, and intensity will increase with time.

Keeping in view the delayed reporting of early SARS cases, the World Assembly calls for a meeting of all WHO members to update the International Health Regulation (IHR) on specific standards for detecting, reporting on, and responding to outbreaks (WHO 2005). Despite so much global preparedness still, challenges and substantial gaps exist *(Fischer and Katz, 2013; WHO, 2014)*

THE ROLE AND IMPORTANCE OF HOSPITAL MANAGEMENT DURING PANDEMIC

Hospital management refers to the overall administration and coordination of healthcare facilities, including hospitals, clinics, and other healthcare institutions. The primary goal of hospital management is to ensure the efficient and effective delivery of high-quality healthcare services to patients. Hospital management encompasses a wide range of activities and functions, including strategic planning and goal setting, financial management and budgeting, human resource management, facilities management, [*McKee & Healy, 2002*] procurement and supply chain management, quality assurance, patient care and safety, regulatory compliance and risk management, information management and technology infrastructure, and community outreach. Effective hospital management is essential for ensuring the successful operation of healthcare facilities, especially during times of crisis such as the ongoing pandemic. Good hospital management can help healthcare institutions respond quickly and effectively to the needs of their patients while also ensuring the safety and well-being of their staff and the broader community.

The proposed research is essential and needed for several reasons. The COVID-19 pandemic has profoundly impacted hospital management, highlighting the need for preparedness and effective management during pandemics and other crises. By analyzing the root causes of the challenges faced by health managers during the pandemic, this study can help develop protocols for future pandemics and other emergencies, [*Gonzalez et al., 2020*] allowing hospitals to be better prepared and respond more effectively.

Secondly, there is a lack of research in this field, with little work done on the impact of pandemics on hospital management. This study will help fill this research gap and provide valuable insights into the challenges faced by health managers during the pandemic, as well as the coping strategies and best practices that can be employed to manage hospitals more effectively during crises. [*Ranney et al., 2020*]

Thirdly, the proposed research will impact H.R. managers of the healthcare industry, who will be able to learn from the challenges faced by hospital managers during the pandemic and develop action plans to cope with such situations in the future. This will help ensure the provision of high-quality medical services to patients during pandemics and other crises. Finally, the proposed research will also help healthcare administrators understand the financial, physical, and external factors affected by the pandemic outbreak. This understanding can inform decisions on resource allocation and investment in critical infrastructure and technology to better prepare for future pandemics and other crises.

2. LITERATURE REVIEW

The literature on the impact of the pandemic on hospital management has always been of focus among researchers. Due to the recent pandemic, the situation exposes an entirely different scenario with a heightened level of stress, anxiety, and burnout among healthcare workers *(Santarone K et al., 2020).* During the COVID-19 pandemic, the healthcare industry has faced numerous essential management challenges. Some challenges are particular for an organization, yet the

healthcare industry primarily faces major catastrophic challenges. Begun, James W., and H. Joanna Jiang. (2020). Dong et al. (2020) suggested that lower respiratory tract infection was the most common reason for hospital admission in children with suspected Covid-19-19.

It is reported that hospital management faced several new challenges during the pandemic. A global study conducted with authors from the UK, Germany, Portugal and Spain revealed that management faced severe problems during the pandemic *Alhammadi S. et al. (2020)*. The authors noted that management established several new strategies, which include but are not limited to meeting daily internally, meeting with vendors and taking instant decisions on new challenges to keep the functioning of the hospital smooth and if there is any need to increase or decrease the capacity and protect the staff from getting infected.

It was reported that during the pandemic, hospitals had to run at maximum efficiency to combat the emergency, and there was no room for minor issues such as inter-departmental problems that may be faced during routine days. Richard et al. (2020) suggested that inventory management and information sharing are key aspects during the crisis, which can be done through openness across departments and hospitals.

