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A study on growth performance of Ayurveda industries and constraints faced in processing of herbal products in Solan district of Himachal Pradesh

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Abstract

Ayurveda system of medicine is used by most of the Indian households. Due to increase in the demand of Ayurveda products, Ayurveda is coming up in India as a business proposition. As the Coronavirus Disease (COVID-19) crisis take over the world, Ayurvedic products helps in boosting the immunity against this deadly disease. The present study was through light on the growth performance of Ayurveda industries in Solan district of Himachal Pradesh. The main aim of the study is to study the compound annual growth rate of the Ayurveda industries units and the factors affecting the growth of these units. For this purpose, multistage random sampling technique was used for the selection of study area. 45 units out of total 60 units were purposively selected from Nalagarh block of Solan district. Out of these 45 units, 25 licensed Ayurveda pharmaceuticals industry units and 20 licensed Ayurveda cosmeceuticals industry units was selected for the study. From each unit, 5 respondents were randomly selected in this stage. Thus, the total sample size was 225. The collected data were analysed using Compound Annual growth rate and Garrett's ranking technique for better interpretation of the results. It was concluded that as the demand of the Ayurveda products are increasing over the years from the previous years, the revenue or profits of the Ayurveda industries units are also increasing. High cost of raw material was the major constraints faced by the respondents in processing of herbal products.

Keywords: ayurveda products, pharmaceuticals, cosmeceuticals, industries, revenue, constraints

Introduction

Ayurveda [traditional medicine (TRM) of India as per WHO], the holistic science of medicine, as practiced and utilized by Indians at large since centuries, is getting global at present by virtue of its qualitative strength, essential elements of health and important clues for consistent functioning of life. Ayurveda includes Sanskrit words: 'Ayu' which means life or lifespan and 'Veda' meaning knowledge (The Science of Life). Ayurveda is one of the rapid emerging sectors worldwide. Ayurveda is an ancient system of medicine which has an existence from approximately 5000 years. Though it is an ancient system of medicine, the popularity of Ayurveda is has alternately fallen in and out of favour in correspondence with the progress of western practices. As the Coronavirus Disease (COVID-19) crisis take over the world, Ayurvedic products helps in boosting the immunity against this deadly disease. Ayurvedic have the ability to treat a variety of issues related to physical, mental and genetic. The segmentation of Ayurvedic market in India is categorised on the basis of product and distribution channel. On the basis of product the market is segmented as personal care products, skin care products, health care products, hair care products, oral care products and drugs/ medicines. Based on the application the market is segmented as supermarkets, pharmacies, departmental stores, beauty spa/salon, internet retailing and specialty stores. There are varieties of product range available in the Indian market. Household in India spends large percentage of its monthly budget on Ayurvedic products.

World scenario of Ayurveda industries

According to WHO the global Ayurveda market is expected to grow with a positive CAGR from the period of 2018 to 2023. The main reason of the growth in the global Ayurveda market is due to increase in awareness of harmful effects of allopathy among consumers. Other factors are also driving the growth of Ayurveda market that is affordability, availability, benefits of ayurvedic products etc. North America accounts for one of the growing markets for Ayurveda owing to the high per capita income and healthcare expenditures, the U.S. and Canada are major markets for Ayurveda in the region. Strong potential of Ayurveda products,

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rising application areas and therapeutic applications in cosmetics and personal care are supporting market growth in the region.

Whereas, in Europe, another promising market for Ayurveda, France, Italy, and Germany are major Ayurveda products market. Increasing popularity of Ayurveda as therapeutics and pharmaceuticals is supporting the Ayurveda market in the region. High disposable income and the presence of large facilities especially in France and Germany drive the regional market growth.

Indian scenario of Ayurveda industries

Herbal exports include medicines of AYUSH (Ayurveda, Unani, Siddha, and homoeopathy) products, which occupy a share of 3% of total Indian pharmaceutical export. Seventy percent of export from the herbal sector consists largely of raw materials and is estimated to be ₹ 10 billion per annum. Thirty percent of the export consists of finished products, including herbal extracts. However, India's share in the global herbal export market is less than 1%.

