Mediating Role of CSR in Moulding Consumers' Purchase Decision on Toothpaste Brands: A Study in Kolkata Metropolis

Anulekha Banerjee

Assistant Professor, Department of Commerce

St. Xavier's College (Autonomous), Kolkata

e-mail: anulekha.kolkata@gmail.com

Rajib Dasgupta

Professor, Department of Commerce

University of Calcutta, Kolkata

e-mail: rajibdasgupta@hotmail.com

Abstract: An empirical study was carried out in Kolkata to evaluate the nature of involvement of corporate social responsibility (CSR) initiatives in strengthening the brand equity of selected toothpaste brands by modulating the consumers' purchase decisions. Data were collected using a questionnaire based survey among 322 resident respondents of the Indian metropolis. Findings suggest that while choosing a brand the respondents prioritised oral hygiene although they exhibited consciousness about the pricing and availability of the brand. The most preferred brands were successful in generating loyalty and association among the respondents through convincing portrayal of a responsible social image.

Key-words: CSR, FMCG, brand equity, purchase decision.

1. Introduction

The concept of corporate social responsibility (CSR) was created to mask the profit making attitude of a brand with a societal hue which could capture the emotion of stakeholders and provide an advantageous platform over the competing brands *(Carroll, 1979; Roy, 2010).* Building a healthy customer to brand relationship has become the priority of the companies which are trying every possible way to consolidate their social endeavours to safeguard the business acumen *(Popoli, 2011).* While one accepts that consumer awareness about CSR would generate better understanding of the CSR notions *(Lee and Shin, 2010),* it must also be reconciled that only responsible customers can recognise the social involvements of a company

(D'Amato et al., 2009). Thus the multinational companies (MNCs) are finding it rational to promote their brands with social causes which have motivational as well as functional influence on the consumers *(Keller, 2008).* The fast-moving consumer goods (FMCG) industry which is the fourth largest sector of the Indian economy *(Rishi, 2013; Mohan and Sequeira, 2016)* has adopted the cause related marketing technique to make their brands noticeable and socially acceptable. Moreover, CSR was assimilated in the Companies Act, 2013 of India which provided a mandate to spend 2% of company's annual profit on social causes. However, this encouraging scenario also portrays a challenge for the entrepreneur in India where the consumers make their purchase decision (i) with relatively lower level of involvement with their chosen brand, and (ii) bother least to the technical specification of the product. The toothpaste brands in India are thus under intense competition to make their presence felt in the market and among consumers by adapting numerous social causes ranging from community health to environment conservation (Table 1). The conjecture provides a scope to carry out an empirical study in the populous Indian metropolis like Kolkata to evaluate the involvements of the CSR initiatives in modulating the purchase intentions of consumers for selected toothpaste brands. The investigation would be beneficial to assess the nature of consciousness of the consumers about the social endeavours with reference to the urban toothpaste market of India in the following manners: (i) the successful social outlooks of toothpaste brands influencing consumers' perception would be revealed; (ii) the findings would act as inventories to formulate future framework of marketing policies.

2. Literature Review

Several opinions were theorized over time to define the realistic attributes which might define or augment the image of a brand. It was *Rust et al. (2004)* who hypothesised the concept of "customer equity" while describing the evolving domain of consumer-centric marketing strategy. It was also opined that ethical attributes toward the consumers possibly affect the brand image, which might nurture brand loyalty *(Mishra et al., 2013; He and Lai, 2014)*. Further, consumers are often reported to be comfortably associated with brands which make their presence recognizable but in a subtle manner *(Hoeffler and Keller, 2002)*. Thus, the brand information in

Table 1: Toothpaste brand specific CSR activities

Company	Brand	Brand image promotion policies and campaign	CSR outlook of brand/company
Colgate-Palmolive	Colgate	i. *Colgate Bright Smiles, Bright Futures* program for children ii. *Colgate Cares Day* globally to be a leader in volunteerism iii. Provide children with oral health education iv. Practice oral care packaging with Terracycle v. Support CGF resolution on forced labour vi. UN Global Compact Endorser vii. Signatory to UN CEO Water Mandate	Improvement of community health, education and environment; handwashing education; save water conservation campaign; provides educational scholarships

Hindustan Unilever	Pepsodent	i. Pepsodent collaborated with the Indian Dental Association and the World Dental Association to help educate school children on the importance of regular brushing ii. Vow to protect teeth while someone enjoys sweet eating iii. Offers long lasting protection for teeth against cavity causing germs	Health and hygiene; improving nutrition; reducing greenhouse gases reduction in water use and waste; empowering communities
	Close Up	i. Close Up talks about "fresh breath confidence" that youth requires during social interactions ii. India's first gel toothpaste	
Jyothy Laboratories	Neem Active	i. Promotes oral health care by using natural ingredients. ii. Promotes oral hygiene with herbal remedy	Skill development; promotion of education; rural development

Dabur	Babool	i. Babool was positioned as an economic toothpaste campaigning with taglines-
		   - *"Babool Babool paisa vasool" or, "Babool means value for money"*
		   - *"Begin a great day, the Babool way"*
			Socio-economic development of the community; environmental sustainability; eradicating hunger, poverty and malnutrition; promoting health care; promoting education and gender equality and empowering women

