



Original Research Article

A Study on Product Consciousness on Cellular Service Users with Mention to College Students in Vadodara District

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ABSTRACT

This paper aims to assess the level of product consciousness and factors underlying on cellular service users with mention to under graduate students of Arts and Commerce College, Piparia, Vadodara District of Gujarat State as in this era of information explosion, people are to be provided very quick and timely access to information and cellular service providers can be proved as main drivers in India. A structured survey questionnaire through email or in person to the commerce graduate student of Arts and Commerce College, Piparia, Vadodara District (250 valid respondents) who are availing services of public and private Cellular Service Provider (CSPs) private and public by considering confidence interval at 4, Confidence level at 0.05 with total population as 450. The variables considered for this study are: product consciousness, network coverage, promotional offers, service quality perception on dealers, schemes and offers, tariff rates, free calls/ SMS advertisements and communications including value added services. Factor analysis was done for data reduction as well as to assess inter-relationship among variables and a correlation main was constructed with a view to understand students towards different attributes on product consciousness. IBMSPSS was used for data analysis as a statistical tool.

The collected data discovers on having preference of respondents on network coverage as the most influential factor and considerable correlation ship among the variables considered for this study.

It indicates that network coverage and pricing factors have influence on brand preference among the under graduate students of Arts and Commerce College, Piparia, Vadodara District of Gujarat State Further research can be held with more samples by extending the area of research.

Key words: product consciousness, network coverage. Promotional offers, service quality perception on dealers.

INTRODUCTION

Indian cellular phone services providers have shifted the cellular services from ear to eye within the last five years by penetrating the market with a view to maximize the market share. The market of cellular services is not saturated. The teledensity of cellular services has reached 70.57(Press Release No.18/2013 dated 15 March, 2013 www.trai.gov.in) Gujarat Telecom Circle has also registered teledensity by 85.88 and all the Cellular Services Providers (CSPs) are actively

engaged on maximization their profits and market value. The young generation is targeted by CSPs with gorilla marketing tactics. The consumer has options on selecting the CSP. Price and service quality are proved as important factors for the cellular services users.

In this study, it is aimed to examine product consciousness on cellular Service users with reference to commerce undergraduate students of arts and commerce college, Piparia, Vadodara District. This is correlational study and

brand awareness of respondents is examined in context to network quality, promotional offers, and service quality. Perceptions on dealers, schemes & offers, tariff rates, free calls/SMS, advertisements and communication and value added services rendered by CSP to the consumers. The major CSPs are Bharti Airtel, Vodafone, Idea Cellular, Uninor,

Reliance, and BSNL in Vadodara Telecom District of Gujarat Telecom Circle.

Research Questions

The research questions are designed as follows on the basis of reviewed literature.

1. Is there any relationship between product consciousness and network quality of cellular services users in viewpoint to commerce under Graduate Student of Arts and Commerce College, Piparia of Vadodara District?
2. Is there any relationship between product consciousness and promotional offers of cellular services users in context to commerce Graduate Student of Arts and Commerce College, Piparia?
3. Is there any relationship between product consciousness and services quality offers of cellular services users in context to commerce Graduate Students of Arts and Commerce College, Piparia?
4. Is there any relationship between brand awareness and perceptions on dealers of cellular services users in context to commerce Graduate Students of Arts and Commerce College, Piparia?
5. Is there any relationship between brand awareness and tariff rates of cellular services users in context to commerce Graduate Student of Arts and Commerce College, Piparia?
6. Is there any relationship between brand awareness and free calls/SMS of cellular services users in context to commerce Graduate Student of Arts and Commerce College, Piparia?

Objectives of study

1. To investigate the relationship between product consciousness and network quality of cellular services users in context to commerce Graduate Students of Arts and Commerce College, Piparia of Vadodara District.

2. To investigate the relationship between brand awareness and services quality of cellular services users in context to commerce Graduate Students of Arts and Commerce College, Piparia.
3. To investigate the relationship between brand awareness and perceptions on dealers of cellular services users in context to commerce Graduate Students of Arts and Commerce College, Piparia.
4. To investigate the relationship between brand awareness and promotional offers of cellular services users in context to commerce Graduate Students of Arts and Commerce College, Piparia.
5. To investigate the relationship between product consciousness and tariff rates of cellular services users in context to commerce Graduate Students of Arts and Commerce College, Piparia.
6. To investigate the relationship between product consciousness and free calls/SMS of cellular services users in context to commerce Graduate Students of Arts and Commerce College, Piparia.