Ayurveda industries in Himachal Pradesh

Himachal Pradesh is one of the North Indian state in India which is situated in the lap of Himalayas. Most of the state is covered with forest that is about 68.16 per cent of the total geographical area. Himachal Pradesh has well developed Ayurveda system of medicines. This system of medicines is governed by department of AYUSH, Government of Himachal Pradesh, India. The state consists of many Ayurveda industries which are licensed under department of AYUSH, Government of India. These industries are manufacturing different type's ayurvedic medicines in a large quantity. There are 3 government pharmacies and 159 non-government pharmacies under Ayurveda in Himachal Pradesh, whereas overall there are 36 government and 7682 non-government pharmacies under Ayurveda in India.

Need of the study

As the demand of Ayurvedic products are increasing at a very rapid pace, it is very important to understand the at what pace the growth is increasing. The estimation of growth will also help to know that what are the factors that are affecting the growth of the industries. It also helps to implement the right marketing strategies by the Ayurveda industries in order to popularize the market of Ayurveda. The study will also through the light on various constraints faced in the processing of herbal products by the respondents. This helps to make the better management policies in Ayurveda industries regarding proper manufacturing practices.

Objective

To estimate the economic growth of Ayurveda industry units in Solan district.

To analyze the problems of the study area with special reference to processing and marketing of herbal products.

Materials and Methods

The study was conducted in Solan district of Himachal Pradesh. Secondary data was collected from the study area. The secondary data pertaining to revenue generated was collected from the records maintained by the Ayurveda industries units from the period from 2010-11 to 2019-20. Multistage random sampling technique was used for the selection of study area. In first stage, Himachal Pradesh was

purposively selected to investigate the objective of the study. In second stage, Solan district was purposively selected for the study because of the presence of highest number of licensed Ayurveda industries in this district. In third state nalagarh block was purposively selected from solan district as there is highest number of licenced Ayurveda industries. In fourth state 45 units out of 60 units were purposively selected from Nalagarh block. Out of these 45 units, 25 licensed Ayurveda pharmaceuticals industry units and 20 licensed Ayurveda cosmeceuticals industry units was selected for the study. The sample units were 45. From each unit, 5 respondents were randomly selected in this stage. Thus, the total sample size was 225. Compound Annual growth rate and Garrett ranking were employed for the better interpretation of the results.

Results and discussion

The findings of the present study as well as relevant discussion have been summarized under the following heads:

Growth of total revenue in selected Ayurveda Pharmaceuticals units

The compound annual growth rate in total revenue in Ayurveda Pharmaceutical industries units were worked out and the results are presented in the Table 1 and Fig. 1. It was observed from the table that, there was 2.62 per cent of increase in the average annual growth rate of the Ayurveda Pharmaceutical industries units. The reason might be an increase in the demand of Ayurvedic medicine in the Indian market. The major factors affecting demand are due to less side-effects of Ayurveda drugs as compared to other system of medicine and also Ayurveda medicines are cost effective. The government interventions in Ayurveda system of medicines are also playing a significant role in the popularity of Ayurveda drugs. Further the results presented that most of the Ayurveda pharmaceutical units had positive growth rate and only four Ayurveda pharmaceutical units had a negative growth rate. Shree Dhanvantri had the highest positive compound annual growth rate of 13.53 per cent. This might be due to the reason because Shree Dhanvantri manufactured those products which are totally based on the customer needs and demands. The Smilex Healthcare has the negative compound annual growth rate of -1.66 per cent because due to unavailability of raw material and poor marketing strategies by the unit. The result is in the accordance with Dahal *et al.* (2020)^[2].

The coefficient of variation (C.V) of revenue in Ayurveda pharmaceutical industries units was also worked out and results are presented in the table 1 and fig. 1. The average C.V of revenue of Ayurveda Pharmaceuticals units was 9.65, which implies that there was a quite low measure of dispersion because the fluctuation in the revenue is quite low from past 10 years (2010-11 to 2019-20). Shree Dhanvantri has the highest C.V of 35.48 per cent. It means there is more fluctuation in the revenue during the past 10 years (2010-11 to 2019-20). On the other hand the lowest C.V of 1.88 was observed in Abhishek Pharmaceuticals. Which means there were very less variation in revenue of the unit from the past 10 years (2011-12 to 2019-20). The result is in the accordance with Murugan (2020)^[4].

