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Mothers' perception towards pricing pattern of baby foods with special reference to Coimbatore district

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Abstract

One industry that is gaining importance all over the world is the baby food industry. The Indian baby care Market Analysis has conducted a study which shows that the growth potential for baby care products in India is very strong. We live in an age where exclusively breast feeding their babies has become very difficult for mothers. These can be for a variety of reasons ranging from inadequate milk secretion to physiological problems like sickness, disease, death, etc. There is another major reason as to why baby formula is being used as a substitute for breast milk, and this is because of modernization, financial situations in the family and a steep increase in literacy levels which in turn has caused a majority of women to be very strongly career oriented. This reason has been majorly capitalized on by Baby formula industries and the result is a cow-based milk formula substitute for breast milk. It has become very evident that for some reason or the other, most mothers are moving towards infant food formula. The market has many choices for them ranging from a wide range of brands with different prices and qualities. This, in turn makes it very difficult for mothers to choose what they need. This in turn makes the competition pretty stiff between competitors in this industry. This stiff competition has made it mandatory for marketers to study what mothers look for/ expect from baby food products when it comes to pricing of the same to be able to survive and succeed in this industry.

In order to assess the extent of variation of mothers' perception towards the price of baby food products in Coimbatore district, this study has data that has been collected from 900 married women respondents who have infants in the age group of six months to two years. The technique used to select the respondents is the Multi stage random sampling technique and the data was collected from respondents using the Interview schedule method. The statistical tools used for the study were Simple percentage technique, Chi – square analysis, Correlation, Regression, Stepwise analysis, Path analysis and Factor analysis.

The leader in the whole of the Indian market is the baby food giant, Nestle who have mammoth's share of 85% of the market and other major competitors in this field are Farex, Nusobee and Amul. The study reveals that socio-economic factors are the major cause of influence in the perception of respondents towards baby food product prices. The factor analysis also reveals that price, pricing affordability, pricing regulation & familiarity and middlemen pricing were the major causes of the perception of the respondents about baby food product prices.

The major focus area of the baby food industry are mothers. This has resulted in this highly competitive environment of baby food products laying all their emphasis and concentration in providing quality products at nominal prices to their customers which in turn improves their (customers') level of satisfaction. This industry fulfils and caters to the needs of mothers by offering better and a variety of diverse and customized products, thus creating a strong trust in their minds towards their baby food products.

Keywords: Mothers' perception, baby foods, Coimbatore district

1. Introduction

One industry that is gaining importance all over the world is the baby food industry^[1]. The Indian baby care Market Analysis has conducted a study which shows that the growth potential for baby care products in India is very strong. The various factors like increasing awareness, increase in income levels and shifts in consumer behaviour increase demand for baby care products and it becomes fastest growing sector in the world^[3]. As India is also going in for the nuclear family structure, the grandmother's care has been reduced considerably. Due to various reasons, parents were not able to feed their babies exclusively with homemade food. Due to the rising population and the growing per capita income of individual, the standard of living of every individual has been raised. With increasing incomes and raised standards of living, people not even fulfilled their necessities but also created a need of luxuries. A significant impact of this change can be easily noticed in the increasing demand for baby food products. With a population over a billion and with people ranging from low level income groups to high level income groups, the demand for baby food in India is increasing. The compounded annual growth rate of the baby food industry in India was around 10% in 2010 – 13^[1].

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India is the second largest populated country in the world, according to India Statistical Centre 2011. India has more working women than does any other country in the world. Of the entire workforce of 400 million, 30-35% are female and out of these women, only 20% work in urban India (Nasscom and Mercer, 2009) [2].

Children are the most crucial resources in any country for they contribute to the overall development of the nation. A healthy generation of children leads to a healthy generation of young people with full vigour and vitality and these future citizens contribute to the social and economic development of the country. Hence, it is necessary that, more care, attention, and daily supplementary nutritious food are required for the growth of children. Because these are the crucial years where child requires attention on both physical and psychological development. To start with, a highly nutritional food is essential for the children below two years of age. Throughout the first six months of babies life, Mothers milk is alone sufficient. During this period there is no need for supplementary food for the growth of babies. Baby food should be given as a supplement to mother's milk between the ages of 6 months to 2 years. These baby foods come in multiple varieties and are produced by different manufacturers which are designed for ease of eating as soft liquid paste [4]. The total market size of the baby food industry in India is around Rs. 1500 crores, which is lead by the major baby food giant Nestle which commands 85% of the market and the major competitors are Farex (owned by Wockhardt), Nusobee, Amul, Pristine, etc [1].

The Government of India has regulated the marketing practices of baby food manufacturers, by enacting the Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act in 1992 and was further amended in June 2003. This act is solely oriented towards the production, supply and distribution of infant milk substitutes. It prohibits the advertising and promotion of the product to the general public in any form [4].

