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Analyzing The Financial Performance of Dr. Augustine's Arya Vaidya Ashramam: A Comprehensive Study

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Abstract

Purpose: To assess the financial performance of Dr. Augustine's Arya Vaidya Ashramam, a non-profit in the Ayurveda sector, addressing cost challenges.

Theoretical framework: The study utilizes financial analysis methods, including ratios and percentages, to assess the financial performance of Dr. Augustine's Arya Vaidya Ashramam.

Design/methodology/approach: The study employs financial analysis methods such as ratios and percentages, utilizing financial statements over four years to assess organizational performance.

Findings: The study uncovers financial challenges in Dr. Augustine's Arya Vaidya Ashramam, highlighting cost issues due to scarce raw materials.

Research, Practical & Social implications: The research offers insights into the financial challenges of a non-profit Ayurveda organization, guiding strategic decisions for sustainability and growth.

Originality/value: The study's originality lies in exploring the financial intricacies of a non-profit Ayurveda organization in Kerala's tourism-driven sector, offering strategic insights.

Keywords: Financial Performance, Ayurveda Sector, Small-Scale Industry, Financial Analysis, Correlations, Business Management, Good Health and Well Being

INTRODUCTION

In the landscape of Kerala's growing tourism industry and the emergent Ayurveda sector, non-profit organizations like Dr. Augustine's Arya Vaidya Ashramam navigate unique challenges and opportunities. This research focuses on unraveling the financial intricacies faced by the organization, positioned as a small-scale industry (SSI) engaged in in-house pharmaceutical production.

As tourism continues to flourish in Kerala, the Ayurveda sector is gaining momentum, presenting a backdrop of both promise and complexity. Dr. Augustine's Arya Vaidya Ashramam, while committed to preserving traditional Ayurvedic practices, grapples with the inherent challenge of high manufacturing costs, exacerbated by the scarcity and rising costs of raw materials. This financial dilemma prompts a comprehensive investigation, employing various financial analysis methods over a four-year period, including ratios, correlations, and percentages.

Motivated by the need to address a misalignment between organizational objectives and realized outcomes, this research not only seeks to understand the financial nuances within the Ayurveda sector but also aims to offer actionable insights. With a primary focus on scrutinizing the financial performance of the organization, the study also conducts a comparative analysis with historical financial statements. This dual approach is essential for identifying trends, challenges, and opportunities, providing crucial inputs for strategic decision-making within this evolving landscape of non-profit organizations in the Ayurveda sector.

LITERATURE REVIEW

The literature review conducted aimed to identify gaps in existing studies, particularly focusing on the Ayurveda industry and its financial performance. Several studies were reviewed to gain insights into the broader context of Ayurveda, healthcare in India, and related subjects.

Vasudev V. Vyas et.al delved into Ayurveda's foundational concepts, emphasizing its holistic approach to human life Vyas (1982). Charaka's categorization of therapy into Vyapasraya, Yukti Vyapasraya, and Sattwavajaya was highlighted, showcasing Ayurveda's unique perspective on diseases and remedies. R. Srinivasan et. al explored healthcare in India, addressing public health issues, challenges in women's and children's healthcare, and health systems and resources Chandrashekar et al. (2015). The study revealed the inadequacies of the public health system in India, contrasting it with a growing, unregulated private health sector.

The research offered insights into the Indian healthcare model postindependence, emphasizing the influence of committee recommendations Rastogi et al. (2009). The focus on high-tech, high-cost procedures and the importance of quality of life in health were key takeaways. Leena Abraham et. al examined the alteration of Ayurveda in Kerala under modern influences Al-Mazeedi et al. (2013). The study highlighted the impact of institutionalization and modernization on Ayurveda, especially in response to socio-political changes postcolonization.

