

# Effect of Knowledge Management in the Performance of Indian System of Medicine

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**Abstract-** Ayurveda is one of oldest holistic medical system practiced in India since 5000 years ago. But due to the inefficient knowledge management, the Ayurveda medical practice could not guaranty reliable and consistent outcome and accurate prognosis. The efficient knowledge management is one of the important prerequisite for every organization for its efficient performance. This article examines the causal relationship of knowledge management on organizational performance in Ayurveda Industry in Kerala.

The analysis mainly relied on the structural equation model (SEM). Organisational performance was selected as a latent variable in this study which was constructed by three observed variables namely, knowledge sharing, creation and utilization. Financial and management problems were selected as confounding variables. The exogenous variables were evaluated using Confirmative Factor Analysis (CFA) in measurement models.

The result showed knowledge management has significant positive impact of Organizational Performance in Ayurveda Industry in Kerala. The industry is not giving much importance to knowledge, sharing and utilization compared to the important given to Knowledge Creation. Financial and management problems adversely affect knowledge management. Financial problem more powerful in reducing Organizational Performance.

**Key words:** Indian System of Medicine, Knowledge Asset, Knowledge creation, Knowledge Management, Knowledge sharing, Knowledge utilization

## I. INTRODUCTION

Knowledge management is not only important for large organization but is equally important for small organisations to achieve better outcomes. Especially in the case of health care organizations whatever may be their size and mission they all are basically human organizations and their most important asset is human beings. The quality of the health care organisations mainly depends on the quality of human resources. Human resources in health care sector always seek to improve the quality of services through proper Management in order to acquire patients' satisfaction.

In knowledge based industry, in order to improve the quality of human resources, it requires efficient Knowledge Management. According to Martin Ihrig (2015), Knowledge assets are the drivers of an organization's success. Knowledge assets are the Product knowledge, markets, technologies, and organizations, that a business owns or needs to own and which enable its business

processes to generate profits and add value. Warriar,(2009),(Wickramasinghe, 2009).But identification of one's own Knowledge Asset and retaining it within the Organisation or developing them for better outcomes are very difficult tasks especially for small organizations.

Ayurveda, the Indian system of Medicine is found in the Rig Veda and the Atharva Veda, both from the second millennium BC. It is believed to be one of the world's oldest medical systems which originated in India and is now one of the most recognized and widely practiced disciplines of alternative health care system (Dennis, Weber & Killen, 2015; Agrawal & Tiwari, 2017). The ancient Indian concepts relating to health care are holistic and that traditional medical knowledge asset is still precious.

## II. REVIEW OF LITERATURE

Knowledge Management involves enhancing organizational knowledge (Warriar,2009). The creation and dissemination of knowledge have become increasingly important factors

in competitiveness. Knowledge has been a strategic valuable resource that facilitates the organizations to achieve sustainable competitive advantages and enhance the performance (Xue, 2017). Knowledge has been treated as one of the most important and extremely valued asset. Knowledge management is a process that converts individual knowledge into organisational knowledge, (Rasula, Vuksic, & Stemberger, 2012)(Ahmed, Fiaz, & Shoaib, 2015) stated that one of the main reasons to introduce knowledge management in organizations is because it assists to develop positive impact and outcomes on organizational performance. An effective knowledge management through capabilities of development will be an advantage to organizational performance (Liao & Wu, 2009). By implementing knowledge management, organizations can develop their potentials of creating, sharing applying and managing organisational knowledge, sharpen their organisational intelligence, enhance their managerial assessments efficiency and effectiveness, and finally achieve better organizational performance (Herschel & Jones, 2005).

(Lee, 2017), investigated the impacts of knowledge management enablers, such as organizational structure, learning, information technology systems, leadership, trust, and collaboration, on the knowledge management process of creation, storage, sharing, and application. Through self-administered questionnaires data were collected from four Korean tertiary hospitals, identified the main organizational factors affecting the knowledge management process in these organizations. From a managerial perspective, the implications of the study was that knowledge managers of each hospital must build an organization culture and systems and continuously educate employees about Knowledge Management based on trust and collaboration.