Source: Companies' annual disclosures

Table 2: Major findings on the impact of CSR on the components of brand equity

Components of brand equity	Key findings	Literature
Brand loyalty	CSR had a direct positive effect on brand loyalty	*Lombart and Louis (2014)*
	Perceived ethical responsibilities of brands may boost brand loyalty	*He and Lai (2014);*
Perceived brand quality	Relationship between perceived quality and emotional value has moderate influence on purchase intention	*Asshidin et al. (2016)*
	Perceived quality of a brand affects the purchase intention of the consumers	*Wongpitch et al. (2016)*
Brand awareness	Identity salience play a crucial role in the influence of CSR initiatives on consumer loyalty	*Marin et al.(2009)*
	Lack of customers' awareness about CSR initiatives is a major limiting factor in their ability to respond to these initiatives	*Schuler and Cording (2006)*
Brand association	Consumers pay more for the products produced by corporates which have carried out social responsibilities	*Sen and Bhattacharya (2001)*
	CSR initiatives strengthens the cohesion between brand with consumer	*Park et al. (2010)*

the consumers' memory has been defined as the strength of a brand *(Keller, 1993)* while lack of awareness about the social initiatives have been often linked with restricted sensitivity about a brand *(Schuler and Cording, 2006).* Moreover, to nullify the effect of economic polarization on brand promotion the entrepreneurs are now actively involved in understanding the socio-economic background and traditional lifestyle of the stakeholders before formulating any CSR strategy *(Visser, 2008; Hah and Freeman, 2014*). Many a brands have successfully capitalized the trust attained through responsible acts to ward off rough times *(Dawar and Pillutla, 2000)*, and many brands have been wrecked by for their false CSR claims which have been perceived by consumers as act of emotional disloyalty *(Balmer et al., 2011)* or ethical abuse *(Nasruddin, 2007).* Thus the relationship between consumers' brand perception and social image of brands has become a popular subject of study (Table 2). The cognitive attributes of a brand like pricing, quality, popularity, availability and promotional acts affect the purchase intention of consumers in diverse ways. *Chang and Wildt (1994)* suggested that the discourse between perceived price and perceived quality of brands often creates a brand imagery which affects the purchase

decision. *Mazumdar and Monroe (1990)* opined that informative consumers value pricing between competing brands while making purchase decisions. However, *Lodish and Mela (2007)* argued that over-attention on pricing rather than on quality might provoke the consumers to be price-sensitive. Further, the consumers' purchase behaviour is reportedly influenced by the brand popularity statements *(Magnini et al., 2013)* while availability of products has often been linked with stimulus for sales *(Hausman and Siekpe, 2009).* Brand promotion through advertisement is said to have influence on purchase decision of the consumers by fostering the socio-cultural and behavior outlooks *(Armitage and Conner, 2001).*

Chahoud et al., 2007 found that the Indian business entrepreneurs were reportedly involved in traditional philanthropic outlook only during state urgencies and *Planken et al. (2010)* opined that in relation to the CSR involvements, Indian corporations basically prefer to focus only on community development projects. Interestingly, *Thite (2012)* reported that prominent corporate boss perceives commitment to CSR in India as a "time and context invariant". Although the toothpaste companies in India has diverse CSR investments (Table 2), empirical studies reflecting the perceptions of the consumers regarding these social attributes and the outcome on purchase decision are wanted.

3. Framing of Hypotheses

The present study has tried to evaluate the customer based brand equity of selected toothpaste brands in India speculated after *Aaker (1991)* where the dimensions like brand awareness, brand associations, perceived brand quality and brand loyalty were judged to calibrate the perceived brand equity (Figure 1). The study has tried to address the notion with the following four hypotheses:

Hypothesis 1(H1): CSR has significant effect on the brand loyalty in FMCG toothpaste brands

Hypothesis 2(H2): CSR has significant effect on the brand awareness of the FMCG toothpaste brands

Hypothesis 3(H3): There is a relationship between CSR and brand association of the FMCG toothpaste brands

Hypothesis 4(H4): There is a relationship between CSR and perceived brand quality of FMCG toothpaste brands

Figure 1: Model depicting the involvement of diverse CSR investments in influencing the brand equity after Aaker (1991)
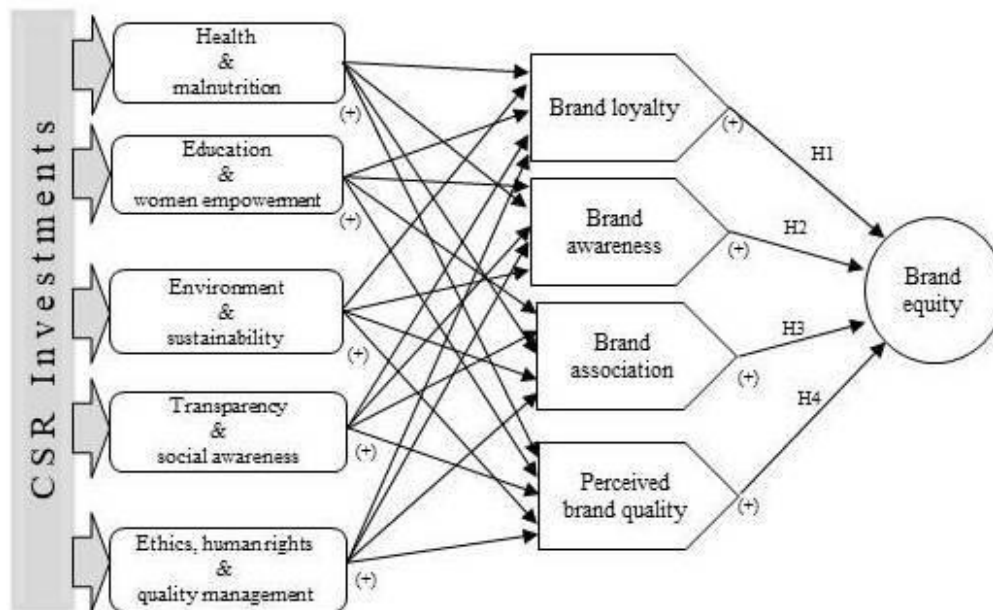
4. Methodology