The value from R² of Ayurveda Pharmaceuticals units was also presented in table 1 and fig. 2. The results showed that the average R² value of units was 0.75. it implies that 75 per cent of the variation is caused by the time factor. The only

independent factor which was mostly affecting the increase in the revenue was time factor and only 25 per cent of the other factors influencing the revenue. Smilex healthcare had the highest R² value of 0.99 which means only 1 per cent of other factors which is influencing the revenue of the unit. The

lowest R² value was found in Svizera Health Remedies (0.20). It implies that 80 per cent of the other factors influencing the revenue of the units and 20 per cent of the time factor are influencing the revenue of the unit. The result is in the accordance with Preethi (2017) [5].

Table 1: Growth of total revenue in selected Ayurveda Pharmaceuticals units from the period 2010-11 to 2019-20

Sl. No.	Units	Cagr (%)	C.V (%)	R ²
1	Aimil Pharmaceuticals	3.36**	11.63	0.77
2	Sai Healthcare	1.17*	4.49	0.56
3	Naxpar Pharma	2.39	7.14	0.93
4	Indian Herbal Remedies	1.05**	3.36	0.81
5	Lomash Pharma	0.74*	2.87	0.55
6	Hemma Herbs	1.17**	3.74	0.83
7	Ayurvet Limited	0.65	1.89	0.97
8	Sarvotham Remedies	1.17**	3.72	0.81
9	Indian Herbs Specialities	7.37	22.64	0.88
10	Biomatrix Research Lab	4.01**	16.07	0.59
11	Dabur India Ltd	1.54*	6.22	0.46
12	Shree Dhanvantri	13.53	35.48	0.98
13	Daxen Agritech	3.31	9.81	0.93
14	Health Reactive	-0.68**	2.51	0.60
15	Svizera Health Remedies	0.38	2.46	0.20
16	Dagon Pharmaceuticals	-1.51**	4.90	0.80
17	Abhishek Pharmaceuticals	-0.30	1.88	0.21
18	Daxen Agritech	1.38**	4.59	0.75
19	Super Dynamics Infrosol	2.47	7.24	0.93
20	Charak Pharma	2.72	8.42	0.87
21	Altis Life Sciences	5.07	14.64	0.95
22	Knox Lifesciences	2.99	8.62	0.95
23	Dabur India Ltd.	6.35	17.96	0.92
24	Alex Biotech	6.08	17.83	0.95
25	Smilex Healthcare	-1.66	21.10	0.99
	Average	2.62	9.65	0.75

Note: ** Significant at 1 per cent level of probability
 * Significant at 5 per cent level of probability