Shahmoradi, Safadari, & Jimma (2017), through systematic review investigated the importance of knowledge management implementation and knowledge management tools used in healthcare for informed decision making.

Rivera, Kyte, Aiyegbusi, Keeley, & Calvert (2017), organised a study to identify the existing methodological frameworks applied to evaluate healthcare research impact

and to summarise the common themes and metrics in an impact matrix.

(Mohajan, 2016) examines the creation, storing, sharing and utilization of knowledge in health sector. The purpose of this study is to apply the concept of Knowledge Management and to study the use of Knowledge Management to the medical science. An effort has been taken in this paper to explain an overview of KM, its methods and techniques, and applications of efficient KM in health sector.

(Singh & Chauhan, 2016), conducted a study to investigate knowledge management with a focus on knowledge management practices and its relationship with doctors, with very little information about knowledge management practices in India

(Nanda, 2016), focused on how HR can be key to the success of knowledge management goals. It also studied how HR links with knowledge management. This study highlighted that there is a strong correlation between HRM and knowledge management. Successful knowledge management facilitates to attain the competitive advantages of every organization.

(Bharadwaj, Chauhan, & Raman, 2016), examined the knowledge management capabilities in large Indian organizations and their impact on knowledge effectiveness. This research has established evidence that large Indian organizations have started realizing the importance of managing knowledge as a strategic asset. However, the approach is different in different organizations. Some organizations depend more on creating knowledge infrastructure capabilities through culture and structure while some others equally emphasize the need of process approach to manage both tacit and explicit knowledge within the organization. Data collected from 156 organizations were subject to structural equation modeling. The results proved that both infrastructure capabilities and process capabilities play a significant role in improving KM effectiveness.

(Balkumar, Anbu, & Ganesh, 2014) presents a detailed review of the concepts of KM in general and relevant to healthcare, and addresses the potential benefits of its implementation. Based on the collections of systematically

reviewed literature this paper is a theoretical approach to understanding the role of KM in healthcare in the Indian context. According to them there is less number of studies in India, about KM for PHC's or secondary/ tertiary healthcare domains in India. They opined that this descriptive attempt can help future researchers to gain in-depth insights and practical implications along with advantages of a proper KM in the Indian healthcare community.

(Hasoneh, 2013) in an article states that in a competitive world, knowledge is an important economic resource that adds value to the manufacturing process. The article illustrates a conceptual framework model for an enterprise-wide knowledge management system. This model is an open system that combines the various players in the healthcare value chain and explains the role of Knowledge Management in the Healthcare Sector

(Manohar R. , 2013), discussed there is evidence that much of the knowledge preserved by oral traditions has been lost in the passage of time. Therefore, it is essential to revisit Ayurveda and find proper applications of it for present times. He emphasized that what is really needed in Kerala's Ayurvedic sector is an auspicious research environment for manufacturers and public laboratories to develop drugs for the treatment of diseases.

A good Knowledge Management system identifies knowledge assets within the organisation, and properly manage that for generate better performance

### III. THE OBJECTIVE OF THE STUDY

The objective of the study is to build a model for the organisational performance of the Ayurveda Industry in relation to knowledge management under the constraints of Financial and managerial problems.

### IV. DATA AND METHODS

This research study is undertaken to analyse the existing practices of Knowledge Management in Ayurveda industry and their influence on the performance of the industry under the constraints of Financial and managerial problems. Structural Equation Model was used for constructing the model.

The population for the study is the Ayurveda Medical Practitioners of Kerala who have registration in the

Travancore Cochin Medical Council for Indian Systems of Medicine, Thiruvananthapuram, as on 31-12-2014. The size of the population was 15160. A multi-stage random sampling technique was applied for the selection of sample: The sample size was determined by Kukeran formula. For the target population of 15160, with a margin of error of five percent and 95 percent confidence level the recommended sample size was 375. The primary data was collected using a pretested structured questionnaire.

