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Research Article

SIGNIFICANCE OF CAPACITY MANAGEMENT IN GOVT MEDICAL COLLEGE THIRUVANATHAPURAM DURING COVID -19 PANDEMIC

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Abstract: *The Kerala model of health care delivery system and controlling epidemic has its roots in the strong health system built over years. The state used innovative approaches to deploy resources quickly and come up with timely and comprehensive response in collaboration with key stakeholders. All the Government medical colleges in Kerala are at the forefront in the war against COVID. Kerala was appreciated for effective management of Covid-19 and captured the attention of worldwide media. Medical education is a dynamic and complex field where professionals devote plenty of time to render quality service. The medical professionals need to possess intrinsic skills and abilities to effectively practice capacity management in the present scenario. The present study has been carried out to pinpoint the Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic using Structural Equation Modelling. Based on the analysis it was found that all the coefficient of determinations are acceptable in this model. Thus, it can be rightly concluded that the capacity management practices of doctors in Govt medical colleges are highly appreciated and acceptable.*

Keywords: Capacity, Management, Traits, Profession, Sensibility.

Introduction

The Corona virus disease (COVID-19) is an emerging public health problem that affects millions of people living across the globe. It had been confirmed in over 210 countries, infected over 145 million people worldwide and the number of deaths has reached 3.1 million as on April 2021. The second wave has hit India hard and is still struggling to control its transmission with a population of more than 1.34 billion. The state of Kerala with a population of over 35 million has reported 14,05,655 confirmed cases of COVID-19 and 5110 deaths with an impressive recovery rate of 84.4% as on April 2021. Kerala's model of controlling epidemic has its roots in the strong health system built over years. The state governments effective measures and prompt response can be attributed to its experience and emergency preparedness. The state used innovative approaches to deploy resources quickly and come up with timely and comprehensive response in collaboration with key stakeholders. All the Government medical colleges in Kerala are at the forefront in the war against COVID.

Kerala was appreciated for effective management of Covid-19 and captured the attention of worldwide media. The robust infrastructure of the public health department consist of primary health centers, community health centers, taluk-level hospitals, district hospitals, general hospitals and medical colleges run by the government. The Kerala model of health care delivery system was considered as the best example that other state could follow.

The Government medical colleges in Kerala are large multispeciality hospitals that provides comprehensive health care in Kerala. The Thiruvanathapuram Government Medical College serve most of the Thiruvananthapuram and Kollam districts and adjacent districts in Tamil Nadu. The hospital includes a main hospital block, trauma care and an outpatient department. The 3,250-bed hospital admits 80,000 patients a year and provides over 7,500,000 outpatient consultations. The outpatient block houses outpatient wings of medical and surgical specialties, a pharmacy and resident and graduate housing. It has set up a treatment center for corona virus patients from containment zones, hotspots and other areas where covid restrictions are there. This comprehensive emergency and trauma care centre is expected to boost the health care system in the state. As the epidemic is progressing, there is an urgent need for all the doctors and professionals to be fully prepared to provide excellent health care services. In these challenging times, effective and scientific capacity management should be adopted in the government medical colleges of Kerala.

Capacity Management

Human Resource Development is concerned with the development of human capacity. Human capacity or potential includes knowledge, values, skills, aptitude, loyalty, commitment, empathy, transparency and leadership skills. Capacity management is the practice to optimally utilize the exiting human resource capacity before hiring new resources The essence of Management of any organization is to utilize effectively all the available capacity of human resources. Optimum utilization of the existing workforce capacity is the key towards the success of any enterprise. Medical education is a complex and dynamic field. The Doctors and professionals in this field are assumed to be persons with high intellectual potential and knowledgeable. However it is their intrinsic skills and abilities that enable them to meet their ever increasing job demands. The present study evaluate the skills required by doctors in government medical colleges for effective human capacity management in the pandemic situation.