Significance of study

This study is examining the various dimensions of student perceptions towards product consciousness of cellular service providers in context to commerce graduate Students of Arts and Commerce College Piparia, Vadodara District. The various dimensions of service quality and facilities are covered for investigation. Network quality, promotional offers, service quality, perceptions of dealers, schemes & offers, tariff rates, free calls/SMS, advertisements and communications and value added value added services are considered for the questionnaire to collect primary data from the respondents. It also investigates the level of correlations among the all variables and how CSPs can maximize their market share and gain more profit for the organization. In this study, it is also aimed to provide CSPs a comprehensive view on maximizing the user flow in young generation by special focusing on brand awareness and brand value.

Review of Literature

Brand awareness means the ability of a consumer can recognize and recall a brand in different situations (Aaker, 1996). Brand awareness consists of brand recall and brand recognition. Brand recall means when consumers see a product category, they can recall a brand name exactly, and brand recognition means consumers has ability to identify a brand when there is a brand cue. That is, consumers can tell a brand correctly if they ever saw or heard it. Moreover, Hoeffler & Keller (2002) indicate that brand awareness can be distinguished from depth and width. Depth means how to make consumers to recall or identify brand easily, and width expresses infers when consumers purchase a product, a brand name will come to their minds at once. If a product owns brand depth and brand width at the same time, consumer will think of a specific brand when they want to buy a product. That is, the product has higher brand awareness. Moreover, brand name is the most important element in brand awareness (Davis, Golicic & Marquardt, 2008). As a consequence, brand awareness will affect purchase secession through brand association, and when a product owns a positive brand image, it will help in marketing activities (Keller. 1993). A brand name offers a symbol that can assist consumers to identify service providers and to predict service results (Herbig & Milewicz, 1993; Janiszewski & Van Osselaer, 2000; Turley & Moore, 1995). Brand awareness plays an important role on purchase intention because consumers tend to buy a familiar and well known product (Keller, 1993; Macdonald & Sharp, 2000). Brand awareness can help consumers to recognize a brand from a product category and make purchase decision (Percy & Rossiter, 1992). Brand awareness has a great influence on selection and can be a prior consideration base in a product category (Hoyer & Brown, 1990). Brand awareness also acts as a critical factor in the consumer purchase intention, and certain brands will accumulate in consumers' mind

to influence consumer purchase decision. A product with a high level of brand awareness will receive higher consumer preferences because it has higher market share and quality evaluation (Dodds et al., 1991; Grewal et al., 1999).

Lim (2005) empirically established important quality of service dimensions of mobile phone users that affect customers' satisfaction as pricing plans, billing system, customer services, network quality, and data service quality. Mobile users view inaccurate billing inquiries, lack of honest commitment to communicate and the terms of contract as major sources of complaints. In addition poor customer's services of including lack of or delayed response to customers' inquiries and complaints were the main factors contributing towards customer dissatisfaction (Consumer Report, 2005, McKinsey, 2004). Based on empirical studies, Gerpott et al. (2000) and Lee, Feick and Lee (2001) found that satisfaction of mobile phone customers is strongly influenced by the pricing plans Telecom Regulatory Authority of India carried out a study on satisfaction of cell phone customers in Delhi in 2005. The results indicated poor quality signals, costs, billing errors, poor response to unsolicited calls and signal messaging services and customer services as major causes of dissatisfaction (Vision RI, 2005). Global System for Mobile communication (GSM) Association identified a list of indicators for mobile phone quality of services. These indicators included network access, service access; service integrity and service retain ability (Sunderland, 2007, p.20). Lim & Kumar (2008) carried out study in United States based on a sample of 298 mobile phone users of two age groups (collage students and old age group). The study found that quality and reliability of network, billing services and customers services found to be essential attributes of service quality of mobile phone services that contribute to economical and emotional value that leads to satisfaction of customers in different age groups. Chi, Yeh and Jang (2008) noted, in