2. Statement of the Problem

It is an emotionally bonding occasion for every mother when she breast feeds her baby. The baby gets numerous benefits from his/her mother's breast milk which is adequate for his/her growth and development. During the first six months of an infant's life, mother's milk is not just the only source of energy, but it also increases the immunity, which protects the infant from diseases throughout his/her life. Breast milk also contains hormones and live cells that can never be replaced by cow based baby formula [5]. However, in the present age, mothers find it extremely difficult to exclusively breast feed their babies due to various reasons like inadequate milk secretion, sickness, physiological problems, disease, death, etc. Another reason for the need of baby formula as a substitute for breast milk is that due to modernization, family financial situation and a steep increase in literacy levels, majority of women are forced to be strongly career oriented. Baby formula industries capitalized on this reason and provide a substitute for breast milk with a cow-based milk formula [6]. It is evident that a majority of mothers are moving towards infant food formula for some reason or another. Many brands with different prices and quality are available in the market. In this case, mothers also face difficulty in choosing the appropriate brand. At the same time, marketers are facing stiff competition from their competitors. So it

becomes essential for marketers to study the perception of mothers towards the price of baby food products for their survival and success. Therefore, to know mothers' perceptions about price of baby foods, this study has been undertaken.

3. Scope of the Study

The scope of the study is restricted to selected category of the respondents i.e. the data for the study is collected only from married women respondents who have infants between the age group six months to two years. The present study titled "Mothers' perception towards Pricing pattern of baby foods with special reference to Coimbatore district" aims to assess the extent of variation in the perception of the mothers' towards price of baby food product in Coimbatore district.

4. Objectives of the Study

1. To present a brief consumption pattern of the respondents in Coimbatore district.
2. To assess respondents' perception towards Price of baby food products.
3. To offer valuable suggestions for the improvement of infant food industry.

5. Research Methodology

Sample size

A total of 900 mothers' who have infants between the age group six months to two years residing in the Coimbatore district were selected for the study. Out of 450 paediatricians in the district of Coimbatore, 90 paediatricians were selected and ten patients / respondents from each paediatrician were selected using Multi stage random sampling technique and then interviewed them using Interview schedule.

Tools for collection of data

The present study is empirical in nature and is based on the survey method. The researcher collected the data required for carrying out the present study in two stages. In the first stage, the personal and occupational data relating to the sample respondents and their perception on price of baby food was collected from the respondents by using the Interview Schedule. During the second stage of the data collection, the researcher collected the secondary data from various published and unpublished records.

Tools for analysis

The field work for the present study was conducted by the researcher during the period July 2014 to December 2014. After the collection of data through the interview schedule, accuracy of data was verified thoroughly for various factors like consistency and completeness. The average time taken for each interview was around 30 minutes. The data thus collected was properly categorized and was entered in MS Excel for further processing. The analysis required for the present study has been processed with the help of SPSS package.

The present study has a general plan of analysis which ranges from simple descriptive statistics, bivariate test, testing of hypothesis to multivariate techniques viz., correlation, regression, stepwise analysis, path analysis and factor analysis. Simple percentage technique was used to analyse the consumption pattern of the respondents.

6. Analysis and Interpretation

Table 6.1: Consumption pattern

Factors	No. of Respondents	Percentage
1. Milk powder		
Amul	40	12.7
Nan	84	26.6
Lactogen	129	40.8
Everyday	10	3.2
Dexolac	44	13.9
Nesobee / Nutralite	9	2.8
	316	100
2. Supplementary foods		
Cerelac	369	67.7
Farex	21	3.9
Nestum	133	24.4
Babyvista & Others	22	4.0
	545	100
3. Health Drinks		
Boost	56	13.2
Complan	78	18.4
Horlicks	188	44.5
Bournvita	21	5.0
Pediasure	62	14.6
Others(Vita+,Lactocal,Protein powder)	18	4.3
	423	100

It is evident from the table that majority of the respondents prefer Lactogen milk powder as substitute for their babies followed by Nan milk powder. Most of the mothers' prefer Cerelac as the preferred supplementary food for their babies

followed by Nestum. The table also showed that majority of the mothers' prefers Horlicks as their favorite health drink for their babies followed by Complan and Pediasure.

Table 6.2: Information seeking behaviour of the respondents

Factors	No. of Respondents (N = 900)	Percentage
6.2.1.Source of reference		
Medical Practitioners	385	42.8
Friends, Relatives and Neighbours	384	42.7
Media & Advertisement	75	8.3
Shop keepers	56	6.2
6.2.2.Frequency of purchase		
Monthly	463	51.4
Fortnightly	59	6.6
Weekly	97	10.8
As and when required	281	31.2
6.2.3.Amount spent for baby food products		
Up to Rs. 500	258	28.7
Between Rs. 500 – Rs. 1000	463	51.4
Above Rs. 1000	179	19.9

6.2.1. Source of reference

Customers get information from various sources namely media, friends, shop keepers, neighbours, etc. Sharing of opinions through discussions also play its own role in disseminating the information and creating awareness in the minds of the customers. Table 2 exhibits that out of 900 respondents, 385 (42.8%) respondents get the information from the medical practitioners whereas 384 (42.7%) respondents are of the opinion that they are able to get all the required information from the Friends, Relatives and Neighbours, 75 (8.3%) respondents get the information through Media & Advertisement and the remaining 56 (6.2%) respondents get the information from shop keepers.

6.2.2. Frequency of purchase

Out of 900 respondents, 463 (51.4%) respondents purchase baby food products once in a month, 59 (6.6%) respondents purchase baby food products twice in a month, 97 (10.8%) respondents purchase infant food products once in a week and 281 (31.2%) respondents purchase baby food products as and when required.