It is a fact that the demand for hospital services has increased tremendously during the pandemic, and many hospitals have had to run at maximum or more than their capacity. It becomes more difficult during the crisis to maintain social distancing and has an additional risk of infection for healthcare workers. Richard et al. (2020) provide a complete overview of this and how it can be effectively managed, e.g. different entry and exit systems in the hospital for infected and non-infected petronels or may be considering reducing the hospital or ICU stay for patients to meet the demand. However, this may create some issues as some patients may require rehospitalization.

A paper published by Deloitte China (2019) pointed out that management should try to create an organization that is flexible and can utilize available resources effectively to face such challenging times successfully. The management should make its objective clear to employees across the organization. David Hutton (2020) that interhospital utilization of resources should be used with utmost care as it leads to increased severity of crisis at one specific hospital during the sudden surge of cases,

It is not only management but also financial aspects that need due attention during the pandemic by the management. Severe crunch and increased supply prices are noticed while running the hospital. It is time-consuming to get reimbursement from government bodies while vendors require advance or cash payment, which may lead to a cash flow crisis. Pietro Ferrara (2020) suggested that patient-level resource utilization should be considered for better financial ideas of expenses and overall impact.

COVID-19 has provided a clear overview of how one small event in one part of the world can significantly impact healthcare organizations worldwide. It has also been noticed that most of the challenges faced by healthcare organizations during the pandemic are common. However, some of them are specific to individual organizations (James and Joanna, 2020)

A survey done by Christi A. Grimm, Principal Duty Inspector General of U.S. Department of Health and Human Services, on hospital administrators of 323 hospitals across 46 states found several difficult challenges for the hospital managers to manage the hospital, such as difficulty in maintaining the bed capacity of the hospital, difficulty in maintaining adequate staffing, widespread shortage of the personal protection kit (PPE), shortage of the critical supplies material and logistic support, shortage of ventilator, increased cost and decreased revenue.

How a minor and wonder pandemic in a small part of the world has a gigantic effect on the daily operations of the hospital; Covid-19 is the best example. This episode could be categorized into three sections: the rapidity of its blowout, the complexity of its origin and the unpredictability of measuring its effect (Begun, James W., and H. Joanna Jiang 2020).

During the COVID-19 pandemic, the healthcare industry has faced numerous essential management challenges. Some challenges are particular for a particular organization, yet the healthcare industry primarily faces major catastrophic challenges *(Begun, James W., and H. Joanna Jiang, 2020).*

Emotional exhaustion is a common issue reported by healthcare workers, which may eventually lead to more medical errors, reduced motivation to treat patients, and an increased turnover rate (Penwell et al., 2018). Several studies during the study of the effect of COVID-19- found that stress, fear, anxiety and symptoms of depression were predominant. The anxiety level observed dominance by Liu et al. (2020) among health workers while handling Covid-19 patients. Few scholars have also used qualitative methods to get better results on the effect of Covid-19 on workers' health. Liu et al. (2020) for nine nursing staff and four consultant physicians.

Many challenges of COVID-19, like fear of getting infected, the feeling of exhaustion and functioning in a new environment, have been described by these health workers. The health workers realized that despite these challenges, they were entirely responsible for the care of their patients as it was part of their duty, showing dedication and fulfilment to their profession.

There are some other factors also which have affected the more significant number of populations related to this Covid-19 Pandemic, like distance from their family, lack of liberty, Incalculability of the advancement of the Virus, and sense of helplessness (Li and Wang, 2020; Cao et al.,2020)

3. METHODOLOGY

INSTRUMENT

A questionnaire was designed to gather quantitative information on how the epidemic has affected hospital administration. It consisted of 40 multiple-choice and Likert scale questions. A thorough literature analysis was done to determine the essential elements that affected hospital management during a pandemic to ensure the comprehensive survey questionnaire captures all pertinent information. Participants were asked to rate their agreement or disagreement with a statement using the Likert scale, which generally ranges from 1 (strongly disagree) to 5 (strongly agree). [Likert. (1932).” A Technique for the Measurement of Attitudes.” *Archives of Psychology*]

PROCEDURE

A secure online survey platform, i.e. Google Form, was used to administer the questionnaire electronically. The participants were selected randomly from social media profiles, i.e. Linkedin, Google Scholar, and some personal contacts. An email invitation with a link to the survey questionnaire was sent to the participants. [Couper, M. P. (2000). "Web Surveys: A Review of Issues and Approaches." *Public Opinion Quarterly*]

The survey administration considered ethical issues at all times, and participants could opt out at any moment, which was clear to them. The questionnaire did not request any identifying information, such as names or addresses to maintain the data's anonymity and confidentiality.