The study involved a survey of potential FMCG consumers (respondents) from the population of Kolkata (currently placed around 4.5 million). The Survey Software available online at *www.surveysystem.com/sscalc.htm* was used to ascertain the sample size of the proposed study at

Table 3: Rank analyses of the cognitive criteria influencing purchase decision of toothpaste brands (*P<0.05; female: n=140; male: n=182)

Respondent	Mean rank of selection criteria						Kendall's W	Chi square (χ^2)	Df	P
	Reasonable pricing	Well-known brand	Taste and flavour	Oral-dental care	Availability	Advertisement				
Female	3.10	2.88	3.45	1.20	4.68	5.70	0.72	504.91	5	<0.001*
Male	3.96	2.93	3.18	1.57	4.07	5.29	0.45	415.71	5	<0.001*

95% confidence level. The respondents (140 female and 182 male) in the age group between 28-57 years with higher educational background and/or professional experiences were considered for the survey. The study was done using a combination of probability and non-probability sampling methods after *Mohan and Sequeira (2016)*. The survey included five brands from the toothpaste sector (Colgate, Pepsodent, Neem Active, Babool and Close Up), which according to the Business Today (bt500.businesstoday.in) and Economic Times (economictimes.indiatimes.com/et500) had maintained market capitalization since 2013. Published literature like *Ray (1982), Svensson (2001), Park and Ghauri (2014), Tan et al. (2016), Mishra et al. (2016), Mohan and Sequeira (2016), Tanveer and Lodhi (2016)* were

reviewed to justify the construct validity of the survey questionnaire (Appendix 1). Kendall's W test *(Boutsouki et al., 2008)* was applied for rank analysis and Pearson's correlation coefficient was calculated to ascertain the relationship among the criteria *(Medina et al., 2015).* Factor analysis was carried out to deduce the most influential criteria for product selection *(Osborne, 2015).* The comparison of gender based perception of the different cognitive attributes influencing purchase decision of toothpaste brands was carried out by the Kruskal-Wallis H test *(Fagerland and Sandvik, 2009).* The mediating role of the CSR components in enhancing the brand equity was analysed by multiple linear regression. Reliability analysis of the response to Likert's scale was ascertained by evaluating Cronbach's alpha values (alpha value > 0.700) *(Nunnally and Bernstein, 1994).* SPSS 16 statistical software package was used to compute and analysis of data.

5. Findings

Ranking of selection criteria

Oral dental care was identified as the most important criterion while the respondents intend to make a decision on the purchase of a toothpaste brand. The rank analysis by Kendall's W test identified the next important criterion as *well-known brand* by respondents and (Table 3).

Correlation among ranking of selection criteria and income

Significant correlation was observed in the response pattern between the criteria like: *reasonable pricing─well-known brand*, *reasonable pricing-availability, reasonable pricing-advertisement,*

Table 4: Pearson's correlation between the income and ranking of selection-criteria influencing the purchase intention of toothpaste brands of the female respondents (*P<0.05; n=140; SD= standard deviation; # in multiple of ₹1000.00)

	Mean	SD	1	2	3	4	5	6	7	8
						Female respondent					
1. Reasonable pricing	2.60	0.98	1.00							
2. Well-known brand	2.60	0.87	*0.31	1.00						
3. Taste and flavour	2.85	0.69	0.06	*0.23	1.00					
4. Oral-dental care	1.30	0.47	-0.33	-0.33	-0.10	1.00				
5. Availability	3.90	1.02	*0.30	*0.59	0.03	-0.59	1.00			
6. Advertisement	4.85	0.92	*0.41	*0.82	*0.39	-0.42	*0.75	1.00		
7. Monthly income#	46.75	21.29	-0.16	*0.59	0.19	-0.06	0.15	*0.40	1.00	
8. Monthly family income#	85.25	35.07	-0.15	0.13	0.21	-0.15	-0.10	0.12	*0.66	1.00

Table 5: Pearson's correlation between the income and ranking of selection-criteria influencing the purchase intention of toothpaste brands of the male respondents (*P<0.05; n=140; SD= standard deviation; # in multiple of ₹1000.00)

	Mean	SD	1	2	3	4	5	6	7	8
					Male respondent					
1. Reasonable pricing	3.71	1.49	1.00							
2. Well-known brand	2.71	0.99	0.15	1.00						
3. Taste and flavour	2.79	1.58	-0.16	-0.43	1.00					
4. Oral-dental care	1.50	0.85	0.18	0.09	-0.71	1.00				
5. Availability	3.93	1.54	*0.26	*0.39	-0.48	*0.61	1.00			
6. Advertisement	4.86	1.35	-0.17	-0.03	0.17	-0.07	*0.40	1.00		
7. Monthly income #	50.36	17.26	-0.25	-0.04	0.13	-0.12	0.15	*0.43	1.00	
8. Monthly family income #	79.29	32.81	-0.10	-0.42	*0.52	-0.29	-0.18	0.22	*0.64	1.00

for both of the male and female respondents. The female respondents correlated *monthly income* and *well-known brand* while it was *monthly income– taste and flavour* for the male (Table 4, 5). (Table 5).

Factors ascertaining the criteria for selection of toothpaste brand

The factor deduced had significant Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's sphericity (Table 6) and it suggests that during making a purchase decision on a toothpaste-brand, the respondents had considered only two factors of significance, namely: *reasonable pricing* and *well-known brand* (Table 7). The Cronbach's alpha values suggest reliability in the internal consistency of the scale (Table 7).