6.2.3. Amount spent for baby food products

Table 6.2 clearly shows that out of 900 respondents, 258 (28.7%) respondents spent Rs. 500 per month towards the purchase of infant food products, 463 (51.4%) respondents spent between Rs. 500 and Rs. 1000 per month towards the purchase of infant food products and 179 (19.9%) respondents spent more than Rs. 1000 per month towards the purchase of infant food products.

Table 6.3: Place of Purchase

Place of purchase	Always	Frequently	Sometimes	Rarely	Not at all	Total
Pharmacy	119 (13.2%)	39 (4.3%)	202 (22.4%)	273 (30.3%)	267 (29.8%)	900
Departmental Stores	217 (24.1%)	49 (5.4%)	274 (30.5%)	233 (25.9%)	127 (14.1%)	900
Hyper & Super markets	561(62.3%)	158 (17.6%)	123 (13.7%)	47 (5.2%)	11 (1.2%)	900
Retail stores	558 (62.0%)	138 (15.3%)	144 (16.0%)	36 (4.0%)	24 (2.7%)	900

Out of 900 respondents, 119 (13.2%) respondents purchase baby food products always in Pharmacy, 39 (4.3%) respondents purchase baby food products frequently in Pharmacy, 202 (22.4%) respondents purchase sometimes, 273 (30.3%) respondents purchase rarely and 267 (29.8%) respondents do not purchase at all from pharmacy. 217 (24.1%) respondents always purchase baby food products from the departmental stores, 49 (5.4%) respondents frequently purchases, 274 (30.5%) respondents purchases some times, 233 (25.9%) respondents purchases rarely and 127 (14.1%) respondents do not purchase from the departmental stores. Out of total respondents, 561 (62.3%) always purchases from hyper & super markets, 158 (17.6%) purchases frequently, 123 (13.7%) purchases sometimes, 47 (5.2%) purchases rarely and 11 (1.2%) respondents do not purchase at all from the super & hyper markets. It is also clear that out of 900 respondents, 558 (62.0%) respondents always purchase baby food products from retail stores, 138 (15.3%) respondents purchases frequently, 144 (16.0%) respondents purchases some times, 36 (4.0%) respondents purchases rarely and 24 (2.7%) respondents do not purchase at all from the retail stores.

6.4. Perception of the Respondents about Price of the Baby Foods

A major factor that affects the sales of products is the price. Acceptance level and the width and latitude of product accessibility are a few things that price consciousness is related to.⁸ Price is now used just to denote the symbol of money value which is agreed to be paid to the seller during purchase made by the consumer.⁷ The consumer's perception of price is very similar to their perception of quality, value, benefit and personal beliefs. It has generally been noted that price conscious individuals look at the value of products and are not usually willing to pay more for something that they don't consider worth the value. But not so in the case of mothers, whose first wish is to provide the best for their babies.

6.4.1. Factors Influencing the Perception of the Respondents on the Price of Baby Foods in Coimbatore District - Chi – Square Test.

Table 6.4.1: Factors influencing perception of the respondents about the price of baby food products in Coimbatore district.

S.No.	Variables	Calculated Value	df	P Value
1.	Age	10.339*	4	0.035
2.	Education	43.744**	6	0.000
3.	Occupational Status	39.611**	6	0.000
4.	Area of Residence	4.959	4	0.291
5.	Family Size	12.267*	4	0.015
6.	Number of Children	7.275*	2	0.026
7.	Occupational Status of Head of the Family	6.548	6	0.365
8.	Number of Earning Members	16.402**	2	0.000
9.	Monthly Family Income	21.720**	4	0.000
10.	Source of Reference	13.608*	6	0.034
11.	Frequency of Purchase	22.024**	6	0.001
12.	Amount spent on Infant food product purchase	8.828	4	0.066

* Significant at 5% level

** Significant at 1% level

The result of chi-square test indicates that the factors such as educational level of the respondents, occupational status of the respondents, monthly family income of the respondents, number of earning members in the family of the respondents and frequency of purchase significantly influence the perception of the respondents on price of the infant food products at a 1% level. Similarly age group of the respondents, number of children in the family of respondents, family size of the respondents, and source of reference significantly influence the perception of the respondents on price of the infant food products at 5% level. The other factors such as area of residence, occupational status of head of the family and amount spent on infant food products purchase do not have influence over the perception of the respondents about the price of the infant food products.

6.4.2. Multivariate Analysis

In order to find out the simultaneous effects of independent variables on the perception of the respondents' on the price of baby food products, the researcher has employed some techniques of multivariate analysis. For this purpose, the researcher has employed techniques such as Karl Pearson's Correlation, Multiple Regression Analysis, Path analysis, Step wise Analysis and the factor analysis. The results of the Multivariate Analysis are presented in the following pages.

6.4.2.1. Results Of Multiple Regression Analysis And Correlation Of The Independent Variables With The Perception Of The Respondents On The Price Of Baby Foods

Table 6.4.2.1: Results of Multiple Regression analysis and Correlation of Price Index with other Independent variables.