a study of 127 mobile phone users, that coverage and reduction in service charges are essential elements of quality for retention of existing customers and attracting new customers. Souki and Filho (2008) carried out a study based of 434 customers in Brazil. The study focused on satisfaction of mobile phone users. The results of the study indicated high rating of customers' services, Quality of connections, overall ambience of the outlets, and the coverage provided. In a study Singh (2008) argued that the unprecedented growth of subscribers in India poses challenges to operators to ensure quality of services based on customers care, price, billing and new applications to meet ever increasing customers' demands ACMA (2008). The study reported highest levels of dissatisfaction with mobile phone services (35 percent), citing problems such as drop-outs, poor call quality and interference. The research also highlighted the growing number of complains to Telecommunications Industry

In a survey conducted in 2009, Indian mobile phone users indicated diversity of services, reliable customer services and reasonable pricing as the main features of quality of service (Prabhudesai, 2009). Dotchin and Oakland (1994) observed that, in services that provide much interaction with consumers, essential attributes of service quality are competence, credibility, security and knowledge. Parasuraman, Zenithal and Berry (1988) identified some generic dimensions of service quality' (SERVQUAL), which measures service Quality based on five dimensions, which are tangibles, reliability, responsiveness, assurance and empathy.

RESEARCH METHODOLOGY

This study is correlational study. The study is aimed to examine the students perceptions towards product consciousness the of cellular services providers (CSPs) in context to arts and commerce collage of Piparia, Vadodara District. Total 350 students are pursuing their bachelor degree

program with commerce graduation, which are considered as population for the study. The sample size is considered as 250 with the strength of 71% of the total strength under graduate students in faculty of commerce. For our research we have adopted the convenience sampling, which is a non- probability statistical method of drawing representative data by selecting people because of the ease of their volunteering or selecting units due to their availability or easy access. The advantage of this type of sampling is the availability and the quickness with which data can be gathered. Since our study focuses on examining the students' perceptions on their selecting their cellular services provider we have collected the data by primary method of data collection namely mailed questionnaire, we have selected a sample of 250 respondents out of 350 total populations with 95% confidence level and 4% margin of error. Sample of size 250 is almost 71.42% of the population which is quite representative of the population. The collected data are analyzed by employing SPSS 16.0 as a statistical tool. Scale reliability test, measurement of items, descriptive statistics, Pearson correlation test and simple linear regression test is conducted. The following hypothesizes are formed for investigating the possible relationship among variables.

H₀₁: There is no significant relationship between brand awareness and network quality of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia of Vadodara District

H₁₁: There is no significant relationship between brand awareness and network quality of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia of Vadodara District

H₀₂: There is no significant relationship between brand awareness and promotional offers of cellular services users in context to commerce graduate students of

Arts and commerce collage, Piparia of Vadodara District

H₁₂: There is no significant relationship between brand awareness and promotional offers of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia.

H₁₃: There is no significant relationship between brand awareness and service quality of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia.

H₁₃: There is significant relationship between brand awareness and service quality of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia.

H₁₄: There is no significant relationship between brand awareness and perceptions on dealers of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia.

H₁₄: There is significant relationship between brand awareness and perceptions on dealers of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia.

H₁₅: There is no significant relationship between brand awareness and tariff rates of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia.

H₁₅: There is significant relationship between brand awareness and tariff rates of cellular services users in context to commerce graduate students of Arts and commerce collage, Piparia.

H₁₆: There is no significant relationship between brand awareness and free calls/ SMS offers of cellular services users in context to commerce graduate students of Arts and commerce collage, piparia.

H₁₆: There is significant relationship between brand awareness and free calls/ SMS offers of cellular services users in

context to commerce graduate students of Arts and commerce collage, Piparia.