Empathy: It is the action of understanding or being sensitive to the feelings, thoughts and

actions of another person. Other persons feelings, ideas and thoughts should be considered

Emotion control and regulation: It is about how well emotions can be managed and controlled. This determines our words, choices and actions

Sensibility: It is an acute awareness and responsiveness towards other people's emotions. It is the intrinsic sensibility that makes us forgive other persons mistakes and evaluate past experience.

Curiosity : It makes us explore and learns for the sole pleasure of learning and mastering

Challenge: Being challenged make us work at a continuously optimal level towards meaningful goals

Leadership and communication skills: It is the ability to listen, saying the right things in a powerful way ,to mobilize people and deliver result.

Review of Literature

Lara El Mouallem and Farhad analoui (2014) examined major human resource related capacity building themes in International Consultancy Organization (ICO) which include employee involvement and motivation, recruitment and selection, in addition to performance appraisal and reward management. They suggested that the HR department should expand to handle additional tasks and provide support system for employees to address their needs, concerns and problems. Majid Aarabi and Sajedeh Hasanian (2014) found that there should be some kind of balance between demand placed on an operation and its ability to satisfy that demand. They concluded that there is close relationship between capacity and demand. Sathidevi and Sivadas (2013) examined the strengths, weakness, opportunities and threats of Thrissur Government Medical College and identified the factors needed to enhance the proper utilization of opportunities. They were of the opinion that the stakeholders maintain expected quality with scope for improvement. Rob Dekkers and Kanagi Kanapthy (2012) in their paper set out to investigate whether the notion of strategic capacity management encompasses sufficiently the matching of manufacturing capabilities with strategic intents. By studying the practices in five Malaysian firms, the researchers uncovered the challenges of manufacturing managers in these companies. Spencer (1997) in his article discussed the relationship between marketing and manufacturing which allows for the attainment of economies of scale. He suggested that marketing uses price adjustments in coordination with production planning to ensure full utilization of the existing capacity.

Problem Statement

Human resources are the success drivers of any institution. It is their talent, efforts and skills that enhance the reputation of any organization. Capacity management is the process of ensuring you have the appropriate amount of resources for your service to be scalable, efficient, and reliable. Medical education is a dynamic and complex field where professionals devote plenty of time to render quality service. The absence of scientific capacity management practices may increase their work hours and reduces their job satisfaction. The problem of capacity management is one of the most difficult problem that medical colleges need to tackle with, particularly in these challenging times due to the COVID -19 pandemic. The medical professionals need to possess intrinsic skills and abilities to effectively practice capacity management in the present scenario

Scope and Significance of the Study

Govt Medical College, Thiruvananthapuram which provides comprehensive healthcare is the first and biggest medical college of Kerala. It is one of the topmost institutions in India. They form an essential part of an effective response to the COVID-19 pandemic by playing critical roles in diagnosis, containment and treatment. They are experiencing high work volume, personal risks and societal pressure to meet extraordinary demands. Effective capacity management that ensures optimum workforce utilization is the need of the hour. Even after conducting an extensive literature search, it was not possible to find a publication of capacity management practices of Medical Colleges in Kerala and India. So it will be an innovative project in this aspect, as we could fill the existing research gap. The study also attempts to put forward a capacity management model that can be effectively adopted in medical colleges of Kerala. Intrinsic skills, sensibility and emotion regulation are very much required by medical professionals for effective practice of capacity management in Govt medical colleges of Kerala.

Objective of the Study

To pinpoint the Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic.