Variable	Partial Regression Coefficient (b)	Standard Error	t value	Significance	Correlation
Constant	26.346	3.196	8.244	.000	
Quality Index	.409**	.045	9.006	.000	0.617**
Product Index	.175**	.053	3.334	.001	0.569**
Corporate & Brand image Index	.258**	.044	5.906	.000	0.550**
Customer Satisfaction Index	-.098*	.041	-2.397	.017	0.445**
Age	-.172**	.058	-2.981	.003	-0.117**
Educational Qualification	-.913**	.322	-2.837	.005	-0.163**
Occupation	-.342	.286	-1.198	.231	-0.150**
Area of Residence	.224	.239	.938	.349	0.055
Family size	-.261	.261	-.999	.318	-0.054
Number of Children	-.591	.431	-1.372	.170	-0.071*
Occupation of head of the family	.947**	.350	2.707	.007	0.039
Number of earning members	-.301	.473	-.635	.525	-0.109**
Family income	-.007	.008	-.787	.431	-0.092**
Source of reference	-.212	.262	-.806	.420	-0.036
Frequency of purchase	.591**	.167	3.530	.000	0.008
Amount spent for infant food	-.043	.062	-.695	.487	-0.085*

R² = 46.81

F value = 48.614 **

Significance = .000

* Significant at 5% level

** Significant at 1% level

The Following variables are found to be significant at 1% level For a unit increase in quality index, price index value will be increased by 0.409 units when other variables are held constant. For a unit increase in product index, price index value will be increased by 0.175 units when other variables are kept constant. For a unit increase in corporate and brand image index, price index value will be increased by 0.258 units when other variables are held constant. For a unit increase in occupation of head of the family, price index value will be increased by 0.947 units when other variables are held constant. For a unit increase in purchase frequency, price index value will be increased by 0.591 units when other variables are held constant. For a unit increase in age, price index value will be decreased by 0.172 units when other variables are held constant. For a unit increase in educational qualification, price index value will be decreased by 0.913 units when other variables are held constant. The following variable is found to be significant at a 5% level. For a unit increase in customer satisfaction index, price index value will be decreased by 0.098 units when other variables are kept constant. The other regression co-efficient viz., Occupational status, area of residence, family size, number of children, number of earning members, family income, source of reference and amount spent on infant food purchase are not significant. The overall contribution of all the independent variables to the dependent variable indicated by R² 46.8%. The significance of R² is tested by applying Analysis of Variance Technique and

the F value happens to be 48.61 which is significant at 1% level. This indicates that the model is an adequate one. The Multiple Regression Equation for the Perception of the respondents about the Price of Infant Food Products is given below:

$$Y = 26.346 + 0.409^{**} x_1 + 0.175^{**} x_2 + 0.258^{**} x_3 - 0.098^{*} x_4 - 0.172^{**} x_5 - 0.913^{**} x_6 - 0.342 x_7 + 0.022 x_8 - 0.261 x_9 - 0.591 x_{10} + 0.947^{**} x_{11} - 0.301 x_{12} - 0.007 x_{13} - 0.212 x_{14} - 0.043 x_{15} + 0.591^{**} x_{16}$$

The Correlation Co-efficient of price with the quality (0.617**), Product (0.569**), Corporate image and Brand Image (0.550**) and customer Satisfaction (0.445**), are found to be positive and highly significant at a 1% level. The correlation co-efficient of price with age (0.117**), Educational Qualification (0.163**), Occupation (0.150**), and Family Income (0.092**), are found to be highly significant at a 1% level but the relationship was negative. Similarly the correlation co-efficient of price with the variables such as Number of children (0.071*) and the amount spent for infant food purchase (0.085*) was negative and significant at a 5% level. The other correlation co-efficient are not significant.

6.4.2.2. Contribution of the Significant Variables to the Dependent Variable “Perception pf the Respondents about the Price of the Baby Foods” - Step-Wise Analysis (Forward Method).

Table 6.4.2.2: Contribution of Significant Variables to the Dependent variable ‘Price’

Step No.	Constant	Partial Regression Co-efficient (b)									R ² Value (%)	Increase in R ² Value (%)
		Quality	Corporate & Brand Image	Education	Age	Purchase Frequency	Occupation of Head of the Family	Product	Customer Satisfaction	Family Member		
1	25.750	0.665									38.1	
2	19.709	0.490	0.249								40.9	2.8
3	23.916	0.472	0.265	-1.458							43.2	2.3
4	28.803	0.467	0.277	-1.124	-0.225						44.2	1.0
5	27.139	0.466	0.279	-1.126	-0.206	0.482					44.7	0.5
6	24.761	0.466	0.279	-1.262	-0.202	0.510	1.039				45.3	0.6
7	23.036	0.397	0.229	-1.280	-0.196	0.532	1.046	0.135			45.7	0.4
8	24.254	0.413	0.264	-1.259	-0.203	0.523	1.066	0.173	-0.101		46.1	0.4
9	26.328	0.412	0.264	-1.263	-0.205	0.572	0.974	0.172	-0.100	-0.458	46.4	0.3

As the first step, the variable quality index has been included in the step-wise regression analysis as it was the highly significant variable. The contribution of this variable on the price was 38.1%. In the second step, the variable corporate and brand image index has been included with the already selected variable quality index and these variables contribute 40.9% to the perception of the respondents on the price of infant food products. The increase of 2.8% in contribution was due to the inclusion of the variable corporate and brand image index. In the third step, the variable educational qualification of the respondents has been included along with the already selected two variables and these variables contribute 43.2% to the perception of the respondents on price of infant food products. The increase of 2.3% in contribution was due to the inclusion of the variable educational qualification of the respondents. In the fourth step, the variable age group of the respondents was included and its contribution was found to be 1%. In the fifth step, the variable purchase frequency was added and its

contribution was 0.5%. In the Sixth step, occupational status of head of the family was included and its contribution was 0.6%. In the seventh step, the variable product index was added and its contribution was 0.4%. In the eighth step, the variable customer satisfaction was included and its contribution was found to be 0.4%. Finally the variable 'number of members in the family' was included and its contribution was 0.3% the other variables were not significant.