The secondary data were collected mainly from the Travancore Cochin Medical Council for Indian Systems of Medicine, Thiruvananthapuram; Office of the Drugs Controller, *Arogya Bhavan*, Thiruvananthapuram; Ayurveda Medical Association of India; and Ayurveda Drug Manufacturers' Association.

Table1 presents the distribution of sample Ayurveda organisations.

**Table 1. Distribution of Sample Ayurveda Organisations**

Characteristics		N	%
Location of organisation	Rural	223	59.47
	Urban	152	40.53
Size of organisation	Large	101	26.93
	Medium	95	25.33
	Small	179	47.73
Type of organisation	Sole proprietorship	43	11.47
	Private Company	154	41.07
	Govt. & Cooperative	60	16.00
	Agencies	118	31.47

Source: Primary Data

Ayurveda organisations considered for this study can be categorised into three on the basis of the scale of operations. The organisations that engage in treatment, produce and supply medicines for agencies throughout Kerala are grouped as large organisations, the organisations functioning within one or two districts are grouped as medium and organisations that produce medicine for their own treatment purpose and sell them only through their outlets are grouped as small organisations. From the selected sample 26.93 per cent of total respondents belong to large organisations, 25.33 percent of total respondents belong to medium organisations and 47.73 percent of total respondent belongs to small organisations. Large Ayurveda organisations have their branches throughout the state and

they have franchises or agencies to provide Ayurveda products and services.

Based on the type of ownership of Ayurveda organisations considered for the study can categorized into four, Sole proprietorship, Private Company, Govt. & Cooperative and Agencies. Among the respondents 11.47 percent belongs to Sole proprietorship firms, 41.07 percent belongs to Private Company, and 16.00 percent belongs to Govt. & Cooperative sector and 31.47 percent belongs to Agencies of large firms.

**Table 2. Distribution of respondents by their personal profile**

Characteristics		N	%
Age	Less than 30	115	30.67
	30-39	138	36.80
	40-49	80	21.33
	50 and above	42	11.20
Gender	Male	151	40.27
	Female	224	59.73
Marital status	Married	285	76.00
	Unmarried	90	24.00
Religion	Hindu	280	74.67
	Christian	75	20.00
	Muslims	20	5.33
Qualification	BAMS	327	87.20
	MD	37	9.87
	Diploma	11	2.93
Experience	Upto 3	87	23.20
	4-10	125	33.33
	10-19	89	23.73
	20+	74	19.73

Source: Primary Data

Table 2 presents the distribution of respondents by their personal profile. It is seen from the table that among 375 Ayurveda Medical Practitioners, the highest percentage (36.8) constituted the age group of 30-39 years, followed by

the age group of less than thirty(30.6 percent). Thus it can be inferred that the majority of the respondents are in age groups below 40 years. It can also be seen from the table that, 21.33 percent belongs to 40 - 49 age group and only 11.20 percent are above 50 years. Female doctors constituted the majority (59.7 per cent) of the respondents, only 40.3 per cent are male doctors. The majority of the sample (76.00 per cent) is married and 24.00 per cent are unmarried. It can also be seen that 74.67 per cent of the respondents are Hindus; 20.00 per cent are Christians while the rest 5.33 per cent are Muslims. About 60.00 per cent of the respondents are from rural while 40.50 per cent from urban area. As far as qualification is concerned, 87.20 per cent of the respondents are BAMS Degree holders and only 9.87 per cent are PG Degree holders and the rest are Diploma holders. Experience-wise classification of the sample reveals that 23.20 per cent of respondents have less than 3 years of experience in Ayurveda treatment; 33.33 per cent have 4 to 10 years of experience; 23.73 per cent have 11 to 19 years of experience, and 19.73 per cent have 20 and above years of experience in Ayurveda practices.

## V. RESULTS AND DISCUSSIONS

The variables selected for the study are composite variables representing Organizational performance, Knowledge creation, Knowledge sharing practices, Knowledge utilization, Financial Problem and Management Problem. All the variables are computed from the responses of the sample Ayurveda medical practitioners in five-point scale on respective elementary questions related to each variable. The variables were computed by taking weighted average using weights derived through principal component analysis. The descriptive statistics of the study variables are presented in Table 3.