Ashutosh Chauhan et al. stressed the need for research on Ayurvedic fundamentals, validation of Ayurvedic drugs, and overall improvement in the quality of herbal drugs Chauhan et al. (2015). They emphasized the importance of understanding core principles and diagnostic tools in Ayurvedic research. Dr. Padmasani et al. focused on health tourism in Kerala, particularly the profile of domestic tourists seeking Ayurvedic treatment Padmasani and Remya (2015). The study identified destination attributes that attract tourists to Ayurvedic health tourism in Kerala. Manoj Mohanan et al. discussed the wide range of quality in India's healthcare sector. They emphasized the need for structural improvements to enhance the quality of care, particularly in rural areas Mohanan et al. (2016). Vishal Kaushik et al. addressed the quality of Ayurveda, pointing out the importance of high-quality herbs in organic herb cultivation. The study highlighted the scarcity of Ayurveda practitioners and the need for more educational institutions Bajaj et al. (2022). Murugesan at al. explored the entrepreneurial environment in the Ayurvedic sector, conducting a SWOT analysis. The study emphasized the potential for entrepreneurship in Ayurveda, particularly in innovative products and services A and Murugesan (2005).

The literature review revealed a gap in studies specifically addressing the financial performance of the Ayurveda industry. While there is ample research on Ayurveda's foundational concepts, healthcare in India, and related entrepreneurial aspects, there is a lack of comprehensive studies focusing on financial aspects within the Ayurveda industry Dixit et al. (2022).

To address this gap, the current study aims to fill the void by conducting a detailed analysis of the financial performance of the Ayurveda industry. By exploring key financial indicators, challenges, and opportunities, this research seeks to contribute valuable insights to the understanding of the economic dynamics within the Ayurveda sector. The objective is to provide a holistic perspective that integrates financial considerations with the broader context of Ayurveda practice, healthcare, and entrepreneurship in India.

DATA AND METHODOLOGY

Data Sources

The data is collected through secondary sources. The secondary data is collected from the company are as follows: Annual reports, Balance sheet, Profit and loss account, financial statements, Books, Journals and Websites.

Company Profile

Dr. Augustine K. I, a retired government officer, established the Dr. Augustine's Arya Vaidya Ashramam – Ayurveda Hospital in 2005 in Thiruvanchikulam, Kodungaloor, describing it as an exceptional Ayurvedic Hospital. The

hospital, located 25km from Cochin International Airport, offers 45 AC and Non-AC rooms, specializing in treating various diseases, with a focus on skin ailments.

The hospital produces its medicines in-house, utilizing ingredients from its herbal garden, making the process more expensive and time-consuming than traditional methods. The main treatments include Ayurvedic remedies for infertility, specialized care for various ailments, and Rasayana treatment for overall health. New competitors have emerged since 2005, leading to increased competition and challenges for the hospital.

Late Dr. Augustine's patients were among the initial clients, and the hospital's reputation for quality treatments and medicines has kept it operational. The hospital's services include accommodation with different room categories and three vegetarian meals per day. Although the company has faced challenges, including increased competition and rising raw material costs, it continues to operate and has been passed on to the next generation, with plans for further expansion. The hospital also contributes to education by offering nursing and panchakarma classes for class 12 candidates and internship opportunities in Ayurveda.

In summary, Dr. Augustine's Arya Vaidya Ashramam has established itself as a reputable Ayurvedic hospital, overcoming challenges and adapting to the evolving healthcare landscape.

Tools for Data Analysis

The following are the tools used to analyse the data.

1. Statistical Tools: Statistics are computations that are used to analyses the data. Statistical analysis tools can be used to describe, summarize, and compare data. Statistical data is analyzed using a variety of tools.

- Charts - A graph or diagram that arranges and shows a collection of numerical or qualitative data.
- Percentage - Percentage is expressed with the sign %, which simply means "per hundred."
- Diagrams - A visual representation of statistical data that emphasizes the fundamental facts and relationships found in the data.
- Graphs - The pictorial representation of statistical data in graphical form.