Data Interpretation and Findings

Out of 250 respondents 160 (64.00%) were male and 90 (36. %) were female. Moreover, 96 (38.4%) of the students were below age of 20 years and 161 (64.4%) of students were of the age 21-25 years. The respondents having first semester study is 87 (34.6%). The respondents having second semester study is 60 (24.1%) and the respondents having study with fourth semester is 81 (32.2%) It indicates that the maximum respondents are pursuing their study in first semester and minimum respondents are pursuing their study in third semester. The unmarried respondents are with the strength of 237(94.8%) and married respondents are with the strength of 14 (5.6%) The dependent respondents are with the strength of 231(92.4%) and independent respondents are with the strength of 20(8%) The respondents having cellular services of BSNL with the strength of 72(28.8%) which is highest among the all CSPs. The respondents having cellular of Idea with the strength of 33(13.2%); the respondents having cellular services of Vodafone with the strength of 71(28.4%); The respondents having cellular services of Airtel with the strength of 53(21.2%); The respondents having cellular services of Reliance with the strength of 13(5.2%); The respondents having usage period of cellular services with less than one year amounts to 110(44%); The 1-3 years amounts to 16(6.4%); The respondents having monthly consumption on cellular services is less than 200 rupees. amounts to 84(33.6%). The respondents having monthly consumption on cellular services are 200-400 rupees amounts to 84(32.5%). The respondents having monthly consumption on cellular services are more than 400 rupees amounts to 85(34. %). All the respondents are having prepaid cellular services.

Table 1: Scale Reliability Test

Sr. No.	Name of Variable	No. of Variables	Dropped Variables	Cronbach Alpha
1	Product Consciousness (PC)	4	0	0.797
2	Network Quality (NQ)	4	0	0.828
3	Promotional Offers (PO)	3	0	0.729
4	Service Quality (SQ)	4	0	0.806
5	Perceptions on Dealer (PD)	4	0	0.897
6	Schemes & Offers (SO)	4	0	0.828
7	Tariff Rates (TR)	4	0	0.841
8	Free Calls/ SMS (FCSMS)	4	0	0.41
9	Advts & Communications (AC)	4	0	0.868
10	Value Added Services (VAS)	4	0	0.790

Table 2: Descriptive statistics of and Variable

Sr. No.	Factor	Valid Respondents	Missing Response	Mode	Standard Deviation
1	Product Consciousness (PC)	250	0	1	1.61
2	Network Quality (NQ)	250	0	1	1.61
3	Promotional Offers (PO)	250	0	1	1.50
4	Service Quality (SQ)	250	0	1	1.61
5	Perceptions on Dealer (PD)	250	0	1	1.61
6	Schemes & Offers (SO)	250	0	1	1.61
7	Tariff Rates (TR)	250	0	1	1.61
8	Free Calls/ SMS (FCSMS)	250	0	1	1.61
9	Advts & Communications (AC)	250	0	1	1.61
10	Value Added Services (VAS)	250	0	1	1.61

Table-1 indicates the results on scale reliability of questionnaire for collecting primary data. The results of scale reliability analysis indicate the consistency of questionnaire. Reliability is the degree to which measures are free from error according to George and Mallery (2003). There are ten factors with 39 items. The factors are; network quality (NQ), promotional offers (PO), service quality (SQ), perceptions on dealers (PD), schemes & offers (SO), tariff rates (TR), free calls/SMS(EC/SMS), advertisements and communications (AC) and value added services (VAS) Each factor has four items except " promotional offers (PO). It has three items the scale reliability of all the factors is in the range of 0.729-897 which validates the scale for further investigation. All the items are considered for further investigation.

In this study, five point Likert scale (strongly Disagree to strongly agree) is employed to questionnaire design for primary data collection. The source for data

collection is the commerce graduate students of The Arts and Commerce College, Piparia, Vadodara District. Table-2 indicates on results on descriptive statistics. All the factors have the mode value observed at 1(one). It means major of the respondents have a response on "strongly disagree" (SDA). No response is observed as missing. The range of standard deviation (SD) for all the variables is 1.50-1.61. A Pearson correlation matrix indicates information on relationship between two variables It also indicate strength and significance of bivariate relationship of all the variables. Table-3 indicates the results on correlations among all variables. There is a positive relationship among the entire factor. The range of Pearson coefficient(r) is observed at 0.879-0.954. The significant value (p-value) is also observed for the same variables at 0.00 ($p < 0.05$). Such a positive relationship leads to move for further investigation by employing simple linear regression analysis.