**Table 3 Descriptive statistics of Study Variables**

Statistics	Organizational performance	Knowledge Management			Problems	
		Knowledge creation	Knowledge sharing	Knowledge utilization	Financial Problem	Management Problem
Mean	3.05	2.90	2.93	2.85	3.04	3.45
SD	1.24	1.21	1.19	1.18	1.10	0.87
Variance	1.53	1.45	1.42	1.39	1.20	0.76
Skewness	-0.12	-0.19	-0.19	-0.11	-0.46	-0.60
Kurtosis	-0.68	-0.57	-0.47	-0.60	-0.06	-0.56

Source: Primary Data



The mean score of Organizational Performance is 3.04 with a standard deviation of 1.24. The score indicates that according to the opinion of the Ayurveda medical practitioners, the organisational performance of the Ayurveda Industry is above average level as the mean of the response scale is three. The distribution of the response is nearly normal as the skewness (-0.12) and kurtosis (-0.68) are very low. At the same time, the mean score of Knowledge Creation (2.90), Knowledge Sharing (2.93) and Knowledge Utilization (2.85) are below the mean of the response scale indicating that according to the opinion of the Ayurveda medical practitioners, Knowledge management in the sample Ayurveda Industries is below average. But the mean opinion score of Ayurveda medical practitioners regarding Financial Problem (3.04) and Management Problem (3.45) are more than the mean of the response scale indicating the existence of moderate level of Financial Problem and Management Problem in the sample Ayurveda organisations.

The variation of the scores of study variables with respect to category of the sample Ayurveda organisations is presented in Table 4. The variations was evaluated by appropriate test statistics namely two independent samples test and one way ANOVA.

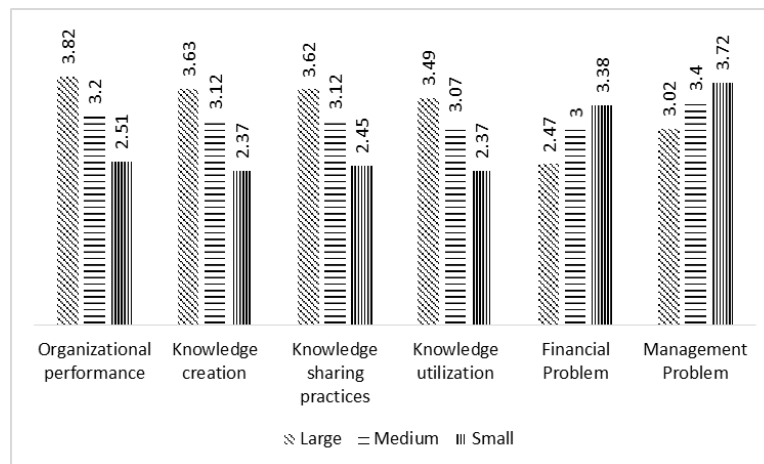
**Table 4 Mean scores of study variables with respect to categories of the Ayurveda organisations**