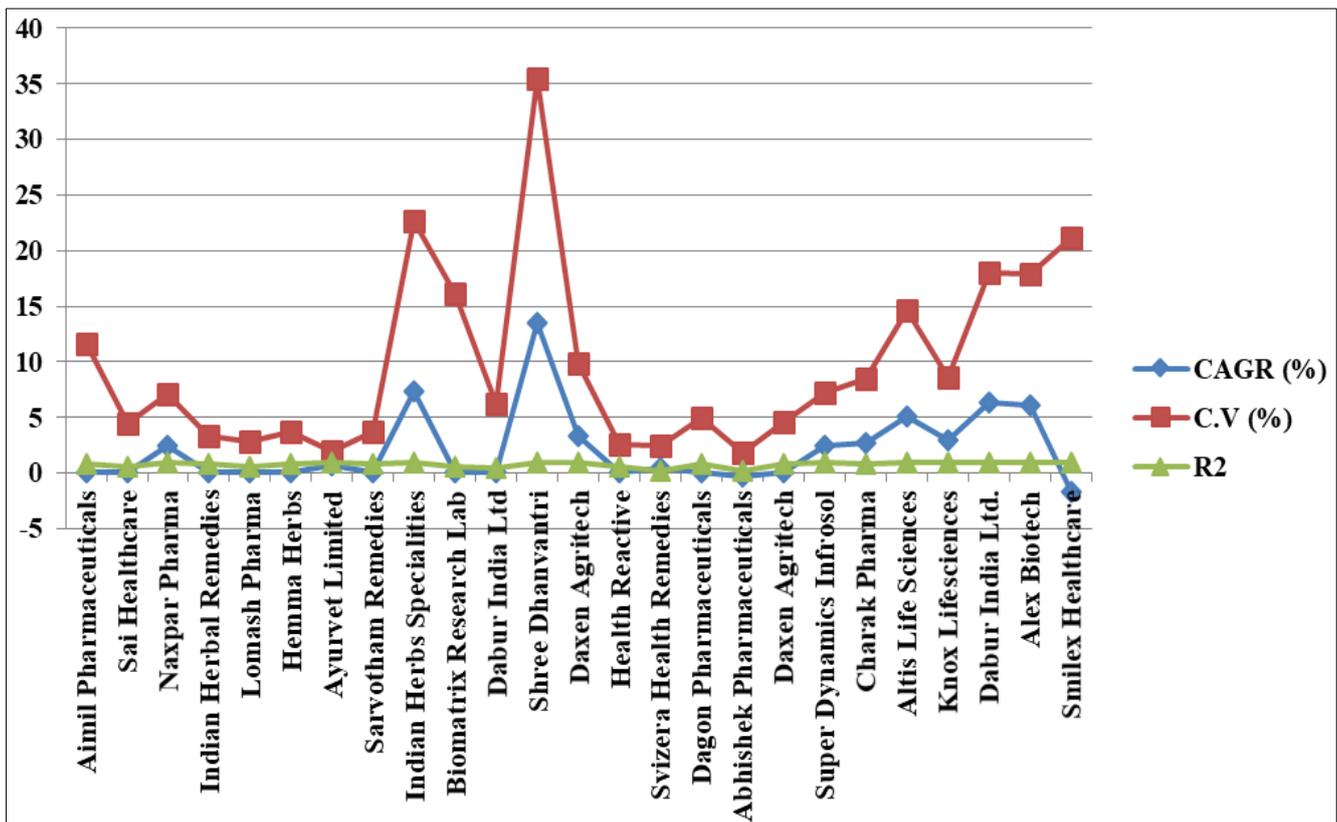


Fig 1: Growth of total revenue in selected Ayurveda Pharmaceuticals units from the period 2010-11 to 2019-20

Growth of total revenue in selected Ayurveda Cosmeceuticals units

Table 2 and Fig. 2 presented the growth of total revenue in selected Ayurveda Cosmeceuticals units from the period 2010-11 to 2019-20. From the time period of 2010-11 to 2019-20 the average annual growth rate of the cosmeceutical Ayurveda units was increased at the rate of 0.80 per cent. This is due to the less demand of Ayurveda cosmetics among the consumers in the market. Though the ayurvedic cosmetics have less or no chemical but one of the drawbacks is that these ayurvedic cosmetics take a long time to give effective result. The increase in growth rate is also due to the new innovation in the field of Ayurvedic products and also new brands are introducing in the markets which have a very good marketing strategies to attract the customer towards ayurvedic products. The table also showed that most of the units had positive growth while on the other hand only 4 units had a negative growth rate. The Dabur India had the highest Compound annual growth rate of 3.44 per cent. The strong brand image and strong consumer base was the main reason of increase in growth rate. Ratnasagar Herbals had lowest and negative growth rate of -0.70 per cent. This might be due to no brand image and low demand of the products. The result is in the accordance with Thakur and Murthy (2018)^[8].

The table 2 and fig. 2 also depicted the coefficient of variation (C.V) of revenue in Ayurveda cosmeceutical units. The average C.V of revenue realized in Ayurveda cosmeceutical

units was 3.22 percent. Which implies that from the past 10 years (2010-11 to 2019-20) the fluctuation in the revenue realized is very less as compared to pharmaceutical units. The highest C.V of 6.16 per cent was observed in unit Cosmic Neutracos Solution. It means there is more fluctuation in the revenue from the period of 2010-11 to 2019-20. It might be because of fluctuation in increase or decrease in demand of cosmeceutical products. Further the lowest C.V of 0.58 per cent was observed in Ratnasagar Herbals i.e. 0.58. It represents the less fluctuation in revenue realized by the unit from the past 10 years. The result is in the accordance with Roselyn *et al.* (2019)^[6].

Similarly the coefficient of determination (R^2) was also worked out in the Table 2 and Fig. 2 and it was revealed that the average R^2 value of the cosmeceutical units was 0.73. Which means 73 per cent of the variation is caused by the time factor and except time factor other factors like demand, consumer preference, perception etc. are also associated for increase in the revenue over the years. had the highest R^2 (0.98) value were found in Aryanveda Cosmeceuticals and Reckitt Benkiser implies that 98 per cent is the time factor which influencing the revenue of the units and rest of the two per cent was explained by other factors or variables. The lowest R^2 (0.12) value of 0.12 was found in Ratnasagar Herbals implies that only 12 per cent in the variation in revenue explained by the time. The result is in the accordance with Murulidhar *et al.* (2019)^[3].