PARTICIPANTS

The study was conducted in hospitals located in various cities and districts of India. The participants of the study were hospital administrators, managers, and staff who were involved in the management and delivery of healthcare services during the COVID-19 pandemic. [Ranney, M. L., Grépin, K. A., & Melton, G. B. (2020). "Critical Supply Shortages—The Need for Ventilators and Personal Protective Equipment during the COVID-19 Pandemic." New England Journal of Medicine.] The participants were selected based on their job category, experience, and availability. A total of 324 responses were received. [Krejcie, R. V., & Morgan, D. W. (1970). "Determining Sample Size for Research Activities." *Educational and Psychological Measurement*]

STATISTICAL ANALYSIS:

The researcher used various statistical tools to analyze the collected data, e.g. SPSS 25.0, AMOS, and Microsoft Excel. [Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics*. SAGE Publications.]

EXPLORATORY FACTOR ANALYSIS

Exploratory Factor Analysis (EFA) is used to understand the nature of the constructs influencing a response set. It also helps in getting an understanding of a large set of variables. [Costello, A. B., & Osborne, J. W. (2005). "Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most From Your Analysis." Practical Assessment, Research, and Evaluation.] There is a prior assumption in this study that any indicator may have any association with any factor.

RELIABILITY ANALYSIS

Reliability analysis is used to determine the internal consistency or average correlation of items in the survey to gauge its reliability. Reliability analysis assists in determining whether the same response would come on repetitive analysis. Cronbach's Alpha is a numerical reliability coefficient that is tested on its basis. [Cronbach, L. J. (1951). "Coefficient Alpha and the Internal Structure of Tests." *Psychometrika*.]

REGRESSION ANALYSIS

Regression analysis is performed to establish the relationships among variables. It has many techniques for analyzing several variables to establish the relationship between a dependent variable and one or more independent variables (or 'predictors'). [Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics*. SAGE Publications.]

RELIABILITY

Validity and reliability are the most important and required characteristics of any research instrument. Cronbach's alpha test was used to check the reliability of the questionnaire, and it was found to be 0.706. Cronbach's alpha value of more than 0.7 is found in the acceptance range as it shows a perfect fit of variables correlations coded in the instrument, and the questionnaire is considered reliable for research. [Tavakol, M., & Dennick, R. (2011). "Making Sense of Cronbach's Alpha." *International Journal of Medical Education*.] Reliability indicates the instrument's capacity to ensure that any instrument used for measuring experimental variables gives consistent results every time. Cronbach's alpha test was performed on all variables measured on a five-point Likert scale. A test value of more than 0.912 is accepted, which indicates 91.2% reliability of the instrument (see table-1). [DeVellis, R. F. (2016). *Scale Development: Theory and Applications*. SAGE Publications.]

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.706**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	**8809.987**
	df	**780**
	Sig.	**.000**

Table-1 KMO and Bartletts's Test

4. RESULTS AND DISCUSSIONS

Data analysis is performed through SPSS 25 and AMOS 25 tools. The questions are arranged to determine the significance of the several factors impacting hospital functioning. The significant results conferred and analyzed the hypotheses based on statistical techniques, e.g., independent t-test, One-way analysis of variance (ANOVA) and regression through SPSS 25 and AMOS 25. Data analysis is done in two stages. In stage one, scale development, exploratory factor analysis, and reliability analysis are done, and in the second stage, the hypotheses are tested using various statistical tools like SPSS.