Hypothesis of the Study

The Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic is accepted

Methodology of the Study

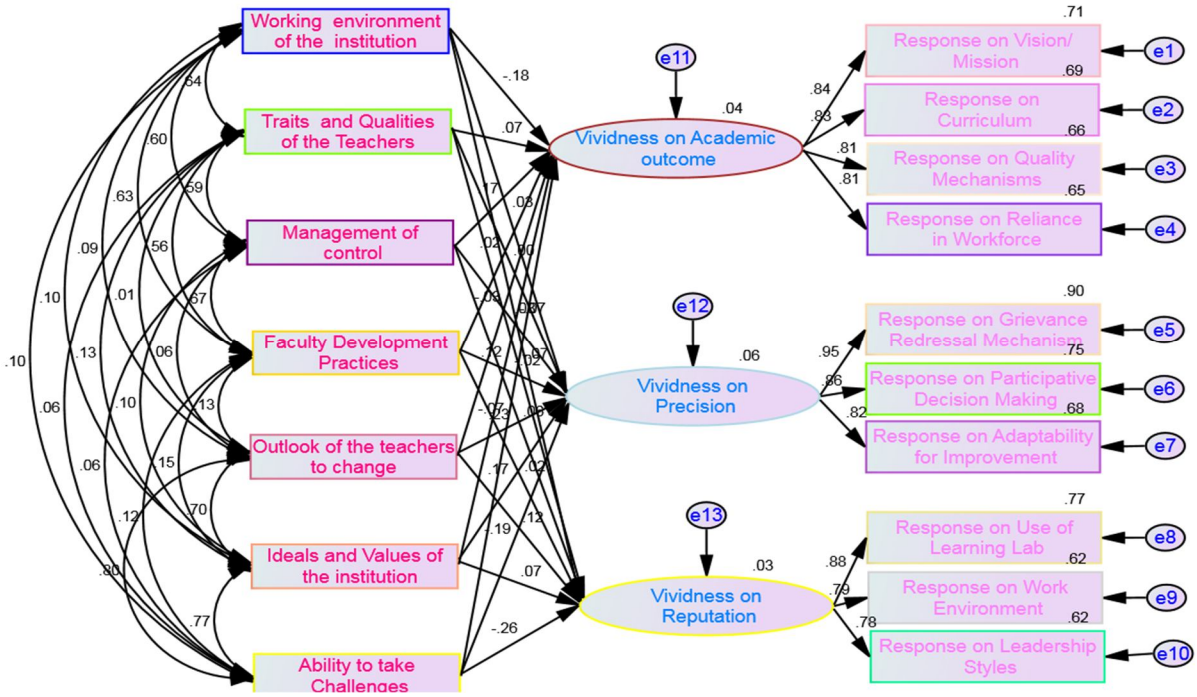
The motivation of the present analysis is to pinpoint the Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic. The present study attempts to find the Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic. The population constitutes the entire doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic. The sample for the study is confined to 75 doctors in Govt Medical College Thiruvanathapuram. One month period of February 2021 has been selected for the present study. Primary data was collected using a questionnaire by Judgement Sampling Method. Structural Equation Modelling is used to study the Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic.

Discussion of Findings

In the present analysis there are 17 observed variables; 16unobserved variables, 20 exogenous variables used and the corresponding endogenous variables include 13 items. Thus, the total number of variables in the SEM model is 33.

Figure 1.1

Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic



Source: Primary data

Table 1.1
Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic

Relation			Un-Standardized Estimate	S.E.	C.R.	P	Standardized Estimate
Vividness on Precision	<---	Working environment of the institution	.039	.131	.300	.764	.232
Vividness on Reputation	<---	Working environment of the institution	-.065	.085	-.768	.442	.367
Vividness on Precision	<---	Traits and Qualities of Teachers	.001	.140	.005	.996	.322
Vividness on Reputation	<---	Traits and Qualities of Teachers	-.073	.090	-.805	.421	.834
Vividness on Reputation	<---	Management of control	.057	.085	.669	.504	.827
Vividness on Academic Outcome	<---	Faculty Development Practices	.020	.086	.237	.813	.754
Vividness on Academic Outcome	<---	Outlook of teachers to change	-.014	.060	-.228	.819	.027
Vividness on Precision	<---	Outlook of teachers to change	.208	.094	2.209	.027	-.073
Vividness on Academic Outcome	<---	Ideals and Values of the institution	.070	.058	1.206	.228	.000
Vividness on Precision	<---	Ideals and Values of the institution	.156	.091	1.721	.085	-.073
Vividness on Reputation	<---	Ideals and Values of the institution	.039	.059	.658	.510	.063
Vividness on Precision	<---	Ability to take Challenges	-.177	.111	-1.599	.110	.022
Vividness on Academic Outcome	<---	Ability to take Challenges	-.038	.071	-.540	.589	-.025
Vividness on Academic Outcome	<---	Management of control	.153	.084	1.814	.070	.235
Vividness on Academic	<---	Traits and Qualities of	.072	.089	.808	.419	.123