The full model regression of price index with other independent variables showed an R^2 value of 46.8%. The difference between the R^2 value of the full model and step-wise model was found to be 0.4% and this was the contribution of all the variables which were not included in the step-wise model.

6.4.2.3. Combined Effects of the Independent Variables on the Perception of the Respondents on the Price of Baby Food Products – Path Analysis

Table 6.4.2.3: Direct and indirect effects of the independent variables on the perception of the respondents about the price of baby food products.

Variable Code	Variable	Direct effect	Indirect effect	
			Highest	Lowest
X ₁	Quality	0.38000	0.16819(X ₃)	-0.06279(X ₄)
X ₂	Product	0.15800	0.30058(X ₁)	-0.06862(X ₄)
X ₃	Corporate image & Brand image	0.24200	0.26410(X ₁)	-0.06674(X ₄)
X ₄	Customer satisfaction	-0.09400	0.25384(X ₁)	-0.00282(X ₁₅)
X ₅	Age group	-0.08100	0.01960(X ₃)	-0.03074(X ₆)
X ₆	Educational Qualification	-0.09400	0.01256(X ₁₁)	-0.02785(X ₇)
X ₇	Occupation	-0.04400	0.00856(X ₁₁)	-0.05950(X ₆)
X ₈	Area of residence	0.02400	0.01815(X ₃)	-0.00386(X ₁₀)
X ₉	Family size	-0.03000	0.01383(X ₁₅)	-0.01478(X ₁₀)
X ₁₀	Number of Children	-0.03900	0.00819(X ₁₅)	-0.01444(X ₁)
X ₁₁	Occupational status of head of the family	0.06900	0.00408(X ₉)	-0.01711(X ₆)
X ₁₂	Number of earning members	-0.02100	0.00446(X ₁₅)	-0.03469(X ₆)
X ₁₃	Family income	-0.02200	0.00305(X ₈)	-0.03055(X ₆)
X ₁₄	Source of Reference	-0.02100	0.01338(X ₁₅)	-0.02774(X ₁)
X ₁₅	Purchase frequency	0.09100	0.01029(X ₅)	-0.00581(X ₃)
X ₁₆	Amount spent on infant food purchase	-0.01800	0.01064(X ₁)	-0.00513(X ₁₃)

The highest direct effect was from the variable quality index (0.38000) and the least direct effect was from the variables customer satisfaction index (-0.09400) and educational qualification (-0.09400) to the dependent variable namely the perception of the respondents on the price of infant food products.

The indirect effect was maximum (0.16819) for the variable Corporate image and brand image index and minimum (-0.06279) for the variable customer satisfaction index through the variable quality index. The variable quality index (0.30058) and customer satisfaction index (-0.06862) have the highest positive and negative indirect effects respectively through the variable product index to the perception of the respondents on the price of infant food products. The indirect effect was maximum (0.26410) for the variable quality index and minimum (-0.06674) for the variable customer satisfaction index through the variable Corporate image & Brand image index. The variable quality index (0.25384) and purchase frequency (-0.00282) have the highest positive and negative indirect effects respectively through the variable customer satisfaction index. The indirect effect was maximum (0.01960) for the variable Corporate image & Brand image index and minimum (-0.03074) for the variable educational qualification through the variable age group of the respondents. The variable Occupational status of head of the family (0.01256) and occupation (-0.02785) have the highest positive and negative

indirect effects respectively through the variable educational qualification. The indirect effect was maximum (0.00856) for the variable Occupational status of head of the family and minimum (-0.05950) for the variable educational qualification through the variable occupational status of the respondents. The variable Corporate image and brand image index (0.01815) and Number of children (-0.00386) have the highest positive and negative indirect effects respectively through the variable Area of Residence. The indirect effect was maximum (0.01383) for the variable purchase frequency and minimum (-0.01478) for the variable number of children through the variable family size of the respondents. The variable purchase frequency (0.00819) and quality index (-0.01444) have the highest positive and negative indirect effects respectively through the variable number of children. The indirect effect was maximum (0.00408) for the variable family size and minimum (-0.01711) for the variable educational qualification through the variable Occupational status of head of the family. The variable purchase frequency (0.00446) and educational qualification (-0.03469) have the highest positive and negative indirect effects respectively through the variable number of earning members in respondents family. The indirect effect was maximum (0.00305) for the variable area of residence and minimum (-0.03055) for the variable educational qualification through the variable family income. The variable purchase frequency (0.01338) and quality index (-0.02774) have the highest

positive and negative indirect effects respectively through the variable source of reference. The indirect effect was maximum (0.01029) for the variable age group and minimum (-0.00581) for the variable Corporate image and brand image index through the variable purchase frequency. The variable quality index (0.01064) and family income (-0.00513) have the highest positive and negative indirect effects respectively through the variable amount spent for infant food purchase.