KAISER-MEYER-OLKIN TEST AND BARLETT'S TEST

Kaiser- Meyer-Olkin (KMO) statistic helps to measure the suitability of the sample. The result of a KMO value > 0.5 is considered to have better adequacy. KMO value near 1.0 is supposed to be more acceptable. Bartlett's test is run in SPSS to check that the variables used in the study are not correlated. The value less than 0.04 of sig in Bartlett's test shows that the data collected for the study is adequate. The value of KMO in the study is 0.706, which is higher than the standard value of 0.5, which means that the data is appropriate for the analysis. According to the KMO value obtained, it is apparent that the variables are not co-related (see table-2).

KMOandBartlett's Test		
Kaiser-Meyer-OlkinMeasureofSamplingAdequacy.		.706
Bartlett'sTestofSphericity	Approx.Chi-Square	8809.987
	df	780
	Sig.	.000

Table-2

EXPLORATORY FACTOR ANALYSIS (EFA)

A multivariate statistical approach is known as factor analysis and is commonly used in education, psychology, and health care. Factor analysis can be divided into two categories: exploratory factor analysis and confirmatory factor analysis. As the name implies, the exploratory factor analysis explores the dimensions to create a model from a large set of items. The object of the factor analysis is to discover the independent variables to achieve the best theoretical understanding of the factors under consideration.

This study uses the varimax factor rotation method for the analysis. A value of more than 0.4 of the factor loading is

considered significant. The factor loading table obtained from SPSS is concise in the table-3 below.

S. N	ITEMS	FACTOR LOADING
1	HOSPITALMANAGEMENT1	0.733
2	HOSPITALMANAGEMENT2	0.561
3	HOSPITALMANAGEMENT3	0.535
4	HOSPITALMANAGEMENT4	0.452
5	HOSPITALMANAGEMENT5	0.655
6	HOSPITALMANAGEMENT6	0.498
7	HOSPITALMANAGEMENT7	0.680
8	HUMANRESOURCE1	0.763
9	HUMANRESOURCE2	0.618
10	HUMANRESOURCE3	0.695
11	HUMANRESOURCE4	-0.455
12	HUMANRESOURCE5	0.412
13	MATERIAL1	0.707
14	MATERIAL2	0.614
15	MATERIAL3	0.676
16	MATERIAL4	0.589
17	MATERIAL5	0.523
18	MAINTENANCE1	0.657
19	MAINTENANCE2	0.767
20	HOSPITALSERVICES1	0.794
21	HOSPITALSERVICES2	0.748
22	HOSPITALSERVICES3	0.655
23	HOSPITALSERVICES4	0.702
24	COSTIMPACT1	0.770
25	COSTIMPACT2	0.824
26	COSTIMPACT3	0.666
27	COSTIMPACT4	0.841
28	COVIDSOCIALIMPACT1	0.524
29	COVIDSOCIALIMPACT2	0.786
30	COVIDSOCIALIMPACT3	0.803
31	COVIDSOCIALIMPACT4	0.649
32	COVIDSOCIALIMPACT5	0.838
33	COVIDSOCIALIMPACT6	0.859
34	COVIDSOCIALIMPACT7	0.892
35	COVIDSOCIALIMPACT8	0.791
36	COVIDSOCIALIMPACT9	0.539
37	COVIDSOCIALIMPACT10	0.641
38	COVIDFINANCIALIMPACT1	0.461
39	COVIDFINANACIAL II IMPACT2	0.788
40	COVIDFINANCIALIMPACT3	0.774

Table-3: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.[a]

In the table-3, the loading factor of all items is more than 0.4, which is why all the items are considered for the analysis.

RELIABILITY ANALYSIS

The reliability analysis is done using Cronbach's alfa method. The Lee Cronbach established coefficient alpha to measure the reliability. A score of more than 0.6 is considered acceptable for the reliability of the questionnaire. Here is the Cronbach's α result mentioned below (see table-4 and table-5).