Relation			Un-Standardized Estimate	S.E.	C.R.	P	Standardized Estimate
Outcome		Teachers					
Vividness on Academic Outcome	<---	Working environment of the institution	-.162	.084	-1.929	.054	.169
Vividness on Precision	<---	Faculty Development Practices	-.030	.135	-.225	.822	.068
Vividness on Precision	<---	Management of control	.040	.132	.306	.759	-.187
Vividness on Reputation	<---	Outlook of teachers to change	.064	.061	1.051	.293	-.065
Vividness on Reputation	<---	Faculty Development Practices	.014	.087	.163	.870	.167
Vividness on Reputation	<---	Ability to take Challenges	-.150	.072	-2.094	.036	.072
Response on Participative Decision Making	<---	Vividness on Precision	.948	.047	20.354	***	-.179
Response on Work Environment	<---	Vividness on Reputation	.946	.069	13.681	***	-.020
Response on Quality Mechanisms	<---	Vividness on Academic Outcome	.884	.057	15.418	***	.027
Response on Curriculum	<---	Vividness on Academic Outcome	.944	.059	15.876	***	.117
Response on Vision Mission	<---	Vividness on Academic Outcome	1.000				.015
Response on Reliance in Workforce	<---	Vividness on Academic Outcome	.948	.062	15.277	***	-.257
Response on Grievance Redressal Mechanism	<---	Vividness on Precision	1.000				.865
Response on Adaptability for Improvement	<---	Vividness on Precision	.832	.045	18.687	***	.787
Response on Use of Learning Lab	<---	Vividness on Reputation	1.000				.811

Relation			Un-Standardized Estimate	S.E.	C.R.	P	Standardized Estimate
Response on Leadership Styles	<---	Vividness on Reputation	.879	.064	13.651	***	.830

Source: Primary data

According to the Standardized Estimate, it is noted that Outlook of teachers to change individually influences the Vividness on Precision (-0.073), Ability to take Challenges on Vividness on Reputation (0.072), Vividness on Precision on Participative Decision Making (-0.179), Vividness on Reputation on Response on Work Environment (-0.020), Vividness on Academic Outcome on Response on Response on Quality Mechanisms (0.027), Vividness on Academic Outcome on Response on Curriculum (0.117), Vividness on Academic Outcome on Response on Vision Mission (0.015), Vividness on Academic Outcome on Response on Reliance in Workforce (-0.257), Vividness on Precision on Response on Response on Grievance Redressal Mechanism (0.865), Vividness on Precision on Response on Response on Adaptability for Improvement (0.787), Vividness on Reputation on Response on Response on Use of Learning Lab (0.811) and Vividness on Reputation on Response on Response on Leadership Styles (0.830).

Table 1.2

Correlations - Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic

Traits and Qualities of Teachers	<-->	Ideals and Values of the institution	.125
Management of control	<-->	Ability to take Challenges	.062
Traits and Qualities of Teachers	<-->	Faculty Development Practices	.558
Management of control	<-->	Faculty Development Practices	.672
Ideals and Values of the institution	<-->	Management of control	.098
Traits and Qualities of Teachers	<-->	Working environment of the institution	.643
Traits and Qualities of Teachers	<-->	Management of control	.588
Traits and Qualities of Teachers	<-->	Outlook of teachers to change	.013
Faculty Development Practices	<-->	Working environment of the institution	.632
Management of control	<-->	Working environment of the institution	.603
Working environment of the institution	<-->	Outlook of teachers to change	.087
Faculty Development Practices	<-->	Outlook of teachers to change	.128
Management of control	<-->	Outlook of teachers to change	.056
Ideals and Values of the institution	<-->	Ability to take Challenges	.765
Ideals and Values of the institution	<-->	Working environment of the institution	.102
Ideals and Values of the institution	<-->	Outlook of teachers to change	.701