Comparison of independent variables

Among the criteria which might influence the purchase decision of the toothpaste brands, the females exhibited significantly greater involvement with criteria like: *reasonable pricing*, *well-known brand* and *advertisement* (Table 8). However, with relation to the purchase decision of toothpaste brand on the issue of oral health and hygiene, the male respondents significantly

Figure 2: (a) Respondents' experience with toothpaste brands; (b) respondents' preference for toothpaste brands which were perceived to have addressed the issue of oral health and hygiene (female: n=140; male: n=182)

(a)   (b)
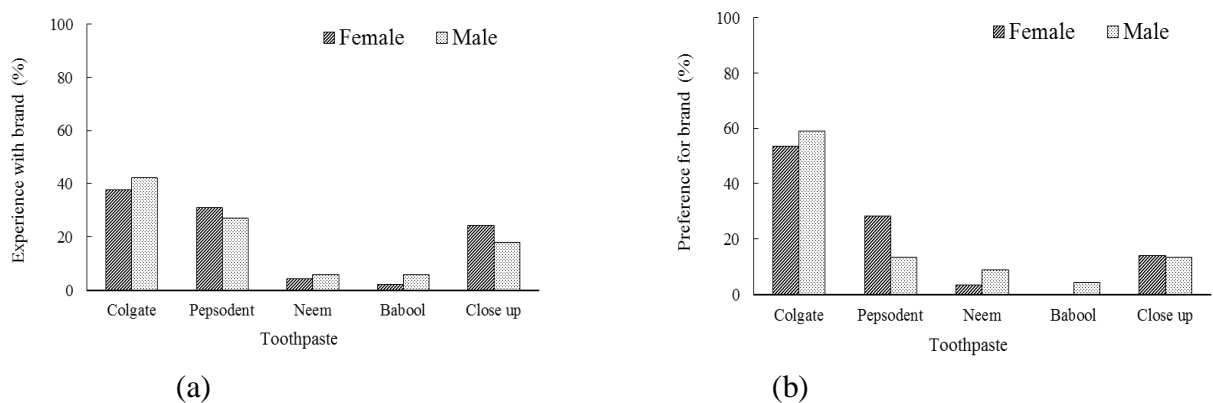
differed on the criteria like: *reasonable pricing*, *taste and flavour* and *advertisement* (Table 8). The concerns of the female respondents were significantly high with regard to the CSR attributes like: *affordable*, *follow guidelines of Indian Dental Care Association,* and *does not employ child/forced labour* (Table 8).

Experience with toothpaste brands

All the respondents were experienced with the toothpaste-brands under consideration, namely: Colgate, Pepsodent, Neem Active, Babool and Close Up (Figure 2a) and in the perspective of oral health and hygiene, the respondents exhibited consistent higher preference for the brand Colgate (Figure 2 b).

Selection of toothpaste brand on the basis of oral health and hygiene

The factor deduced had significant Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's sphericity (Table 6) and suggests in perspective of making purchase decision of toothpaste brand addressing the issue of oral health and hygiene, the respondents preferred the criteria: *well-known brand* and *reasonable pricing* (Table 7).

Correlation among the criteria for selection of toothpaste brand on the basis of oral health and hygiene

A significantly strong correlation was observed between the criteria like: *reasonable pricing-taste and flavour, well-known brand- taste and flavour, availability─well-known brand, advertisement─well-known brand* as perceived by the female respondents. The male respondents perceived the criteria *availability─well-known brand, taste and flavour─well-known brand* and *availability─reasonably priced, availability─taste and flavour* to have greater correlations (Table 9).

Table 6: Measurement of the adequacy and sphericity of response patterns of the respondents while deciding on the purchase of toothpaste brands (*P<0.05; female: n=140; male: n=182)

Cognitive component influenced	Kaiser-Meyer-Olkin measure of sampling adequacy		Bartlett's test of sphericity			
	Female	Male	Chi-Square (Female)	Chi-Square (Male)	Df	*P*
Purchase decision of a toothpaste brand	0.69	0.72	192.75	612.00	15	<0.001*
Purchase decision of toothpaste brand addressing the issue of oral health and hygiene	0.64	0.61	373.73	410.39	10	<0.001*
Judgment on CSR attributes of toothpaste brand addressing the issue of oral health and hygiene	0.66	0.51	387.76	454.42	15	<0.001*
Brand loyalty	0.61	0.59	113.91	428.56	3	<0.001*
Brand awareness	0.54	0.47	151.09	681.79	3	<0.001*
Brand association	0.61	0.69	153.77	295.06	3	<0.001*
Perceived brand quality	0.65	0.68	94.16	228.73	3	<0.001*

Table 7: Factor analysis for identification of the most significant criteria influencing purchase decision of toothpaste brands for domestic use (*P<0.05.; female: n=140; male: n=182)