SCALE: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	324	100.0
	Excluded[a]	0	.0
	Total	324	100.0

a.Listwisedeletionbasedonallvariablesintheprocedure.

Table-4

ReliabilityStatistics	
Cronbach'sAlpha	**Nof Items**
.896	**40**

Table-5

The test value of Cronbach's alfa is 0.896, which is more than 0.6, which means that the questionnaire is reliable for conducting the study. This Cronbach's Alpha is supposed to be better. This Cronbach's Alpha value may be due to the maximum number of professional participants from the relevant industry and the hospital administration department who have opted for special care during the selection. The researcher trailed the systematic methodology for the data collection and the systematic method for data analysis.

The table-6 represents the tested value of Cronbach's Alpha for individual scale variables.

S.N	DIMENSIONS	N OF ITEMS	FACTOR LOADING	CRONBACH'S ALPHA
1	HOSPITAL MANAGEMENT	7	0.733	0.558
			0.561	
			0.535	
			0.452	
			0.655	
			0.498	
			0.680	
2	HUMAN RESOURCE	5	0.763	0.659
			0.618	
			0.695	
			-0.455	
			0.412	
3	MATERIAL	5	0.707	0.754
			0.614	
			0.676	
			0.589	
			0.523	
4	MAINTENANCE	2	0.657	0.722
			0.767	
5	HOSPITALSERVICES	4	0.794	0.836
			0.748	
			0.655	
			0.702	
6	COST IMPACT	4	0.770	0.824
			0.824	
			0.666	
			0.841	
7	COVID SOCIAL IMPACT	10	0.524	0.802
			0.786	
			0.803	
			0.649	
			0.838	
			0.859	
			0.892	
			0.791	
			0.539	
			0.641	
8	COVID FINANCIAL IMPACT	3	0.461	0.666
			0.788	

			0.774	

Table-6

REGRESSION ANALYSIS:

To find out the relationship between two or more variables. This method analyzes the relationship between independent variables and dependent variables. In this data analysis, linear regression and R square value are used. The range of the R square is always between 0 to 100%. The interpretation of a higher R square means the lesser difference between observed data and fitted value (see table-7,8, 9, and 10).

REGRESSION ANALYSIS

VariablesEntered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	CFI,COSTI, MAT, H.R.,. MAIN, HS, CSI[b]		Enter

Table-7
a.DependentVariable:HM
b.All requested variables entered.

Table 7

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.770[a]	.593	.584	.33331

Table-8: a. Predictors:(Constant), CFI, COSTI, MAT, H.R., MAIN, H.S., CSI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.171	7	7.310	65.800	.000[b]
	Residual	35.106	316	.111		
	Total	86.277	323			

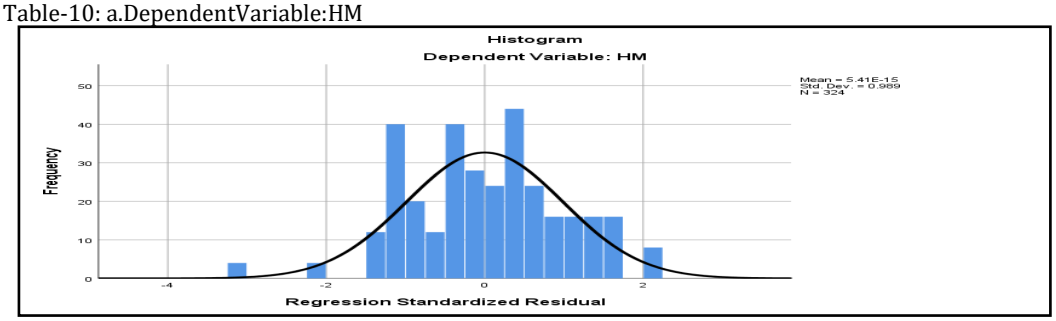
Table-9
a. Dependent Variable: HM
b. Predictors:(Constant), CFI, COSTI, MAT, H.R., MAIN, H.S., CSI