6.4.2.4. Factor Analysis for the Perception of the Respondents on the Price of Baby Food Products in Coimbatore District.

In order to find out the systematic interdependence among the set of observed variables and to find out the fundamental or latent, which creates communality, the factor analysis was carried out by the researcher. The Factor Analysis was used to group the highly correlated variables into a factor. This analysis was used to reduce the number of variables to a manageable level. Principal Component analysis was done using varimax rotation criterion. The Kaiser criterion was used to retain only those factors with Eigen values greater than one. Eigen value is the variance explained by all the variables in a factor and it was more than one for four factors. Hence the component loading was considered only for these four factors. To decide the variables, which form one factor, a component loading of 0.5 and above was considered.

In the first factor, the variable “Prices attract demand” has the maximum component loading of 0.721 followed by the variables Price influences purchase (0.689), Corporate image influences the price (0.592), I buy more of the product when price falls (0.579), Link between price & brand equity is maintained (0.576), Price meets quality (0.564) and Price influences the purchasing capacity (0.527) has a loading of 0.5 and above and hence they can be grouped into a factor. These variables form a factor named as “Influencing factors of price”.

In the second factor, the variable “Price is affordable” has the maximum component loading of 0.755 followed by the variables I am satisfied with the price (0.710), Link between price and utility (0.682), Price stability is maintained (0.659) and Price of the product is based on its features (0.605) and hence they can be grouped into a factor. These variables form a factor named as “Pricing affordability”

In the third factor, the variable “Product price is regulated” has the maximum component loading of 0.678 followed by the variables Familiarity of the product influence price (0.646) and Price differs when product is bought in different form (tin or sealed packets) (0.620) and hence they can be grouped into a factor. These variables form a factor named as “Pricing regulation & familiarity”

In the fourth factor, the variable “I believe price loading is not practiced” has the maximum component loading of 0.735 followed by the variables Prices have attractive discounts (0.664), Price suits all (0.617) and Price is same among all the middlemen (0.523) and hence they can be grouped into a factor. As these variables commonly represent about middlemen related information the factor can be named as “middlemen pricing”. Out of 23 variables, only 16 variables mentioned above has loading of 0.50 and above. The other variables which have not been grouped are considered as not important.

In the variation explained by the 23 variables, Factor I explained 32.420% of variation, Factor II explained 7.810% of variation, Factor III explained 6.828% of variation and Factor IV explained 5.039% of variation. The four factors together explained 52.1% of the variance. The variation explained by the individual variables in the retained four factors was also calculated as presented as Communality (h²). The communality values were calculated for all the variables. The Communality value for the variable ‘I believe price loading is not practiced’ is the maximum (.615) and for the variable ‘I buy more of the product when price falls’ is the minimum (.396). The result of the factor analysis is presented in the table 6.4.2.4.

Table6.4.2.4: Factor analysis for the perception of the respondents on price of baby food products in Coimbatore district

Code	Statement	Component				Communality h ²
		1	2	3	4	
P ₁	I am satisfied with the price	.146	.710	-.075	.279	.608
P ₂	Price is affordable	.142	.755	.054	.104	.605
P ₃	Link between price and utility	.227	.682	.286	.010	.599
P ₄	Price stability is maintained	.285	.659	.137	.115	.548
P ₅	Price of the product is based on its features	.124	.605	.435	-.049	.574
P ₆	Price is same among all the middlemen	-.118	.465	.113	.523	.517
P ₇	I believe price loading is not practiced	.195	.179	.064	.735	.615
P ₈	Prices have attractive discounts	.267	-.013	.149	.664	.535
P ₉	Price suits all	.022	.081	.439	.617	.580
P ₁₀	I believe that price is consumer friendly	.481	.341	.077	.408	.520
P ₁₁	Prices attract demand	.721	.194	-.080	.189	.600
P ₁₂	Link between price & brand equity is maintained	.576	.226	.175	.166	.440
P ₁₃	Price influences the purchasing capacity	.527	.190	.369	.005	.450
P ₁₄	Corporate image influences the price	.592	.222	.294	.001	.487
P ₁₅	I buy more of the product when price falls	.579	-.050	.183	.158	.396
P ₁₆	Price influences purchase	.689	.092	.237	.036	.541
P ₁₇	Price meets quality	.564	.189	.277	.053	.433
P ₁₈	Prices are competitive with other product prices	.372	.165	.431	.258	.419
P ₁₉	Odd pricing is adopted	.474	.124	.397	.261	.466
P ₂₀	Price is fixed according to buyer segmentation	.168	.103	.492	.481	.512
P ₂₁	Price differs when product is bought in different form (tin or sealed packets)	.211	.063	.620	.156	.457
P ₂₂	Product price is regulated	.268	.187	.678	.151	.590
P ₂₃	Familiarity of the product influence price	.224	.092	.646	.126	.492
	Eigen Value	7.457	1.796	1.570	1.159	
	% of Variance	32.420	7.810	6.828	5.039	
	Cumulative %	32.420	40.231	47.059	52.098	

7. Major Findings of the Study

The major findings of the study are summarized in this section

7.1. Consumption pattern and information seeking behaviour of the respondents

Majority of the mothers prefer Lactogen, Cerelac and Horlicks as the substitute food for their children. It has been found that majority of the respondents get information from medical practitioners and Friends, relatives & neighbours. Majority of the respondents purchase infant food products once in a month and they spent between Rs. 500 to Rs. 1000 per month towards infant food products. The study also shows that majority of the mothers prefer Hyper & super markets and retail stores rather than preferring departmental stores and pharmacy for purchasing infant food products.