Table 2: Growth of total revenue in selected Ayurveda Cosmeceuticals units from the period 2010-11 to 2019-20

Sl. No.	Units	Cagr	C.V (%)	R^2
1	Maja Healthcare Division	0.78	2.40	0.86
2	Aryanveda Cosmeceuticals	0.52	1.51	0.98
3	TVC Lifesciences	-0.62	1.90	0.89
4	Hygiene Research Institute	0.23	1.41	0.22
5	Kanidi Cosmeceuticals	0.30	0.92	0.88
6	Ratnasagar Herbals	-0.07	0.58	0.12
7	Ozone Ayurvedics	1.85	5.64	0.89
8	Cosmic Neutracos Solution	2.07	6.16	0.91
9	Wings Biotech	0.94	2.91	0.88
10	Vaishnavi Kosmetics	0.90	2.70	0.90
11	JBJ Perfumes	1.50	4.44	0.92
12	Crest Tropical	0.49	1.47	0.91
13	Mapaex Remedies	-0.22	1.42	0.20
14	Dabur India	3.44	9.79	0.98
15	VVF Ltd.	-0.84**	2.61	0.85
16	Reckitt Benkiser	1.74	5	0.98
17	Alliance India	1.81	5.50	0.90
18	Ultra-Cosmetic	0.36	2.07	0.25
19	Nexus Health And Beauty Care Ltd.	0.17	2.78	0.35
20	Rahul Healthcare	-0.11	1.63	0.40
	Average	0.80	3.22	0.73