Table 9

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.713	.166		4.284	.000
	H.R.	.035	.035	.042	1.009	.314
	MAT	.256	.039	.363	6.593	.000
	MAIN	.145	.036	.215	4.013	.000
	H.S.	.049	.037	.079	1.323	.187
	COSTI	.077	.026	.115	2.906	.004
	CSI	.212	.054	.235	3.899	.000
	CFI	.037	.037	.057	1.007	.315

Table-10: a.DependentVariable:HM



Figue-1

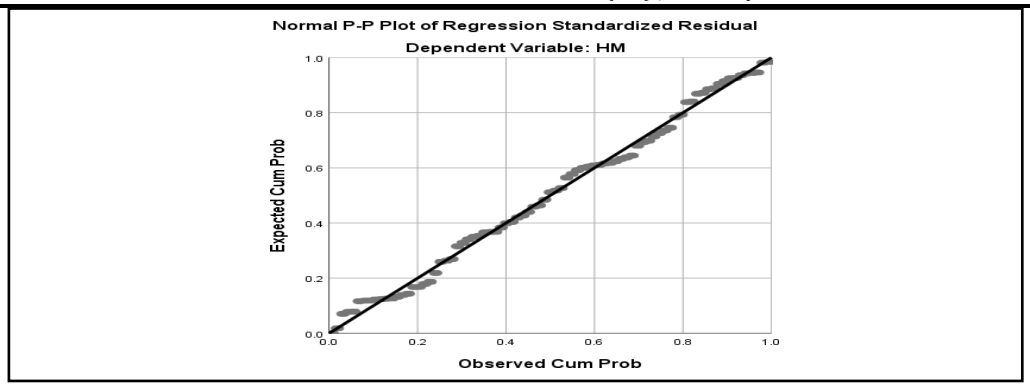


Figure-2

S.N	Independent Variable	Dependent Variable	COEFFICIENT	SIG
1	HUMAN RESOURCES	HOSPITAL MANAGEMENT	0.136	0.003
2	MATERIAL	HOSPITAL MANAGEMENT	0.445	0.000
3	MAINTENANCE	HOSPITAL MANAGEMENT	0.425	0.000
4	HOSPITAL SERVICES	HOSPITAL MANAGEMENT	0.377	0.000
5	COST IMPACT	HOSPITAL MANAGEMENT	0.153	0.000
6	COVIDSOCIAL IMPACT	HOSPITAL MANAGEMENT	0.482	0.000
7	COVID FINANCIAL IMPACT	HOSPITAL MANAGEMENT	0.252	0.000

Table-11: Hypothesis Testing

HUMAN RESOURCES VS HOSPITAL MANAGEMENT

H01 There is no significant impact of Human Resource on Hospital Management
H11 There is a significant impact of Human Resources on Hospital Management

DISCUSSION:

The ANOVA test was applied to find the difference in the mean value obtained in the factor impacting human resources across hospital management. A description analysis was done to get the standard deviation and mean value of hospital management experience, and the results are mentioned in the table-11. The result reveals a difference between the mean values of factors impacting human resources and hospital management. The significant value was recorded as less than 0.05. The result concluded that there is no significant difference in the factors impacting human resources across hospital management. Henceforth, the hypothesis H01 is rejected.

MATERIAL VS HOSPITAL MANAGEMENT

H02 There is no significant impact of Material on Hospital Management
H12 There is a significant impact of Material on Hospital Management

DISCUSSION:

The ANOVA test was applied to find the difference in the mean value obtained in the factor impacting material supply across hospital management. A description analysis was done to get the standard deviation and mean value of hospital management experience, and the results are mentioned in the table above.

The result reveals that a difference exists between the mean values of factors impacting material supply and hospital management. The significant value was recorded as **less than 0.05**. The result concluded that there is a significant difference in the factors impacting material supply across hospital management. Henceforth, the hypothesis **H02** is rejected.