7.2. Perception of the respondents about the price of the baby food products

The results of Chi-square test indicate that the factors such as educational level, occupational status, number of earning members in the family, monthly family income and frequency of purchase significantly influence the perception of the respondents on price of the baby food products at 1% level whereas the factors such as age, family size, number of children in the family and source of reference significantly influence the perception of the respondents on price of the baby food products at 5% level.

The results of Analysis of variance indicate that the difference in the mean scores between the respondents who are with different levels of literacy, respondents with different occupational status, respondents whose source of reference are different, respondents of different age groups, respondents who fall under different income categories, respondents with different sizes of families, respondents with different sizes of earning members, respondents with different amount spent for baby food is significant and the difference in the mean scores between the remaining categories of the respondents is not significant. The study indicates that the relationship between the factors such as educational level of the respondents, occupational status of the respondents, source of reference, age group of the respondents, Income level of the respondents, number of members in respondents family, number of earning members in respondents family and amount spent for purchase of baby food by the respondents and their perception on price of baby food product is significant.

The Multiple Regression analysis reveals that the variables quality, product features, corporate & brand image, Age group of the respondent, educational qualification of the respondents, occupational status of respondents' head of the family, purchase frequency and customer satisfaction have significant influence on the perception of the respondents about the price of baby food products.

The results of Karl Pearson's correlation reveals that the variables like quality, product features, corporate & brand image and customer satisfaction have a positive and highly significant relationship with the price. Age group of the respondent, educational qualification of the respondents, occupational status and monthly family income has the negative and highly significant correlation with the price of baby food products. Similarly the correlation coefficient of price with the variables such as number of children in the family and amount spent towards purchase of baby food products was negative and significant.

The result of Stepwise analysis reveals that the variable quality index was the highly significant variable which contributes 38.1% on the price of the baby food product. The contribution

of other variables to the dependent variable 'price' were corporate & brand image, educational qualification, age group, purchase frequency, occupational status of head of the family, product features, customer satisfaction index and number of members in the family of the respondent.

The results of the Path analysis revealed that the variable quality index has the positive direct effect and the variables satisfaction level of customers and literacy level of the respondents have the negative direct effects respectively on the dependent variable namely the perception of the respondents about the price of the baby food products.

The factor analysis revealed that the factors such as influencing factors of price, pricing affordability, pricing regulation & familiarity and middlemen pricing considerably contributed to the perception of the respondents about the price of baby food products.

8. Suggestions

8.1. Suggestions to the manufacturers

It is hoped that the formulation and implementation of an effective marketing strategy will ensure the success and survival of the baby food industry in the highly competitive environment. The effective marketing strategy has to focus on the components viz. Price, Quality, Product feature, brand image and Customer satisfaction. Hence, the following are the suggestions offered by the researcher through the present study for improving the quality, brand image, product features of baby foods, to offer the product at nominal price and to enhance the satisfaction of the customers. These suggestions include those offered by the customers also.

i. More innovation & diversification of products

Product is the heart of any successful marketing strategy. It is an important element that provides competitive advantage to a firm. Products without uniqueness or products that lack uniqueness fail to attract the customers. Thus to be successful in the market, baby food companies have to think innovatively and diversify their products to meet the taste and preference of the consumers and to face the dynamic market environment. Hence, it is suggested that a proper marketing research can be conducted to identify the suitable product innovation method by listening to the views of the mothers.

ii. Customise the product to meet the customers' expectations

Customers' taste and preferences vary from person to person. The strategy of customisation of the products to the customers' needs proves good. Hence, it is suggested that Customisation can be done by customer requirement analysis.

iii. Offer small – unit packing

It is found that the quantity per pack of products offered by the infant food company is not affordable for the customers. They sell their products in higher quantities, packed in half kilogram or in one kilogram packets. Hence, it is suggested that the infant food companies have to consider offering their products in the quantities required by the customers. If they offer their products in smaller sizes, it will be very easy for them to boost the sale of the products. At the same time, customers' expectation for packs with smaller quantities can also be satisfied. This appears to be an effective strategy for realising the potential of the market.

iv. More focus on the quality of the products

Quality is an important element in case of baby food products. Mothers give more importance to quality rather than price,

image etc. Infant food companies must take necessary steps to maintain the quality of their products. They have to analyse and implement the ways in which the quality of their products can be improved.

v. Pricing and value consciousness

Price is an important element in marketing mix. It plays a key role in determining the marketability of the product. Indian consumers are price sensitive and hence appropriate price should be fixed for the products. They are willing to pay any reasonable price for the products of their choice as they feel that they get value for money. As the product is baby related product, mothers will be ready to pay any price if they are satisfied with the quality of the product. Thus the companies should not compromise product quality for any reason in order to retain them.

vi. Physical distribution

Door delivery facilities can be arranged by the manufacturers through the shop keepers in order to make the product available to all groups of customers at ease.

vii. Extending the supply to the semi-urban and rural areas

The supply of baby foods to semi-urban and rural areas are not adequate enough to fulfil the requirements of the rural customers. Hence it is suggested that suitable measures have to be taken in order to ensure adequate supply to semi-urban and rural areas also.