2. Ratios: Quantitative data with the same characteristics as interval data, but with a clear and equal ratio between each data point and an absolute "zero" acting as the origin, is known as ratio data. Put differently, ratio data cannot contain a negative number.

- Gross Profit Ratio (GP ratio): To calculate a company's performance and efficiency, divide its gross profit by its total net sales. This is a financial statistic. Another way to express the gross profit ratio as a percentage is to multiply the result by 100. Next, the gross profit margin or gross profit.

$$GP\ Ratio = \frac{Gross\ Profit}{Sales} \times 100 \qquad (1)$$

- Net Profit Ratio: Also known as the Net Profit Margin Ratio) is a profitability ratio that compares a company's profits to the total amount of money it brings in. The net profit margin ratio displays the relationship between a company's net profit after taxes and net sales.

$$NP\ Ratio = \frac{Net\ Profit}{Sales} \times 100 \qquad (2)$$

- Inventory to working capital ratio: It is a way to demonstrate how much of an organization's inventory is financed by its cash on hand. For businesses that keep inventory and rely on financial inflows, this is crucial.

$$Inventory\ Capital\ Ratio = \frac{Inventory}{Working\ Capital} \quad (3)$$

- Inventory to Total Asset Ratio: The inventory to total assets ratio is one measure used to assess inventory turnover and operational management. A low inventory ratio relative to total assets typically denotes profitability and strong performance. The inventory to asset ratio is the proportion of inventory to total assets.

$$Inventory\ to\ total\ Asset\ Ratio = \frac{Inventory}{Total\ Asset} \qquad (4)$$

3. Correlation: Correlation between two variables occurs when changes in one variable correspond to changes in another. For example, if inventory levels increase,

working capital also increases, and vice versa. The correlation indicates that these variables move together simultaneously. The correlation is calculated using a specific equation.

$$Correlation = \frac{\sqrt{n}\sum xy - \sum x \sum y}{\sqrt{n}\sum x^2 - (\sum x)^2 \sqrt{n}\sum y^2 - (\sum x)^2} \quad (5)$$

EXPERIMENTAL ANALYSIS

Data from the hospital and pharmacy are analyzed. Data is analyzed using a variety of ratios, including gross profit ratio, net profit ratio, inventory turnover ratio, working capital turnover ratio, asset turnover ratio, and the correlation between inventory and working capital.

From Table 1 and Figure 1, a higher gross profit margin indicates that a company can make a reasonable profit from sales, as long as it keeps overhead costs in control. In the year 2020-21, the company's profit is 18.07%.

YEAR	GROSS PROFIT	SALES	RATIO (%)
2017-18	6,89,980.48	50,50,855.00	13.66
2018-19	6,85,417.70	49,36,634.00	13.88
2019-20	8,48,623.83	53,09,235.00	15.98
2020-21	8,27,799.20	45,78,750.00	18.07

Table 1: Gross profit of the hospital.

Fig. 1: Gross profit ratio of the hospital

YEARS	GROSS LOSS	SALES	RATIO (%)
2018-19	(2322673)	1415439	(164.09)
2019 -20	(1766799)	1614567	(109.42)
2020-21	(1788727)	1177221	(151.94)

Table 2: Gross loss of the hospital.

Fig. 2: Graph representation of gross loss of the pharmacy

YEAR	PROFIT BEFORE TAX	SALES	RATIO (%)
2017-18	372411.48	50,50,855.00	7.37
2018-19	4,00,248.70	49,36,634.00	8.10
2019-20	5,92,517.83	53,09,235.00	11.16
2020-21	5,97,769.20	45,78,750.00	13.05

Table 3: Net profit of the hospital.