Category		Statistics	Organizational performance	Knowledge Management			Problems	
				Knowledge creation	Knowledge sharing practices	Knowledge utilization	Financial Problem	Management Problem
Place of Residence	Rural	Mean	2.94	2.85	2.86	2.78	3.02	3.42
		(SD)	(1.24)	(1.16)	(1.14)	(1.12)	(1.14)	(0.94)
	Urban	Mean	3.18	2.98	3.05	2.95	3.07	3.49
		(SD)	(1.22)	(1.29)	(1.26)	(1.23)	(1.02)	(0.76)
	T		-1.878	-0.993	-1.551	-1.36	-0.42	-0.73
	(Sig.)		(0.061)	(0.321)	(0.122)	(0.175)	(0.673)	-0.462
size of organisation	Large	Mean	3.82	3.63	3.62	3.49	2.47	3.02
		(SD)	(0.89)	(0.85)	(0.87)	(0.91)	(0.95)	(0.84)
	Medium	Mean	3.2	3.12	3.12	3.07	3.00	3.40
		(SD)	(1.21)	(1.15)	(1.19)	(1.17)	(1.13)	(0.9)
	Small	Mean	2.51	2.37	2.45	2.37	3.38	3.72
		(SD)	(1.17)	(1.16)	(1.13)	(1.12)	(1.02)	(0.76)
	F		45.944	46.14	39.084	37.298	24.80	23.84
	(Sig.)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Type of Organisation	Sole proprietors hip	Mean	3.47	3.21	3.15	3.18	2.62	3.09
		(SD)	(1.15)	(1.07)	(1.13)	(1.07)	(1.12)	(0.9)
	Private Company	Mean	3.92	3.78	3.81	3.73	2.53	3.05
		(SD)	(0.82)	(0.72)	(0.74)	(0.77)	(0.98)	(0.81)
	Govt. & Co-operative	Mean	2.99	2.96	2.97	2.79	2.83	3.49
		(SD)	(1.17)	(1.14)	(1.03)	(0.98)	(1.09)	(0.91)
	Agency	Mean	1.75	1.61	1.7	1.61	3.96	4.07
		(SD)	(0.28)	(0.4)	(0.51)	(0.4)	(0.52)	(0.45)
	F		160.735	178.186	162.248	175.093	61.36	44.81
	(Sig.)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Source: Primary Data

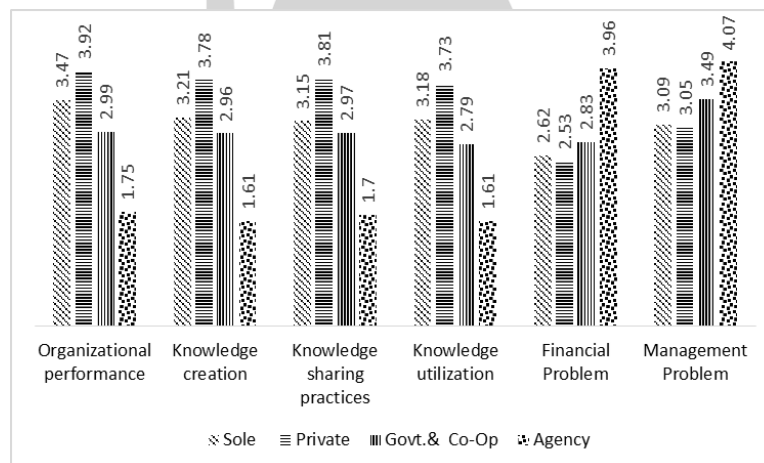
The examination of variation in the scores of study variables among Ayurveda organisations situated in urban and rural areas using t-test reveals that there is no significant variation in the scores of all variables as the significance levels are less than 0.05 for all variables. The result indicates that the Organizational Performance, knowledge management and problems are similar in Ayurveda organisations functioning in urban and rural areas. But the examination of the variation in the scores of study

variables with respect to size and type of organisation revealed that there exists significant variation as the significance level of one-way ANOVA are less than 0.05.



**Figure 1 Mean Score of study variables by size of Ayurveda organisations**

Figure 1 shows that Organizational Performance, Knowledge Creation, Knowledge Sharing and Knowledge Utilization are highest in large organisation and they decrease steadily as the size decreases. At the same time, Financial Problem and Management Problem steadily increase as the size of organisation decreases.



**Figure 2 Mean Score of study variables by type of Ayurveda organisations**

From Figure 2, it can be seen that Organizational Performance, Knowledge Creation, Knowledge Sharing and Knowledge Utilization are highest in private organisations followed by sole ownership and Government and Co-operative sectors. They are lowest in agencies. But Financial Problem and Management Problem are highest in agencies and lowest in private organisations.