viii. Effective customer retention strategy

Customer retention is an important element to survive in today's highly competitive business environment. It is also stated that the cost of customer retention activities are less than the cost of acquiring new customers. Hence, it is suggested that proper and effective customer retention strategies are to be formulated and adopted by the business firm industry in order to retain the existing customers.

ix. Improving the image among the customers

Brand image is a vital factor which plays a crucial role in customer's decision making. The image and reputation of the brand that exist in the minds of the customers significantly influence their willingness to buy the product. Hence, it is suggested that the concrete measures like adopting fair practices, considering the total needs of the customers and creating positive image in the minds of the customers about the product.

x. Gaining customer confidence

Getting customers' confidence is not an easy task in today's competitive world. Customers today are extremely vary from each other. First impressions matter when it comes to gaining trust and confidence. Hence, producers must take necessary steps to win the customer's confidence. This can be achieved through providing appropriate information and delivering services up to the expectations of the customers.

xi. Develop customer grievance redressal cell through internet

It is common that the customers may face some problems and may have some queries regarding the usage of the product. They will be annoyed if they do not get answers to their queries. Hence, it is suggested that a separate customer grievance redressal cell can be started with the help of internet to look after the complaints that have been lodged by the customers.

And also it is to be ensured that this cell finds effective and suitable means for solving the complaints that have been lodged by the customers.

So the only way to increase the sales of infant food product is to offer quality products with reasonable price. The product should also possess uniqueness in order to attract the customers. It is highly suggested that no compromise is made for the quality and easy availability of the product.

8.2. Suggestions to the mothers

- i. Mothers should check the manufacturing date and expiry date before feeding the baby food to their children.
- ii. It is the prime duty of the mother to check the ingredients used in the baby food before selecting the product for their children.
- iii. Mothers should take utmost care while choosing a product for their children. They have to approach Consumer Protection Cell if any harmful or toxic ingredients are used in the baby food product.

8.3. Suggestions to the Government

- i. The Government should monitor and implement Infant Milk Substitutes, feeding bottles and Infant Food Regulation of production frequently. The government should expand the role of doctor communities in raising awareness among the mothers. Government should give first importance to breast feeding and educate and create awareness of supplement infant food among the health workers. It should create awareness among the mother community.⁹
- ii. Consumer education is the most important thing and all concerned should give enough thought and action to it. Government should organize campaigns to educate the mothers regarding the usage of baby food products.
- iii. The Government can concentrate more on consumer awareness and implementation of related acts in letter and spirit. This may help to drive out the sub-standard products from the market.

9. Conclusion

The present study carried out by the researcher has been a rewarding experience in the sense that it has identified the perception of mothers on the price of baby food products in Coimbatore district. Mothers have been considered as the vital focus area in the sectors of the baby food industry. As a result, the baby food industry, in the highly competitive environment, lays down their emphasis on providing quality products at nominal prices to their customers in order to improve their level of satisfaction. By offering better, diversified and customized products to fulfil the needs and wants of the mothers and creating a trust in the minds of mothers, baby food industry can improve the level of satisfaction of mothers towards baby food products. It is hoped that studies of this type and the suggestions offered through this study will prove to be very useful to baby food producers as well as to mothers and that this will pave way for baby food producers to offer superior quality products at nominal prices to their customers.

Mothers take utmost care on their children's' health. Mothers try their maximum to fulfil the nutrient requirements of their children. So baby food industry should supply their products in such a way that it satisfies the taste & preference, quality requirements, product variety requirements, etc of the mothers. Government should also take effective measures to regulate Infant Milk Substitutes, Supply and Distribution.

Bibliography

- 1 www.researchandmarkets.com
- 2 “Nasscom and Mercer (2009), “Gender Industry in India: Building Empowered organisations”, from http://survey.nasscom.in/sites/default/files/upload/61812/Nasscom_Mercer_Gender_Industry_Report.pdf.
- 3 M2PressWIRE, M2 Communications, <http://www.m2.com>
- 4 Keerthi Pandian and Ramachandran. K.K. (2010) “Brand awareness: Baby food products” SCMS Journal of Indian Management, pp: 31 – 38.
- 5 Grunert. K.G. (2005) “Food Quality and Safety: Consumer Perception and Demand. European review of Agricultural Economics”; 32(3), 369- 391.
- 6 Anne F.J. (2011) “An investigation of baby formula marketing practices in the health care setting”. A thesis by undergraduate student of the University of North Carolina at Chapel Hill, United States.
- 7 Laroche, M. & Howard, J.A (1980). Non Linear Relations in a complex model of buyer behaviour. Journal of Consumer Research, 6(4), 337 - 388.
- 8 Lichtenstein, D, Blonch, D. & Black, W (1988) Correlates of price acceptability. Journal of Consumer research, 15(2), 243 - 252.
- 9 Articles.timesofindia.indiatimes.com logged on August 5, 2013.

Books for Reference

1. S.P. Gupta, “Statistical methods” 26th Edition Sultan Chand and Sons publishers. 1999
2. C.R. Kothari. “Research Methodology” New Age International Private Limited publishers. 1999
3. Philip Kotler. “Marketing Management” 9th Edition. Prentice Hall of India publishers 2003.