Component influenced	Respondent	Influencing criteria/statement	Factor loading	Eigen values	Variance (%)	Cronbach's alpha
Purchase decision of a toothpaste brand	Female	*Reasonable pricing*	0.59	2.61	43.65	0.734
		Well-known brand	0.67	1.05	17.57	
	Male	*Reasonable pricing*	0.54	3.30	55.04	0.821
		Well-known brand	0.89	1.26	21.06	
Purchase decision of toothpaste brand addressing the issue of oral health and hygiene	Female	*Reasonable pricing*	0.96	2.94	58.97	0.784
		Well-known brand	0.77	1.08	21.69	
	Male	*Reasonably priced*	0.85	2.53	50.68	0.747
		Well-known brand	0.73	1.50	30.035	
Judgment on CSR attributes of toothpaste brand addressing the issue of oral health and hygiene	Female	*Have a strong social mission of free dental check-up and oral health initiative*	0.42	3.25	54.27	0.833
	Male	*Have a strong social mission of free dental check-up and oral health initiative*	0.84	2.79	46.51	0.771
		Affordable	0.70	1.34	22.45	
Brand loyalty	Female	*I consider myself to be loyal to the toothpaste brand*	0.79	2.00	66.79	0.746
	Male		0.84	2.42	80.88	0.880
Brand awareness	Female	*I can quickly recall the colour/logo of the toothpaste brand*	0.81	1.96	65.32	0.717
	Male		0.78	2.59	86.48	0.894
Brand association	Female	*I can recognize the toothpaste brand even if another toothpaste brand has the same features*	0.64	2.15	71.70	0.797
	Male		0.68	2.37	79.11	0.865
Perceived brand quality	Female	*The quality of the toothpaste brand is extremely high*	0.58	1.96	65.40	0.733
	Male		0.78	2.25	75.19	0.823
Gross brand image	Female					0.869
	Male					0.968

Note: Criteria having poor factor loading and Eigen value <1.000 have been excluded

Factors ascertaining the CSR criteria influencing the selection of toothpaste brand on the basis of oral health and hygiene

The factors with significant Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's sphericity (Table 6) suggests that with reference to selection of toothpaste brand on the basis of oral health and hygiene, the respondents exhibited preference for the CSR criterion like: *have a strong social mission of free dental check-up and oral health initiative* (Table 7). The Cronbach's alpha values suggest acceptable reliability in the internal consistency of the scale (Table 7).

Cognitive criteria influencing the overall brand image perception of toothpaste brands

The respondents were found to be loyal towards their selected toothpaste brand as observed from the deduced cognitive statement with relation to brand loyalty (*I consider myself to be loyal to the toothpaste brand*) (Table 7). The respondents were well versed with the colour and logo of their chosen toothpaste brand (*I can quickly recall the colour/logo of the toothpaste brand*) which implies existence of strong brand awareness (Table 7). The respondents could recognise their chosen toothpaste brand (*I can recognize the toothpaste brand even if another brand have the same features*) which suggests presence of strong brand association (Table 7).

Table 8: Kruskal-Wallis H test for comparison of cognitive attributes influencing the purchase intention of toothpaste brands between the female and male respondents (*P<0.05.; female: n=140; male: n=182)

Cognitive component influenced	Influencing criteria	Mean rank (Female)	Mean rank (Male)	Chi square	Significance
Purchase decision of a toothpaste brand	*Reasonably priced*	187.73	141.32	24.09	<0.001*
	Well-known brand	176.36	150.07	7.29	0.007*
	Taste and flavour	163.08	160.29	0.09	0.766
	Oral-dental care	162.61	160.64	0.07	0.796
	Availability	163.17	160.21	0.09	0.755
	Advertisement	176.54	149.93	6.94	0.008*
Purchase decision of toothpaste brand addressing the issue of oral health and hygiene	*Reasonably priced*	121.48	192.29	60.01	<0.001*
	Well-known brand	159.48	163.06	0.139	0.709
	Taste and flavour	140.75	177.46	14.88	<0.001*
	Availability	167.48	156.90	1.24	0.264
	Advertises well	114.98	197.29	72.53	<0.001*
Judgment on CSR attributes of toothpaste brand addressing the issue of oral health and hygiene	*Have a strong social mission of free dental check-up and oral health initiative*	137.12	180.25	18.41	<0.001*
	Affordable	182.95	145.00	18.53	<0.001*
	Follow guidelines of Indian Dental Care Association	177.10	149.50	8.23	0.004*
	Meets customer's health and safety regulation	154.35	167.00	1.80	0.179
	Transparent about brand's revenue and packaging	147.20	172.50	7.86	0.005*
	Does not employ child/forced labour	174.50	151.50	7.58	0.006*

Table 9: Pearson's correlation between the rating of selection-criteria which influences the purchase decision of the toothpaste brands addressing the issue of oral health and hygiene (*P<0.05.; female: n=140; male: n=182)

	Female respondent							Male respondent						
	Mean	*SD*	*1*	*2*	*3*	*4*	*5*	*Mean*	*SD*	*1*	*2*	*3*	*4*	*5*
1. Reasonable pricing	2.95	0.67	1.00					3.52	0.51	1.00				
2. Well-known brand	3.35	0.73	0.04	1.00				3.45	0.78	*0.22	1.00			
3. Taste and flavour	3.10	0.70	*0.33	*0.72	1.00			3.40	0.66	0.07	*0.53	1.00		
4. Availability	3.20	1.03	-0.06	*0.71	*0.67	1.00		3.30	0.65	*0.31	*0.74	*0.70	1.00	
5. Advertises well	2.80	0.82	0.07	*0.54	*0.74	*0.47	1.00	3.58	0.57	*0.70	0.11	0.09	0.20	1.00

Table 10: Multiple linear regression analysing the mediating role of the CSR components (independent variables) in enhancing the brand loyalty (dependent variable) of the toothpaste brands

Model coefficients		Female respondent		Male respondent						
		Model FLT		Model MLT						
		CL	C5	CL	C6	C5	C3	C2	C4	C1
UC	B	3.93	0.19	2.43	-0.04	-0.05	0.63	-0.03	-0.04	-0.02
	SE	0.19	0.06	0.62	0.07	0.09	0.06	0.07	0.13	0.08
SC	β		0.26		-0.05	-0.04	0.63	-0.03	-0.02	-0.02
t		20.47	3.23	3.87	-0.57	-0.61	10.19	-0.49	-0.30	-0.31
P		<0.01*	<0.01*	<0.01*	0.56	0.53	<0.01*	0.61	0.76	0.75
VIF			1.00		2.87	1.52	1.09	1.31	2.04	1.64
R		0.26		0.61						
R^2		0.07		0.37						
Adjusted R^2		0.06		0.35						