**Table 5. Correlation Matrix of the scores of study variables**

		Organizational performance	Knowledge Management			Problems	
			Knowledge creation	Knowledge sharing	Knowledge utilization	Financial Problem	Management Problem
Organizational Performance	r	1.000	0.930	0.902	0.912	-0.514	-0.465
	Sig.		0.000	0.000	0.000	0.000	0.000
Knowledge Creation	r	0.930	1.000	0.956	0.957	-0.537	-0.506
	Sig.	0.000		0.000	0.000	0.000	0.000
Knowledge sharing practices	r	0.902	0.956	1.000	0.946	-0.479	-0.445
	Sig.	0.000	0.000		0.000	0.000	0.000

Knowledge Utilization	r	0.912	0.957	0.946	1.000	-0.509	-0.473
	Sig.	0.000	0.000	0.000		0.000	0.000
Financial Problem	r	-0.514	-0.537	-0.479	-0.509	1.000	0.766
	Sig.	0.000	0.000	0.000	0.000		0.000
Management Problem	r	-0.465	-0.506	-0.445	-0.473	0.766	1.000
	Sig.	0.000	0.000	0.000	0.000	0.000	

Source: Primary Data

Table 5 presents the correlation matrix of the scores of study variables. From the table it can be seen that the correlation between all the study variables are significant as the significance levels of correlation coefficients are less than 0.05. When Organizational Performance, Knowledge Creation, Knowledge Sharing and Knowledge Utilization are correlated positively with each other, these variables are negatively correlated to Financial Problem and Management Problem. The result indicates that when knowledge management variables support Organizational Performance, the problem variables oppose Organizational Performance. The intrinsic mechanism by which Organizational Performance of Ayurveda Industry varies with respect to knowledge management and problems existing in the organisation are depicted in structural equation model presented in Figure 3.

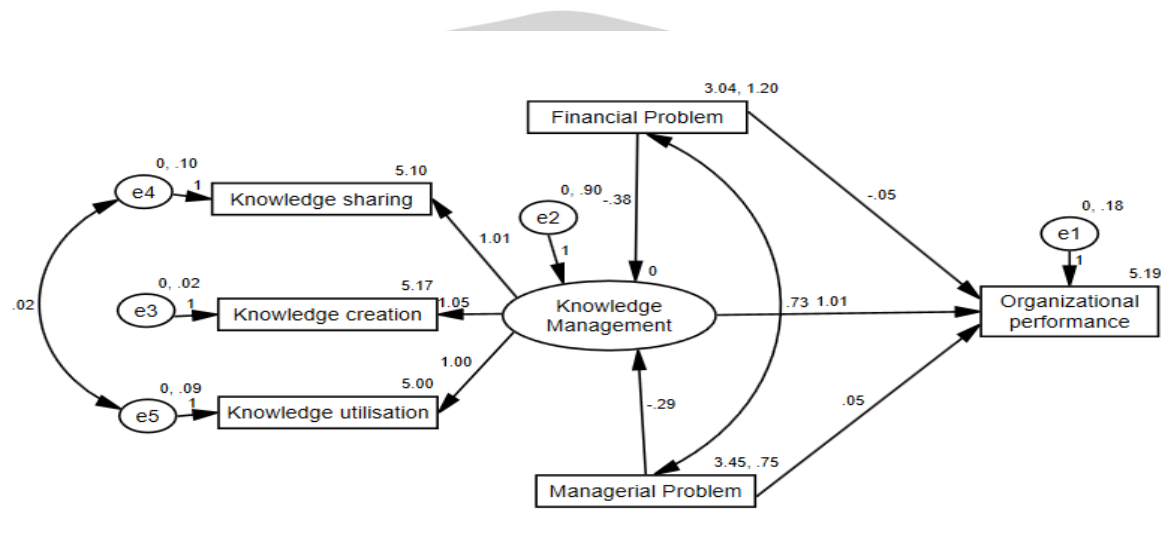


Figure 3 Structural Equation Model Operational Performance of Ayurveda Industry with respect to Knowledge Management

From Figure 3 and Table 5, it can be seen that the most contributing indicator of knowledge management of Ayurveda Industry is Knowledge Creation as the regression unstandardized coefficient is 1.052 which is higher than that of Knowledge Sharing (1.006) and Knowledge Utilisation (1.000). The result indicates that in Ayurveda Industry, importance to Knowledge Sharing and Knowledge Utilisation are not as high as Knowledge Creation. The Knowledge Sharing and Knowledge Utilisation are significantly related to each other as in model those variables showed a covariance of 0.02. Knowledge Sharing and Knowledge Utilisation are found to compliment and supplement each other. Similarly Financial Problem and Management Problem are related to each other as the model showed a covariance of 0.73 between them. It means that Financial Problem and Management Problem form a vicious circle by mutually augmenting each other.