Table 3: Correlations

		BA	NQ	PQ	PD	SO	TR	FCSMS	AC	VAS
BA	Pearson Correlation	1	.575	.954	.421**	.954**	.954**	.954**	.954**	.954**
	sig.(1-tailed)		.000	.000	.000	.000	.000	.000	.000	.000
	N	250	250	250	250	250	250	250	250	250
NQ	Pearson Correlation	.575**	1	.636**	.530**	.636**	.636**	.636	.636	.50000
	sig.(1-tailed)	.000		.000	.000	.000	.000	.000	.000	.250
	N	250	250	250	250	250	250	250	250	250
PQ	Pearson Correlation	.954**	.636**	1	.441**	1.000*	1.000	1.000	1.000	.933
	sig.(1-tailed)	.000	.000		.000	.000	.000	.000	.000	.000
	N	250	250	250	250	250	250	250	250	250
PD	Pearson Correlation	.421	.530**	.441**	1		1.000	1.000	1.000	.933.
	sig.(1-tailed)	.000	.000	.000			.000	.000	.000	.000
	N	250	250	250	250	250	250	250	250	250
SO	Pearson Correlation	.954**	.636**	1.000**	.441**	1.000**	1.000	1.000	1.000.000	.933.000
	sig.(1-tailed)	.000	.000	.000	.000	.000	.000	.000	.250	.250
	N	250	250	250	250	250	250	250	250	250
TR	Pearson Correlation	.000	.000	.000	.000	.000	1.000	1.000	1.000.000	.933.000
	sig.(1-tailed)	.250	.250	.250	.250	.250	.000	.000	.250	.250
	N	250	250	250	250	250	250	250	250	250
FCSMS	Pearson Correlation	.954**	.636**	1.000**	.441**	1.000*	1.000	1.000	1.000.000	.933.000
	sig.(1-tailed)	.000	.000	.000	.000	.000	.000	.000	.250	.250
	N	250	250	250	250	250	250	250	250	250
AC	Pearson Correlation	.954**	.636**	1.000**	.441**		.000	.000	.000	.000
	sig.(1-tailed)	.000	.000	.000	.000		.000	.000	.000	.000
	N	250	250	250	250	250	250	250	250	250
VAS	Pearson Correlation	.879**	.500**	.000	.933*	.313**	.933*	.933*	.933*	1
	sig.(1-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	
	N	250	250	250	250	250	250	250	250	250

The results on correlation as discussed in context to table-3, it is found that the relations amongst variables are high in some cases. So that highly correlated variables are used for finding caused interrelationship amongst variables which can be established by fitting regression equation. Table-4 indicates the results on regression analysis. Brand Awareness is considered as dependent variable and network quality, promotional offers, service quality, perceptions of dealers, schemes & offers, tariff rates, free calls/SMS, advertisements and communications as well as value added services are considered as independent. In this study, the following equation can be used for interpretation of correlation between dependent and independent variables.

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4$$

Where Y is DV & x_1, x_2, x_3, x_4 are IDVs

$$BA_1 = a + b_1(NQ_1) + b_2(NQ_2) + b_3(NQ_3) + b_4(NQ_4)$$

$$= 0.120 + 0.985(NQ_1) - 0.041(NQ_2) - 0.013(NQ_3) - 0.017(NQ_4)$$

$$= 1.034$$

This value is constant. The above results indicate that the change in NQ_1 BA_1 is also changes in the same direction. The

value of R^2 in table-4 on BA_1 with NQ_1 is 0.912. It means that there is 91% of the variance explained by NQ_1 in BA_1 the significant value is observed 0.00 ($p < 0.05$) for relationship between BA_2 and NQ_2 can be evaluated as under:

$$BA_2 = a + b_1(NQ_1) + b_2(NQ_2) + b_3(NQ_3) + b_4(NQ_4)$$

$$= 0.078 - 0.022(NQ_1) + 0.980(NQ_2) - 0.008(NQ_3) - 0.005(NQ_4)$$

$$= 1.023$$

This value is constant. The above results indicate that the change in NQ_2 BA_2 is also changes in the same direction. The value of R^2 in table-4 on BA_2 with NQ_2 is 0.952. It means that there is 95% of the variance explained by NQ_2 in BA_2 the significant value is observed 0.00 ($p < 0.05$) For relationship between BA_3 and NQ_3 can be evaluated as under:

$$BA_3 = a + b_1(NQ_1) + b_2(NQ_2) + b_3(NQ_3) + b_4(NQ_4)$$

$$= 0.133 - 0.038(NQ_1) - 0.042(NQ_2) + 0.991(NQ_3) - 0.004(NQ_4)$$

$$= 1.04$$

This value is constant. The above results indicate that the change in NQ_3 BA_3 is also changes in the same direction. The value of R^2 in table-4 on BA_3 with NQ_2 is 0.919. It means that there is 91% of the

variance explained by NQ₃ in BA₃ the significant value is observed as 0.00(p<0.05). These results are for the following hypothesis.

H₀ 1: There is no significant relationship between brand awareness and network quality of cellular services users in

context to commerce graduate students of Arts and commerce college, Piparia.

It is concluded that there is positive and significant relationship between brand awareness (BA) and network quality (NQ) from the above observations and discussion. That is way H₀ 1 is rejected in this case and as a results, H₀ 1 is accepted.

Table 4: Regression Analysis

Sr. No.	VARIABLES	R Square	F Calculated	sig	Unstandardized B	Coefficient Std Error	Beta	T
1	BA1 (DV)NQ1 (IDV)	0.912	653.625	0.00	0.120(Constant)	0.60		2.012
					NQ1(0.985)	0.025	0.993	39.994
2	BA2 (DV)NQ2 (IDV)	0.912	1.247E3	0.00	0.078(Constant)	0.041		1.907
					NQ2(0.980)	0.020	0.998	49.477
3	BA3 (DV)NQ3 (IDV)	0.991	712.213	0.00	0.133(Constant)	0.056		2.393
					NQ3(0.991)	0.024	1.003	41.670
4	BA1 (DV)PO3 (IDV)	0.910	853.890	0.00	0.059(Constant)	0.061		0.980
					PO3(0.948)	0.021	0.956	44.246
5	BA3 (DV)PO1 (IDV)	0.994	4.57E3	0.00	0.019(Constant)	0.009		0.754
					PO1(0.994)	0.010	0.995	97.632
6	BA1 (DV)SQ3 (IDV)	0.912	652.007	0.00	0.071(Constant)	0.060		1.175
					SQ3(0.985)	0.074	0.984	39.976
7	BA3 (DV)PD3 (IDV)	0.990	6.305E3	0.00	0.008(Constant)	0.019		0.450
					PD3(0.601)	0.031	0.602	19.658
8	BA1 (DV)TR2 (IDV)	0.910	853.774	0.00	0.060(Constant)	0.061		0.997
					TR2(0.949)	0.021	0.957	44.382
9	BA1 (DV)FCSMS2	0.910	853.774	0.00	0.060(Constant)	0.061		0.997
					fcsms2(0.949)	0.021	0.957	44.382

Table-4 indicate the results on H₀ 2 and H₁ 2 and relationship between brand awareness (BA) and promotional offers (PO) can be evaluated as follows

$$BA_1 = a + b_1(PO_1) + b_2(PO_2) + b_3(PO_3) + b_4(PO_4) = 0.059 + 0.007(PO_1) - 0.011(PO_2) + 0.948(PO_3) = 1.004$$

The rest of the relationship between BA and PO is observed as negative. So that, it is ignored to discuss. This value is constant. The above results indicate that the change in PO₃, BA₁ is also changes in the same direction. The value of R² in table-4 on BA₁ with PO₃ is 0.910. It means that there is 91% of the variance explained by PO₃ in BA₁. The significant value is observed as 0.00(p<0.05). These results are for the following hypothesis.

H₀2: There is no significant relationship between brand awareness and promotional offers of cellular services users in context to commerce graduate students of Arts and Commerce College, Piparia of Vadodara District

It is concluded that there is positive and significant relationship between brand

awareness (BA) and network quality (P0) from the above observations and discussion. That is why H₀2 is rejected in this case and as a result, H₁2 is accepted.