*$P<0.05$; female: n=140; male: n=182
Note: UC- Unstandardized coefficients; SC- Standardized coefficients; SE- Standard error; VIF- Variance inflation factor; CL (dependent variable; L-loyalty)- I consider myself to be loyal to the toothpaste brand; C1- Have a strong social mission of free dental check-up and oral health initiative; C2- Affordable; C3- Clearly label products for the customers; C4- Meets customer's health and safety regulation; C5- Transparent about brand's revenue and packaging; C6- Does not employ child/forced labour; (C1-C6 :independent variables); F-female; M-male; T-toothpaste.

Table 11: Multiple linear regression analysing the mediating role of the CSR components (independent variables) in enhancing the brand awareness (dependent variable) of the toothpaste brands

Model coefficients		Female respondent					Male respondent	
		Model FAT					Model MAT	
		CA	C2	C3	C4	C5	CA	C3
UC	B	2.92	0.41	-0.55	0.32	0.23	2.2	0.48
	SE	0.47	0.14	0.09	0.08	0.07	0.23	0.05
SC	β		0.26	-0.68	0.45	0.29		0.538
t		6.14	2.88	-5.58	3.95	2.98	10.14	8.55
P		<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
VIF			1.68	2.93	2.57	1.94		1.00
R		0.55					0.53	
R^2		0.30					0.28	
Adjusted R^2		0.28					0.28	

$P<0.05$; female: n=140; male: n=182
Note: UC- Unstandardized coefficients; SC- Standardized coefficients; SE- Standard error; VIF- Variance inflation factor; CA(dependent variable; A-awareness)- I can quickly recall the colour/logo of the toothpaste brand; C2- Affordable; C3- Clearly label products for the customers; C4- Meets customer's health and safety regulation; C5- Transparent about brand's revenue and packaging; (C2-C5 :independent variables); F-female; M-male' T-toothpaste.

Further, the respondents assured their preference for the quality of their chosen toothpaste brand by preferring the cognitive statement *"the quality of the toothpaste brand is extremely high"*, which implies their faith on the perceived quality of the toothpaste brand (Table 7). The Cronbach's alpha values suggest acceptable reliability in the internal consistency of the scale representing the components: brand loyalty, brand awareness, brand association and perceived

brand quality, and the overall brand image perception of toothpaste brands (Table 7).

Mediating role of the CSR components in enhancing the brand equity of toothpaste brands

In the context of brand loyalty of the female respondents (*I consider myself to be loyal to the toothpaste brand*), the model FLT draw strength only from the CSR component C5 (R^2=0.07). However for the male respondents, the robustness of the model MLT was maximum (R^2=0.37) where all the six components of CSR contributed together (Table 10). In case of brand awareness of the female respondents (*I can quickly recall the colour/logo of the toothpaste brand*), the model FAT exhibited significant impact (R^2=0.30) by deriving strength from C2, C3, C4 and C5. For the male respondents, the workable model was MAT (R^2=0.28) which was supported only by C3 (Table 11). In the cause of brand association (*I can recognize the toothpaste brand even if another brand have the same features*) for the female respondents, model FAST worked best (R^2=0.42) with contributions from C5, C6 and C1 components of CSR. The male respondents were best represented with MAST (R^2=0.39) where the CSR components C2, C5, C3 and C1 adhered together (Table 12). In relation with perceived brand quality (*the quality of the toothpaste brand is extremely high*), model FBQT (R^2=0.03; CSR component- C5) was workable with the female respondents and model MBQT (R^2=0.22; CSR component- C1, C5, C6) with the male respondents. The maximum variance inflation factor (VIF) for all the models were within the acceptable range of 5.0 which suggest multicollinearity was not high enough among the variables to create any disturbance.

6. Discussion

The respondents expressed similar preference for the intrinsic cognitive criterion, *oral-dental care* implying identical reasoning for toothpaste brand selection. However, in the relative scale, they preferred the extrinsic criteria: *reasonable pricing* and *well-known brand* (Table 3).

Table 12: Multiple linear regression analysing the mediating role of the CSR components (independent variables) in enhancing the brand association (dependent variable) of the toothpaste brands

Model coefficients		Female respondent				Male respondent				
		Model FAST				Model MAST				
		CAS	C5	C6	C1	CAS	C2	C5	C3	C1
UC	B	3.81	0.87	-0.53	-0.15	1.44	0.47	0.20	0.21	-0.15
	SE	0.31	0.09	0.11	0.07	0.31	0.05	0.04	0.05	0.03
SC	β		0.92	-0.43	-0.14		0.53	0.26	0.26	-0.27
t		12.32	9.66	-4.86	-2.03	4.59	8.86	4.21	4.15	-4.05
P		<0.01*	<0.01*	<0.01*	0.04*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
VIF			2.17	1.91	1.25		1.05	1.17	1.22	1.37
R		0.65				0.62				
R^2		0.42				0.39				
Adjusted R^2		0.41				0.37				

*P<0.05; female: n=140; male: n=182
Note: UC- Unstandardized coefficients; SC- Standardized coefficients; SE- Standard error; VIF- Variance inflation factor; C (dependent variable; AS-association)- I can recognize the toothpaste brand even if another brand have the same features; C1- Have a strong social mission of free dental check-up and oral health initiative; C2- Affordable; C3- Clearly label products for the customers; C5- Transparent about brand's revenue and packaging; C6- Does not employ child/forced labour; (C1-C6 :independent variables); F-female; M-male; T-toothpaste.