Note: ** Significant at 1 per cent level of probability

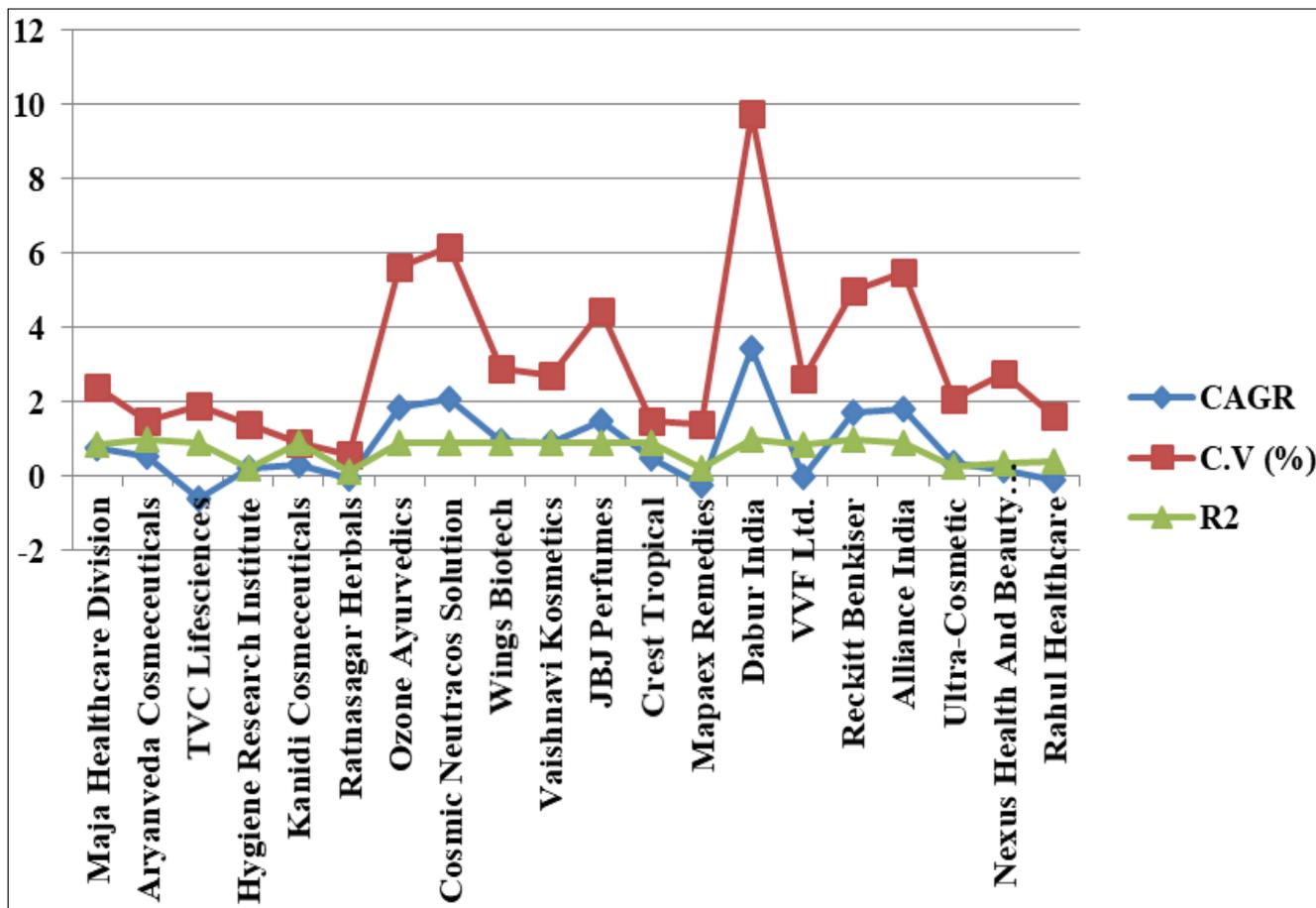


Fig 2: Growth of total revenue in selected Ayurveda Cosmeceuticals units from the period 2010-11 to 2019-20

Constraints faced in processing of herbal products

Table 3 depicts the result of Garrett ranking analysis of Constraints faced in processing of herbal products. Among eleven factors, high cost of raw material was the major problem expressed by most of the respondents so this problem got first rank (73.03). This may due to the reason that, that most of the herbal products needs medicinal plants as a major raw material in manufacturing of these products. But nowadays due to over exploitation of medicinal plants, the extinction of some of the major medicinal plants takes place. Also these plants are available in small quantity. So, in order to manufacture herbal products, the required amount of raw material these plants should be imported from other countries which require a very high cost of raw material. Second problem was high labour cost (70.21). This is because there are large number of industries in Solan district which are labour intensive and requires labour much higher in number than available in the district. Third problem was scarcity of raw material (62.53). Because herbal products require various species of medicinal plants and some of them are endangered species, which is not available in bulk. Poor quality of raw material got fourth rank (50.85). As the Ayurveda industries has to follows certain GMP’s rules and procedures. The industries can’t compromise with the quality of the raw materials. But due to unavailability of raw material or poor quality of raw material the industries has to shift towards its substitute. Other constraints like Wastage of raw material (49.39), Lack of new technology (48.96), Lack of infrastructure facilities (46.92), Scarcity of water (38.57), Labour scarcity (35.75) and Erratic electric supply (34.14). The similar result was reported by Selvaraj and Santhanamari (2019)^[7].

Table 3: Constraints faced in selected Ayurveda industries units with special reference to processing of herbal products

Sl. No.	Constraints	Scores	Garrett’s Rank
1	High cost of raw material	73.03	I
2	High labour cost	70.21	II
3	Scarcity of raw materials	62.53	III
4	Poor quality of raw material	50.85	IV
5	Wastage of raw material	49.39	V
6	Lack of new technology	48.96	VI
7	Lack of infrastructure facilities	46.92	VII
8	Lack of financial availability	40.60	VIII
9	Scarcity of water	38.57	IX
10	Labour scarcity	35.75	X
11	Erratic electricity supply	34.14	XI

Conclusion

It can be concluded from the results that the demand of Ayurveda drugs and cosmetics are increasing at a very great pace. Nowadays consumers are more relying on Ayurveda products because of their features which are beneficial for the health of the humans. As the demand of the Ayurveda products are increasing from the previous years, the revenue or profits of the Ayurveda industries units are also increasing. The industries also starts manufacturing of new and innovative ayurvedic products which are purely based on the consumer needs and wants. The Ayurveda pharmaceuticals units are showing more growth as compared to the Ayurveda cosmeceutical units because Ayurveda drugs are more in demand due to its lesser side effects in the body of the human beings. But on the other hand Ayurveda cosmetics give results after a very long time which sometimes becomes very time consuming. High cost of raw material was the major

constraints faced by the respondents in processing of herbal products because of less availability of important medicinal plants. High labour cost was also another problem due to scarcity of labours in the study area.

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