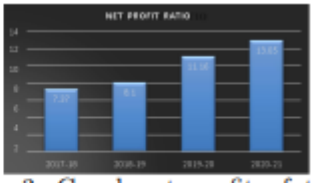

Fig. 3: Graph-net profit of the hospital

From Table 2 and Figure 2,There are chances to expect a steady fall in profit margins as well as no growth in pharmacy due to production costs exceeding total sales. From Table 3 and Figure 3, a higher net profit margin means that a company is more efficient at converting sales into actual profit. In comparison to previous years, the years 2020–21 may witness a bigger net profit. Which means that the company was more efficient at converting sales into profit.

YEAR	NET LOSS	SALES	RATIO (%)
2018-19	(262749)	1415439	(18.56)
2019 -20	31159	1614567	1.92
2020-21	(83935)	1177221	(7.12)

Table 4: Net loss of the pharmacy.

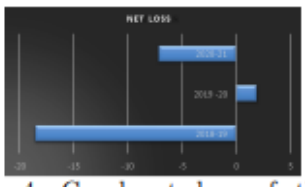

Fig. 4: Graph-net loss of the pharmacy

From Table 4 and Figure 4, one can observe that there has been a negative trend for the past two years, with pharmacy being profitable only in the years 2019-20. From Table 5 and Figure 5, a working capital ratio of below one suggests that there might be problems with liquidity in the future; however, a ratio of 1.5 to 2 shows that the company's liquidity situation is sound. As a result, the corporation is not experiencing any type of crisis in its day- to-day operations. Working capital performance may improve in 2017-18, but liquidity may drop slightly in 2020-21 in terms of day-to-day business operations. From Table 6 and Figure 6, it measures how many times in each period a company is able to replace the inventories that it has sold.

YEAR	INVENTORY	WORKING CAPITAL	RATIO (%)
2017-18	1076648.02	524905.32	2.05
2018-19	1063945.3	662323.02	1.6
2019-20	1362148.74	766946.85	1.77
2020-21	1202069.8	671153.05	1.79

Table 5: Conversion of inventory to working capital.

Fig. 5: Graph-conversion of inventory to working capital

YEAR	COGS	AVERAGE INVENTORY	RATIO (%)
2017-18	10,76,748.02	2072496	0.51
2018-19	10,63,945.30	1945074	0.54
2019-20	13,62,148.74	1871198	0.72
2020-21	12,02,069.80	1795457	0.66

Table 6: Inventory turnover ratio.

Fig. 6: Graph-inventory turnover ratio

YEAR	INVENTORY TURNOVER RATIO	NO. OF DAYS
2017-18	0.51	716
2018-19	0.54	676
2019-20	0.72	507
2020-21	0.66	553

Table 7: holding period of inventory.

Fig. 7: Graph-holding period of inventory

YEAR	INVENTORY	TOTAL ASSETS	RATIO
2017-18	10,76,648.00	39,17,873.32	0.27
2018-19	10,63,945.00	37,72,875.02	0.28
2019-20	13,62,148.00	37,41,456.85	0.36
2020-21	12,02,069.08	34,09,191.05	0.35

Table 8: Conversion of Inventory to total asset.

Fig. 8: Graph-conversion of Inventory to total asset

From Table 7 and Figure 7, it takes 716 days for inventory to convert into sales. But by the year 2020-21 the conversion period has lowered to 553 days, meaning the medicines provided are converted into sales faster and the performance of the company has drastically upgraded. From Table 8 and Figure 8, the lowest ratio was 27% which shows that the company is more effective in the year 2017-18 and the highest ratio was 36% which shows that company is least effective in the year 2019-20.

Year	X	Y	xy	x^2	y^2
2017-18	11	52	572	121	2704
2018-19	11	66	726	121	4356
2019-20	14	77	1078	196	5929
2020-21	12	67	804	144	4489
TOTAL	48	262	3180	582	17478

Table 9: Correlation between inventory and working capital.