Table 5 Regression Weights

			Regression Weights		S.E.	C.R.	P
			Unstandardized	Standardized			
KM	←	FP	-0.376	-0.362	0.070	-5.350	***
KM	←	MP	-0.293	-0.224	0.088	-3.315	***
KNOWLEDGE CREATION	←	KM	1.052	0.992	0.017	62.118	***

KS	←	KM	1.006	0.963	0.018	56.143	***
KU	←	KM	1.000	0.965			
OP	←	KM	1.015	0.934	0.028	36.575	***
OP	←	MP	0.052	0.037	0.042	1.259	0.208
OP	←	FP	-0.049	-0.043	0.034	-1.435	0.151

OP=Organizational Performance, KM=Knowledge management, KC=Knowledge Creation, KS=Knowledge Sharing, KU=Knowledge Utilization, FP=Financial Problem, MP=Managerial Problem

Source: Primary Data

Knowledge management positively affect the Organizational Performance of the Ayurveda Industry by a value of 1.015 which means that one unit increase in knowledge management produces 1.015 unit increase in the Organizational Performance of the organisation. But Financial Problem and Management Problem negatively affect Organizational Performance. As these problems increase in the organisation, it performance will reduce substantially. Among these problem, the most sever one is Financial Problem as its absolute value of unstandardized regression coefficient (-0.376) higher than that of the Management Problem (-0.293). The model is found to be fit to the data as the model fit indices are sufficiently high to the recommended threshold level.

Indices	Observed values	Recommended Level
Minimum Discrepancy (CMIN/DF)	4.358	5.00
Root mean square error of approximation (RMSEA)	0.079	0.08
Goodness of fit statistics (GFI)	0.984	0.90
Comparative Fit Index (CFI)	0.996	0.90
Normed Fit Index (NFI)	0.995	0.80

Form the model it can be concluded that in Ayurveda Industry in Kerala, Knowledge Sharing and Knowledge Utilization have not been given importance as that given to Knowledge Creation. Knowledge management significantly support Organizational Performance and financial and Management Problems significantly oppose the performance of the organisation. Financial Problem is more severely affect the Organizational Performance Ayurveda Industry in Kerala.

## VI. MAJOR FINDINGS

The perceptions of Ayurveda Medical Practitioners on Knowledge Asset Management Practices followed in their organisation were assessed.

1. The study reveals that the Organizational Performance, knowledge management and its problems are similar in Ayurveda organisations functioning in urban and rural areas.
2. But the examination of the variation in the scores of

study variables with respect to size and type of organisation revealed that there exists significant variation as the significance level of one-way ANOVA are less than 0.05.

3. It also reveals that Organizational Performance and Knowledge Management practices such as Knowledge Creation, Knowledge Sharing and Knowledge Utilization are correlated positively with each other; these variables are negatively correlated to Financial Problem and Management Problem.
4. The result indicates that in Ayurveda Industry, importance to Knowledge Sharing and Knowledge Utilization are not as high as Knowledge Creation.
5. Financial Problem more severely affects the Organizational Performance Ayurveda Industry in Kerala.



## VII. SUGGESTIONS

Being a knowledge driven process, Ayurveda healthcare industry must give importance to incorporate knowledge management practices, for mobilizing knowledge assets in Ayurveda Industry and thereby to improve their scientific validity. Financial support from Government is needed for the scientific validation of Ayurveda knowledge and for the welfare of the ailing humanity.