MAINTENANCE VS HOSPITAL MANAGEMENT

H03 There is no significant impact of Maintenance on Hospital Management
H13 There is a significant impact of Maintenance on Hospital Management

DISCUSSION:

The ANOVA test was applied to find the difference in the mean value obtained in the factor impacting maintenance across hospital management. A description analysis was done to get the standard deviation and mean value of hospital management experience, and the results are mentioned in the table above.

The result reveals a difference between the mean values of factors impacting maintenance and hospital management. The significant value was recorded as less than 0.05.

The results concluded that there is a significant difference in the factors impacting maintenance across hospital management. Henceforth, the hypothesis **H03** is rejected.

HOSPITAL SERVICES VS HOSPITAL MANAGEMENT

H0 4 There is no significant impact of hospital services on hospital management.
H14 There is a significant impact of hospital services on hospital management

DISCUSSION:

The ANOVA test was applied to find the difference in the mean value attained in the factors impacting hospital services across hospital management. A description analysis was done to get the standard deviation and mean value of hospital management experience, and the results are mentioned in the table above.

The result reveals a difference between the mean values of factors impacting hospital services and hospital management. The significant value was recorded as less than 0.05.

The result concluded that there is a significant difference in the factor impacting hospital services across hospital management. Henceforth the hypothesis **H04** is rejected.

COST IMPACT VS HOSPITAL MANAGEMENT

H05 There is no significant impact of Cost Impact on Hospital Management
H15 There is a significant impact of Cost Impact on Hospital Management

DISCUSSION:

The ANOVA test was applied to find the difference in the mean value attained in the factor impacting cost across hospital management. A description analysis was done to get the standard deviation and mean value of hospital management experience, and the results are mentioned in the table above.

The result reveals that a difference exists between the mean values of factors impacting cost and hospital management. The significant value was recorded as less than 0.05. The result concluded that there is a significant difference in the factors impacting cost across hospital management. Henceforth, the hypothesis **H05** rejected.

COVID SOCIAL IMPACT VS HOSPITAL MANAGEMENT

H06 There is no significant Covid Social impact on Hospital Management
H16 There is a significant Covid Social impact on Hospital Management

DISCUSSION:

The ANOVA test was applied to find the difference in the mean value attained in the factor impacting COVID social influence across Hospital Management. A description analysis was done to get the standard deviation and mean value of

hospital management experience, and the results are mentioned in the table above.

The result reveals a difference between the mean values of factors impacting COVID social influence and Hospital Management. The significant value recorded **less than 0.05**

The result concluded that there is a significant difference in the factors impacting COVID social Influence across hospital management. Henceforth the hypothesis **H06** is rejected**.**

COVID FINANCIAL IMPACT VS HOSPITAL MANAGEMENT

H07 There is no significant COVID financial impact on Hospital Management
H17 There is a significant COVID financial impact on Hospital Management

DISCUSSION:

The ANOVA test was applied to find the difference in the mean value attained in the factor impacting Covid financial influence across hospital management. A description analysis was done to get the standard deviation and mean value of hospital management experience, and the results are mentioned in the table above.

The result reveals a difference between the mean values of factors impacting COVID financial influence and Hospital Management. The significant value was recorded as less than 0.05.

The result concluded that there is a significant difference in the factors impacting COVID financial Influence across hospital management. Henceforth, the hypothesis **H07** is rejected.

5. CONCLUSION

Most of the study findings are in parallel to the observations made by the researcher in the literature survey. Gourinchas (2020) reported that COVID-19 has generated a situation where 50% or more of the workforce might not be able to work in a short period. Similarly, COVID-19 created a complex and challenging environment for managers and human resource management practitioners (Bharti, S., 2020). Bustamante Izquierdo, J.P (2023) also suggested that the pandemic influenced inadequate payment and decent working conditions, such as a lack of contract stability that eventually put more strain on the overall health system. Mukherjee A. et al. (2020) reported that health workers like doctors, nurses and outreach workers were subjected to heightened verbal and physical violence during the COVID-19 outbreak.