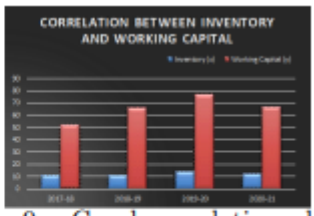

Fig. 9: Graph-correlation between inventory and working capital

From Table 9 and Figure 9, shows an increasing trend from the year 2019 – 2020. The company has enough working capital to meet its daily requirements at this stage. After 2018-2019, the ratio increased again. Thus, there is an improvement in the liquidity position of the company.

DISCUSSION

The study was conducted from March to May 2022 in both the pharmacy and hospital sector. From the data, the following analysis was found and identified. They are as follows:

- In the year 2020-21, the company earns profit of 18.07%. This indicates that the hospital industry is performing better than previous years. However, profit margins continue to decline due to production costs exceeding total sales.
- In 2020-2021, the net profit was higher than previous years. In the case of pharmacies, one can observe that there has been a negative trend for two years, with pharmacy being profitable only in the year 2019-20.
- In 2020-21, the conversion period has been reduced to 553 days, indicating that inventory delivered is being converted into sales at a faster rate. However, performance-wise, the year 2019-20 was better.
- Inventory to working capital shows an increasing trend from the year 2019 – 2020. The company has enough working capital to meet its daily requirements at this stage. After 2018-2019, the ratio increased. Thus, there is an improvement in the liquidity position of the company.
- The correlation between inventory and working capital shows a negative relation of -1.00. Thus, both are negative working capital.
- Pharmacy's performance is comparatively low in all three years. Comparing the three years, a positive impact could be found only in 2019.

CONCLUSION

It has been found that the healthier the country's population, the better the country's health, and economic growth. Ayurveda is generally recognized as a supplemental medicine around the world. Many small businesses have risen substantially in recent years, resulting in a growth in the Ayurveda industry's market share in the economy. It has also contributed to the country's economic progress. The ayurveda sector has acquired even more trust and attracted most clients by employing various marketing methods and informing the public about the benefits of Ayurveda and its treatments. In the last 150 years, Ayurveda has seen significant changes, both during the colonial and post-colonial periods. Present the main conclusions, limitations of the research and recommendations for future studies).

REFERENCES

1. A, S. and Murugesan, M. (2005). Ethnobotanical studies on the wild edible plants used by the tribals of anaimalai hills, the western ghats. *Ancient science of life*, 25:69–73.
2. Al-Mazeedi, H., Miyazawa, M., Ishikawa, Y., Tanoli, N., Mathew, T., and Abraham, L. (2013). Application of modified electrochemical noise technique in *Kuwaiti open cooling water system*.
3. Bajaj, K., Chavhan, V., Raut, N., and Gurav, S. (2022). Panchgavya: A precious gift to humankind. *Journal of Ayurveda and Integrative Medicine*, 13:100525.
4. Chandrashekar, S., Fredy, I., Sandeep, K., and Srinivasan, R. (2015). Detection, prevention and management of adverse

drug reactions in an urban quaternary care hospital. 2015:1531–1539.

5. Chauhan, A., Semwal, D., Mishra, S., and Semwal, R. (2015). Ayurvedic research and methodology: Present status and future strategies. *AYU*, 15:364–69.
6. Dixit, A. K., Nair, R. R., and Babu, T. (2022). Analysis and classification of restaurants based on rating with xgboost model. In 2022 3rd *International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT)*, pages 1–6.
7. Mohanan, M., Hay, K., and Mor, N. (2016). Quality of health care in india: Challenges, priorities, and the road ahead. *Health Affairs*, 35:1753–1758.
8. Padmasani, D. and Remya, V. (2015). Kerala: Health tourism hub for ayurveda. *International Journal of Social Sciences and Management*, 2.
9. Rastogi, S., Rastogi, R., and Rastogi, R. (2009). Standardization and simplification of physico-therapeutic procedures in ayurveda and naturopathy a preliminary study with jala neti. *Indian Journal of Traditional Knowledge*, 8.
10. Vyas, V. (1982). The scope and nature of ayurveda. *Ancient science of life*, 1:135–8