Table 13: Multiple linear regression analyzing the mediating role of the CSR components (independent variables) in enhancing the perceived brand quality (dependent variable) of the toothpaste brands

Model coefficients		Female respondent		Male respondent			
		Model FPBQT		Model MPBQT			
		CPBQ	C5	CPBQ	C1	C5	C6
UC	B	4.10	0.14	3.92	0.43	-0.28	-0.20
	SE	0.20	0.06	0.40	0.06	0.11	0.08
SC	β		0.19		0.52	-0.18	-0.17
t		20.51	2.28	9.63	6.91	-2.55	-2.45
P		<0.01*	0.02*	<0.01*	<0.01*	0.01*	0.01*
VIF			1.00		1.30	1.15	1.14
R		0.19		0.46			
R^2		0.03		0.21			
Adjusted R^2		0.02		0.19			

*$P<0.05$; female: n=140; male: n=182

Note: UC- Unstandardized coefficients; SC- Standardized coefficients; SE- Standard error; VIF- Variance inflation factor; C (dependent variable; PBQ-perceived brand quality)- I can recognize the toothpaste brand even if another brand have the same features; C1- Have a strong social mission of free dental check-up and oral health initiative; C5- Transparent about brand's revenue and packaging; C6- Does not employ child/forced labour; (C1-C6 :independent variables); F-female; M-male; T-toothpaste.

Findings on the correlation of criteria and factor analysis suggest similar nature of gross reasoning between the male and female respondents (Table 4, 5, 7). In the context of selection of toothpaste brand on the basis of oral health and hygiene, the respondents exhibited higher preference for the brands like Colgate (Figure 2 b). It may be noted that the mentioned brand exercises several CSR initiatives and strongly adhere to the oral health initiatives (Table 1). However, in the same context, the respondents preferred two extrinsic criteria, namely, *reasonable pricing* and *well-known brand* for making purchase decision on toothpaste brands (Table 7) suggesting poised state of mind weighing the qualitative as well as economic attributes of the brand. Among the CSR components investigated, the respondents expressed faith for the criterion- *have a strong social mission of free dental check-up and oral health initiative* while the male respondents additionally preferred *affordability* (Table 7). It also strengthens the conjecture that the consumers with a higher level of awareness for CSR may express an elevated purchase intention *(Lee and Shin, 2010).* Moreover, the respondents exhibited confidence with the cognitive statements on brand loyalty, brand awareness, brand association and perceived brand quality and thereby on gross brand image which in turn enhances the brand equities of preferred toothpaste brands (Table 7). The evolving model as represented in Figure 3 (derived from Table 10-13) indicates the differential contribution of the CSR components which might enhance the brand equity of the preferred toothpaste brand. The present findings indicate comprehensive cognitive reasoning ability of both female and male respondents under complex condition of making purchase decision on FMCG brands of toothpaste, an act which somehow

Figure 3: Evolving model reflecting the nature of involvement of the different CSR components in enhancing the brand equity of the toothpaste brands. (F-female; M-male; T-toothpaste; L- loyalty; A-awareness; AS-association; PBQ-perceived brand quality)
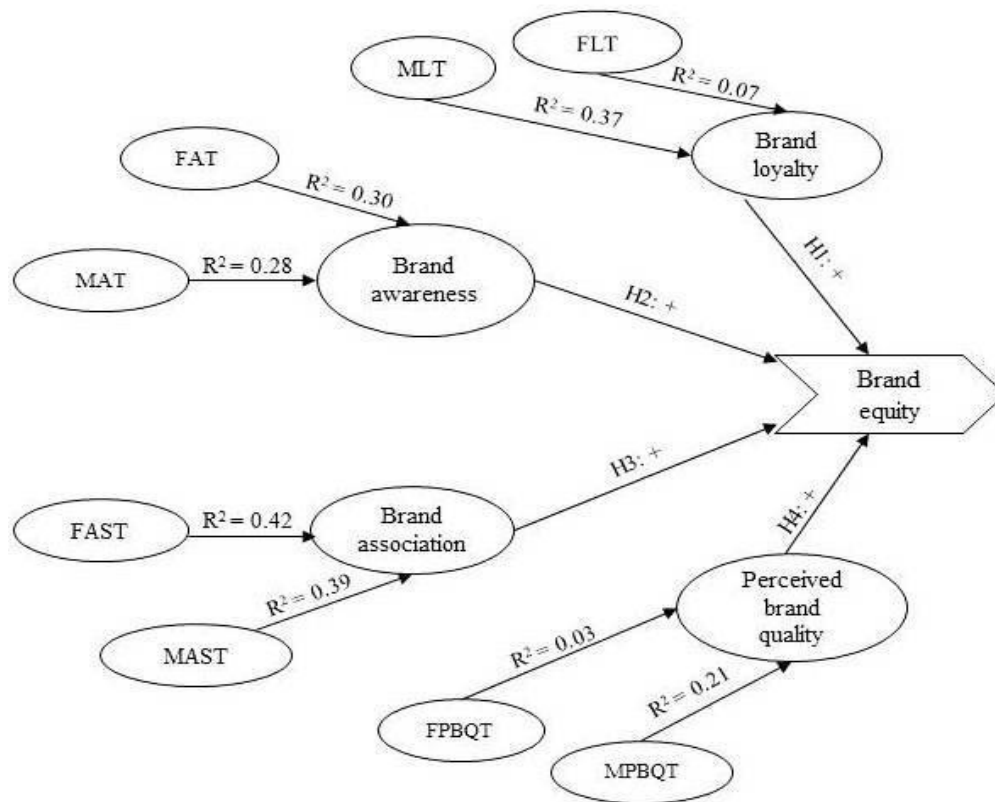
partially contradicts the idea of female biased social norms of household purchase behaviour (*Sinha et al., 2002; Silverstein and Sayre, 2009; Mukherjee et al., 2012*).