The findings of the present study are also supporting the research hypothesis that material has a significant impact on hospital management. Previous research on the subject matter also aligns with the present finding. Lau YY et al. (2022) found that the disturbance of the global supply chain, the supply shortage of raw materials, the highly uncertain delivery schedule and the shortage of life-saving medical supplies faced by hospital administrators.

The COVID-19 pandemic has heavily impacted hospital supply chain management, especially in its supply chain aspect; the substantial shortage of certain pharmaceutical products and medical equipment is crucial (Chtioui A. et al., 2020). Goldschmidt, K., & Stasko, K (2022) have highlighted that the failure of the global supply chain was rapid at the beginning of the COVID-19 pandemic and healthcare organizations were left without supplies to look after the patients.

As the hypothesis that *maintenance has no significant impact on hospital management is rejected*, findings suggest that maintenance will impact hospital management function. Vaidya, Krijan Man et al. (2022) focused on the problems faced by the laboratory staff during the pandemic, and they suggested that pandemic combat measures such as social isolation have been significant concerns in restricting or interrupting the provision of services by companies that perform preventive maintenance services.

The hypothesis *that hospital services have no significant impact on hospital management is rejected; the findings again suggest that hospital s*ervices affect hospital management function. The present study's findings are supported by Banatvala, J (2020). He indicated the shortage of swabs to take samples from patients and healthcare workers during the COVID-19 pandemic. Our reliance on China as a global supplier for such supplies has compromised the U.K.'s COVID-19

response. Many manufacturers, suppliers, and hospital services are inevitably finding it challenging to meet the demand for testing of both patients and staff, a lack of trained personnel to carry out new and sophisticated tests (Banatvala, J., 2020; Triyani et al.2023; Vaidya, et al. 2022).

The study results find the significant impact of cost on hospital management. These results are supported by Miethke-Morais et al. (2021). They reported that the most critical cost components were drugs (30.3%), supplies (23.3%) and laboratory tests (17.2%). In the wards, PPE, medicines and supplies had the highest costs (25.4%, 23.4% and 20.6%, respectively), and E.D. The expenses were incurred by laboratory tests, radiologic exams and drugs (43.9%, 34% and 17.4%, respectively) 17. They have also concluded that total costs and average and daily estimated costs increased by 50% for older age strata, by 10-24% according to the number of comorbidities and by 24%-200% when additional therapeutic procedures were required; these costs decreased by 24% when the outcome was death.

The social impact of COVID-19 is also a significant factor that affected hospital management during the pandemic. The findings align with Gaspar et al.(2023), who concluded that healthcare professionals would experience mental health problems and work-related stress during the COVID-19 pandemic, which can lead to less satisfaction at work and decreased health and quality of life over an extended period. Saifullah et al.(2023) also suggested that the COVID-19 pandemic has badly impacted human personal and family lives.

The COVID-19 financial impact on hospital management has been found to be significant. The finding aligned with the American Hospital Association, which agreed that hospitals and health systems face catastrophic financial challenges in light of the COVID-19 pandemic. A rise was seen in beneficiaries as purchasing of online Health Insurance schemes shot up by 30%, and offline schemes saw a fallout (American Hospital Association, 2020). Shukla et al.(2020) suggested that COVID-19 care prompted higher operating expenses for necessary supplies and rapidly escalating labour costs.

IMPLICATION OF RESEARCH

This research will help healthcare managers understand the root cause of any pandemic and prepare strategies and policies in advance to minimize the pandemic's impact on hospital management. This study will also give healthcare managers and workers an idea of how to focus on the department affected by any pandemic or disaster.

DIRECTION FOR FUTURE RESEARCH

This study will allow the researchers to identify the main causes of that particular department's disruption and prepare a concrete strategy. This research will open a window to explore more causes in the specific department affecting hospital management. This study will provide future research to explore the pandemic's effect on the other hospital departments.

CONFLICT OF INTERESTS

None.

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