Table-4 indicates the results on H₀3 and H₁3 and relationship between brand awareness (BA) and service quality (SQ) can be evaluated as follows

$$BA_1 = a + b_1(SQ_1) + b_2(SQ_2) + b_3(SQ_3) + b_4(SQ_4) = 0.071 + 0.018(SQ_1) - 0.001(SQ_2) + 0.976(SQ_3) - 0.064(SQ_4) = 1.13$$

The rest of the relationship between BA and SQ is observed as negative. So that, it is ignored to discuss. This value is constant. The above results indicate that the change in SQ₃, BA₁ is also changes in the same direction. The value of R² in table-4 on BA with SQ₃ is 0.912. It means that there is 91% of the variance explained by SQ₃ in BA₁. The significant value is observed as 0.00(p<0.05). These results are for the following hypothesis.

H₀3: There is no significant relationship between brand awareness and service quality of cellular services users in

context to commerce graduate students of Arts and Commerce College, Piparia of Vadodara District

It is concluded that there is positive and significant relationship between brand awareness (BA) and service quality (SQ) from the above observations and discussion. That is why H₀₃ is rejected in this case and as a result, H₁₃ is accepted.

Table-4 indicates the results on H₀₄ and H₁₄ and relationship between brand awareness (BA) and perceptions on dealers (PD) can be evaluated as follows

$$\begin{aligned} BA_1 &= a + b_1 (PD_1) + b_2 (PD_2) + b_3 (PD_3) + b_4 (PD_4) \\ &= 0.008 + 0.404(PD_1) - 0.416(PD_2) + 0.601(PD_3) - 0.401 (PD_4) \\ &= 1.028 \end{aligned}$$

The rest of the relationship between BA and PD is observed as negative. So that, it is ignored to discuss. This value is constant. The above results indicate that the change in PD₃, BA₃ is also changes in the same direction. The value of R² in table-4 on BA₃ with PD₃ is 0.990. It means that there is 99% of the variance explained by PD₃ in BA₃ the significant value is observed as 0.00(p<0.05). These results are for the following hypothesis

H₀₄: There is no significant relationship between brand awareness and perceptions on dealers of cellular services users in context to commerce graduate students of Arts and Commerce College, Piparia of Vadodara District

It is concluded that there is positive and significant relationship between brand awareness (BA) and service quality (PD) from the above observations and discussion. That is why H₀₄ is rejected in this case and as a result, H₁₄ is accepted

Table-4 indicates the results on H₀₅ and H₁₅ and relationship between brand awareness (BA) and tariff rates (TR) can be evaluated as follows

$$\begin{aligned} BA_1 &= a + b_1 (TR_1) + b_2 (TR_2) + b_3 (TR_3) + b_4 (TR_4) \\ &= 0.060 + 0.304(TR_1) + 0.949(TR_2) + 0.005 (TR_3) - 0.011 (TR_4) \\ &= 1.307 \end{aligned}$$

The rest of the relationship between BA and TR is observed as negative. So that, it is ignored to discuss. This value is

constant. The above results indicate that the change in TR₂, BA is also changes in the same direction. The value of R² in table-4 on BA₁ with TR₂ is 0.910. It means that there is 91% of the variance explained by TR₂ in BA₁ the significant value is observed as 0.00(p<0.05). These results are for the following hypothesis

H₀₅: There is no significant relationship between brand awareness and tariff rates of cellular services users in context to commerce graduate students of Arts and Commerce College, Piparia of Vadodara District

It is concluded that there is positive and significant relationship between brand awareness (BA) and tariff rates (TR) from the above observations and discussion. That is why H₀₅ is rejected in this case and as a result, H₀₅ is accepted

Table-4 indicates the results on H₀₆ and H₁₆ and relationship between brand awareness (BA) and free calls & SMS (FC/SMS) can be evaluated as follows

$$\begin{aligned} BA_1 &= a + b_1 (FC/SMS_1) + b_2 (FC/SMS_2) + b_3 (FC/SMS_3) + b_4 (FC/SMS_4) \\ &= 0.060 + 0.302(FC/SMS_1) + 0.949(FC/SMS_2) + 0.005 (FC/SMS_3) - 0.011 (FC/SMS_4) \\ &= 1.305 \end{aligned}$$