The respondents exhibited solidarity in the social vision of their chosen toothpaste brands (*have a strong social mission of free dental check-up and oral health initiative*) and affirmed the cognitive statements on brand loyalty (Figure 3; Table 9, 10) which might suggest that CSR has a significant effect on the brand loyalty of FMCG toothpaste brands (H1). The findings also suggest that the respondents exhibited awareness regarding the preferred toothpaste brands' social mission and they could recognize the cognitive statement advocating for brand awareness (Table 7). The evolving model in the Figure 3 suggests involvement of CSR attributes in supporting the statement on brand awareness (Table 11). Thus it is plausible to suggest that there is a relationship between CSR and brand-awareness of the FMCG toothpaste brands (H2). Finally, the respondents could associate their realization with the cognitive statement of brand association (Table 7). The model in Figure 3 depicts significant contribution of the CSR components in manifesting the perception of brand association which might suggest that there is a relationship between CSR and brand association of the FMCG toothpaste brands (H3). The female respondents could prioritise the qualitative aspect of the selected toothpaste brand (oral

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dental care) while making purchase decision (Table 3) and they were able to recognize the cognitive statement on perceived brand quality (Table 7) which might suggest that CSR has significant effect on the perceived quality of the FMCG toothpaste brands (H4).

7. Conclusion and Limitations of the Study

The findings of the present study clearly identified the expectations of the oriental urban consumers from their preferred toothpaste brand. They knowingly appreciated the brand that exhibited maximum commitment to social and environmental causes and exhibited loyalty and association for the same. CSR investments coupled with awareness campaigns turned the table in favour of brand Colgate and the findings redefine the association of consumers for low-involvement FMCG product like toothpaste. Moreover, the brand equity of the toothpaste brands would gather greater momentum if the unexplored CSR initiatives depicted in the Figure 1 and the missing initiatives observable in Figure 3 are provided with due attention. However, the study would have attained more robustness had it encompassed non-residential population who regularly traverse to the city for livelihood and shared identical life style.

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Appendix – I

(Questionnaire of the Survey) PART - A

Please rank the factors according to importance (A) and rate how much you think that each of the factors is important to you when you purchase toothpaste products (put tick mark in boxes that you feel appropriate) (B): (1= not important; 2= less important; 3= no idea; 4= moderately important; 5= very important)

(A) Factors	Rank	(B) Factors	1	2	3	4	5
Reasonably priced		Reasonably priced					
Well-known brand		Well-known brand					
Taste and flavour		Taste and flavour					
Oral-dental care		Oral-dental care					
Availability		Availability					
Advertisement		Advertisement					

PART – B

(I) Have you ever bought toothpaste from any one of the following brands? [put tick mark in box(es) that you feel appropriate]; **(II)** If you have purchased any of the above brands before, which brand you had selected for oral and dental care? [put tick mark in box(es) that you feel appropriate]

(I) Brands	Visuals	Yes	No	(II) Brands	Select (√ mark)	Remark
Colgate				Colgate		
Pepsodent				Pepsodent		
Neem Active				Neem Active		
Babool				Babool		
Close up				Close up		

(If your response is No to all the above mentioned brands, please stop here. Thank you for your participation)

(III) Keeping the above brand(s) in your mind, please rate how likely you think that the brand above has each of the following characteristics (put tick mark in boxes that you feel appropriate): (1= not at all; 2= most likely; 3= no idea; 4= likely; 5=extremely likely)

Characteristics	1	2	3	4	5
Reasonable pricing					
Well-known brand					
Taste and flavour					
Better availability					
Advertises well					

PART- C

Keeping the above brand(s) in your mind, please rate how much you agree or disagree with each of the following remarks (even if you do not have exact information, please express what you think):(1= strongly disagree; 2= disagree; 3= no idea; 4= agree; 5= strongly agree)

Remarks	1	2	3	4	5
Have a strong social mission of free dental check-up and oral health initiative					
Affordable					
Follow guidelines of Indian Dental Care Association					
Meets customer's health and safety regulation					
Transparent about brand's revenue and packaging					
Does not employ child/forced labour					

PART - D

Keeping the above brand(s) in your mind, please rate how much you agree or disagree with each of the following remarks: (1= strongly disagree; 2= disagree; 3= no idea; 4= agree; 5= strongly agree)

Cognitive statements	1	2	3	4	5
I consider myself to be loyal to the toothpaste brand					
I would not buy other toothpaste brands if the brand is available in the store					
If there is another toothpaste brand as good as the considered brand, I prefer to buy the brand					
I can quickly recall the colour/logo of the toothpaste brand					
I can recognize the toothpaste brand among other competing brands					
I have no difficulty in imaging the toothpaste brand in my mind					
I can recognize the toothpaste brand even if another brand have the same features					
The brand would be my first choice among alternatives when I buy toothpaste that I need					
I will be disappointed if I hear that the toothpaste brand is involved in unethical business					
The quality of the toothpaste brand is extremely high					
I would like to recommend the toothpaste brand to my acquaintance					
Performance of the toothpaste brand is best among peers					