Ideals and Values of the institution	<-->	Faculty Development Practices	.154
Ability to take Challenges	<-->	Working environment of the institution	.098
Ability to take Challenges	<-->	Outlook of teachers to change	.805
Ability to take Challenges	<-->	Faculty Development Practices	.117
Traits and Qualities of Teachers	<-->	Ability to take Challenges	.057

Source: Primary data

All correlation values are positively related to each other. The correlation value between Outlook of teachers to change with Ability to take Challenges is 80.5%, correlation value between Outlook of teachers to change with Ideals and Values of the institution is 70.1%, correlation value between Ability to take Challenges with Ideals and Values of the institution is 76.5%, correlation value between Working environment of the institution with Traits and Qualities of Teachers is 64.3% and correlation value between Faculty Development Practices with Management of control is 67.2%,

Table 1.3
Squared Multiple Correlations - Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic

Capacity Management Practices of doctors	Estimate
Vividness on Academic Outcome	.038
Vividness on Reputation	.031
Vividness on Precision	.058
Response on Leadership Styles	.616
Response on Work Environment	.619
Response on Use of Learning Lab	.772
Response on Adaptability for Improvement	.678
Response on Participative Decision Making	.748
Response on Grievance Redressal Mechanism	.896
Response on Reliance in Workforce	.650
Response on Quality Mechanisms	.658
Response on Curriculum	.688
Response on Vision Mission	.710

Source: Primary data

All the coefficient of determinations are acceptable in the current model. The coefficient of determination in influencing the dependent variable 'Response on Grievance Redressal Mechanism' is 89.6%, high in the model, followed by 'Response on Use of Learning Lab'-77.2% and 'Response on Participative Decision Making'- 74.8%.

Table 1.4

Model fit summary of Structural Equation Model- Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic

Indices	Value	Suggested value
Chi-square value	99.071	-
DF	84	-
P value	0.125	> 0.05 (Hair et al., 1998)
Chi-square value/DF	1.179	< 5.00 (Hair et al., 1998)
GFI	0.960	> 0.90 (Hu and Bentler, 1999)
AGFI	0.928	> 0.90 (Hair et al. 2006)
NFI	0.964	> 0.90 (Hu and Bentler, 1999)
CFI	0.994	> 0.90 (Daire et al., 2008)
RMR	0.052	< 0.08 (Hair et al. 2006)
RMSEA	0.026	< 0.08 (Hair et al. 2006)

Source: Primary data

From the above table it is found that the calculated P value is 0.125 which is higher than 0.05. Also, the Chi-square value/DF is 1.179, which is found to be within the threshold limit. Thus, the null hypothesis is failed to reject. Here Goodness of Fit Index (GFI) value (0.960) and Adjusted Goodness of Fit Index (AGFI) value (0.928) is greater than 0.9 which represent it is a good fit. The calculated Normed Fit Index (NFI) value (0.964) and Comparative Fit Index (CFI) value (0.994) indicates that it is a perfectly fit and also it found that Root Mean Residuals (RMR) is 0.052 and Root Mean Square Error of Approximation (RMSEA) value is 0.026, which is less than 0.08 which indicate perfect fit. Thus; it is clear that, the variables to pin point the Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic is accepted.

Conclusion

The analysis revealed that all the variables are positively correlated to each other. The coefficient of determinations used in this model are highly acceptable. The analysis of squared multiple correlation revealed that the coefficient of determination in influencing the dependent variable 'Response on Grievance Redressal Mechanism' is high in the model, followed by 'Response on Use of Learning Lab' and 'Response on Participative Decision Making'. The

model fit summary of structural equation model revealed that Goodness of Fit Index (GFI) value and Adjusted Goodness of Fit Index (AGFI) value is greater than 0.9 which represent it is a good fit. Thus; it is clear that, the variables to pin point the Capacity Management Practices of doctors in Govt Medical College Thiruvanathapuram during Covid -19 pandemic is accepted.

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