The rest of the relationship between BA and FC/SMS is observed as negative. So that it is ignored to discuss. This value is constant. The above results indicate that the change in FC/SMS₂ BA₁ is also changes in the same direction. The value of R² in table-4 on BA₁ with FC/SMS₂ is 0.910. It means that there is 91% of the variance explained by FC/SMS₂ in BA₁ the significant value is observed as 0.00(p<0.05). These results are for the following hypothesis

H₀₆: There is no significant relationship between product consciousness and free calls/SMS offers of cellular services users in context to commerce graduate students of Arts and Commerce College, Piparia of Vadodara District

It is concluded that there is positive and significant relationship between brand awareness (BA) and free calls (FC/SMS) from the above observations and discussion-

That is why H_06 is rejected in this case and as a result, F_{16} is accepted.

DISCUSSION

The study aims to evaluate whether any relationship is between brand awareness (dependent variable) and network quality promotional offers service quality, perceptions on dealers, schemes & offers, tariff mates (free calls/SMS, advertisements and communications, value added services (independent variables) in context to students preference on their cellular services provider (CSP) of Arts and Commerce College, Piparia of Vadodara District.

The results for objective-I indicate that the Positive and acceptable coefficient value between awareness (BA) and network quality (NQ) which suggests that the need for paying attention.

These should not be ignored by the CSPs. The for objective-2 indicate the positive and acceptable coefficient value between brand awareness and promotional offers (PO). The promotional offers can also be useful on building very good image of CSP. The results for objective-3 indicates the positive and acceptable coefficient value between brand awareness (BA) and Service quality (SQ) and such a factor cannot be ignored by CSP. The results for objectives-4 also reflect on importance of perceptions on dealer as there is positive and acceptable coefficient value between brand awareness (BA) and perceptions dealer (PD). The results for objective-5 focus on.

The positive and acceptable relationship between product consciousness (pc) and tariff rates (TR) which cannot be ignored also. The results for objective-6 indicate on positive and acceptable relationship between brand awareness and free calls/SMS which is also one of the important components among the young consumers like college students. Rossiter Percy (1987) describes brand awareness as being essential for the communications process to occur as it precedes all other steps in the process. Without brand awareness occurring, no other

Communication effects can occur. For a consumer to buy a brand they must first be made aware of it Brand attitude cannot be formed, and intention to buy cannot occur unless brand awareness has occurred (Rossiter & Percy 1987; Rossiter et al 1991). In memory theory, brand awareness is positioned as a vital first step in building the "bundle" of associations which are attached to the brand in memory (Stokes 1985). The brand conceptualized as a node in memory which allows other information about the brand to be "anchored" to it (Aaker 1991). The conceptualization of a network of brand associations in memory with the brand as a central core has been put forward by many others (eg. Keller 1993; Holden 1993; Holden & Lutz 1992). Brand awareness enhances perceived quality (Hoyer, Brown 1990).

CONCLUSION AND RECOMMENDATIONS

The main objective of the paper was to identify brand preference for cellular services providers in context to commerce graduate students of Piparia college of Vadodara District. The results revealed that the choice of cellular service provider was more dependent on its key attribute of network quality than any other attributes. The other attributes have also influence on brand awareness like; promotional offers, service quality, perceptions on dealers, schemes & offers, tariff rates, free calls/SMS, advertisements and communications, value added services. The brand awareness enhances brand preference. The following recommendations can be made on the basis of above conclusion to the CSPs.

1. It is recommended that the critical mass that constitutes the target market and the brand position of a CSP should be clearly identified and communicated so as to fashion out services that meet their aspirations and needs of consumers.
2. The CSPs need to adopt the new paradigm in promotion mix termed Integrated Brand

Communications (IBC). Such communication that integrates all communicative activities

3. Network quality, service quality, tariff rates and free calls/SMS are to be taken into consideration for assessing their performance by keeping the consumers in nucleus of cellular services with due acknowledgement to the consumers.
4. The CSPs need to evaluate meaningfulness of brand logo and competitiveness of brand packages.
5. The promotional offers should be transparent.
6. The marketers/employees of CSPs should have adequate knowledge on various tariff plans.
7. The role of dealer towards customer services should be effective

Limitations of the study

This research has certain limits. The research can be extended by considering more independent variables with a view to enhance consistency of results. There is also financial constraints in this research,

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