## VIII. CONCLUSION

The Knowledge Asset Management system is based on the principle that the most valuable asset of an organization is its knowledge and as an asset it should be properly managed for the business success. Ayurveda, the ancient Indian system of medicine, exists, even today as it was in the ancient times. Human resource management in Ayurveda industry of Kerala or knowledge management of Ayurveda industry in Kerala is not explored so far. The study reveals that Knowledge Management practices have not been given much importance at present but it has significant effect on the organizational performance of Ayurveda Industry. And Financial and Management Problems significantly limit the performance of Ayurveda organisations in Kerala.

## REFERENCES

- [1] Ahmed, S., Fiaz, M., & Shoaib, M. (2015). Impact of Knowledge Management Practices on Organizational Performance: An Empirical Study of Banking Sector in Pakistan. *FWU Journal of Social Sciences*, 9 (2), 147-167.
- [2] Balkumar, K., Anbu, S., & Ganesh, K. (2014, Jan). Effective healthcare management in India - The role of knowledge management. *International Journal of Value Chain Management*, 7(2), 97-123.
- [3] Bharadwaj, S. S., Chauhan, S., & Raman, A. (2016, Jan 3). Impact of Knowledge Management Capabilities on Knowledge Management Effectiveness in Indian Organizations. *Vikalpa*, 40(4), 421-434.
- [4] Ihrig, M. (2015, April 21). How to Determine Which Part of What You Know Really Matters. Retrieved October 18, 2019, from <https://knowledge.wharton.upenn.edu>:
- [5] Hasoneh, A. (2013). The Role of Knowledge Management in the Healthcare Sector. *International Journal of Advanced Research* (2013), 1 (6), 436-442.
- [6] Herschel, R. T., & Jones, N. E. (2005). Knowledge management and business intelligence: the importance of integration. *Journal of Knowledge Management*, 9 (4), 45-55.
- [7] Lee, H.-S. (2017, Feb). Knowledge Management Enablers and Process in Hospital Organizations. *Osong Public Health Research Perspectives*, 8(1), 26-33.
- [8] Manohar, R. (2013). A narrative review of research in Ayurveda. *The Newsletter*, 65, 34-35.
- [9] Mohajan, H. K. (2016). An Analysis of Knowledge Management for the Development of Global Health. *American Journal of Social Sciences*, 4 (4), 38-57.
- [10] Nanda, S. (2016). Human resource management is the key elements in knowledge management. *International Journal of Applied Research*, 2(9), 114--116.
- [11] Odysseas, H., & Spyros, K. (2006, Jan). Goals and Benefits of Knowledge Management in Healthcare. *Handbook of Research on Informatics in Healthcare and Biomedicine*.
- [12] Rasula, J., Vuksic, V. B., & Stemberger, J. M. (2012). The Impact of Knowledge Management on Organizational Performance. *Economic and Business Review*, 14 (2), 147-168.
- [13] Rivera, S., Kyte, D., Aiyegbusi, O., Keeley, T., & Calvert, M. (2017, Aug 9). Assessing the impact of healthcare research: A systematic review of methodological frameworks. Retrieved Jan 20, 2018, from [PLOS Med: journals.plos.org/plosmedicine/article?](https://doi.org/10.1371/journal.plosone.0178888)
- [14] Shahmoradi, L., Safadari, R., & Jimma, W. (2017, Sep). Knowledge Management Implementation and the Tools Utilized in Healthcare for Evidence-Based Decision Making: A Systematic Review. *Journal of Health Science*. 27(5), 541--558.
- [15] Singh, R., & Chauhan, A. (2016, April). Knowledge Management Practices in Indian Healthcare Sector, *International Journal of Current Engineering and Technology*, 6(2), 581-585.
- [16] Warrier, S. (2009). Knowledge management. Noida: Vikas Publishing House Pvt Ltd.
- [17] Wickramasinghe, N. (2009). Creating Superior Knowledge Discovery Solutions. Retrieved Oct 21, 2019, from *Encyclopedia of Information Science and Technology*, Second Edition: <https://www.igi-global.com>
- [18] Xue, C. T. (2017). A Literature Review on Knowledge Management in Organizations. *Research in Business and Management*, 4 (1), 30-41.