Structural Equation Modeling for Men's Cosmetics Behavior Research

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Abstract

The descriptive study examines consumer behavior for men's cosmetics purchase in Pune region. A structured and undisguised questionnaire was developed to collect the primary data from 563 respondents. This study provides evidence and detailed insights on various elements used for an analysis and revealed that Attitude, Beliefs in Product Attributes, Self-Image, and Normative Influences positively affected Purchase Intention for Men's Cosmetics in Pune region. However, the present study does not pervade the scope of any particular cosmetics categories, brands, specific companies, and/or their products.

Keywords: **attitude, beliefs in product attributes, self-image, normative influences, purchase intention**

Paper Submission Date : August 8, 2015 ; Paper sent back for Revision : January 6, 2016 ; Paper Acceptance Date : May 31, 2016

The success of any business organization lies in a firm's ability to understand and influence the consumer behavior (Bovee & Thill, 1992). However, it is in no way an easy job mainly because consumer behavior is highly dynamic, and it poses a number of challenges in front of the marketers while formulating strategies in this regard. Consumer behavior is highly dynamic, and it poses a number of challenges in front of the marketers while formulating strategies in this regard (Evans & Berman, 2009; Kumar & Meenakshi, 2006). Moreover, products that companies deal in also play a vital role in these challenges. By and large, the consumers buy only those products that give them value they seek (Saxena, 2006). However, value of the product in the minds of the consumers depends on their ability to perceive.

There are various external and internal forces that act upon the consumers' mind and can directly affect the purchase decisions (Kotler & Keller, 2007). Even the perception keeps changing with the changing marketing environment. Failure to understand the dynamic buyer behavior and improper allocation and coordination of resources will lead the organization to great losses. There are three areas related to consumer behavior that need to be addressed carefully: psychological influences, socio-cultural influences, and situational influences (Nair, 2006). Marketers have to go through a number of challenges in selling products like cosmetics as they have to be applied directly on human skin, body, and other parts (Nair, 2012). There is a perceived risk of dissatisfaction in the consumers as far as its (cosmetics) benefits are concerned (Tiainen, 2010).

The word 'cosmetics' in the Indian perspective was always related with women till recently (Datta, 2012). Inclusion of exclusive 'men' segment in the world of cosmetics is a recent phenomenon. It did not mean that men never used cosmetics in earlier days. Of course, they did. However, these were limited to shaving related products, and at the most, application of hair oils and gels, scents, or such other products (Kapoor, 2005). Skin-care products were not very openly used by men as they were used by women in the society. The marketers found 'men's cosmetics' as one of the most lucrative and fast growing segments, which was earlier shadowed under the name of

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cosmetics in general, without apparent gender differentiation (Audrey, Cyrielle, & Quentin, 2004).

Although the 'men's cosmetics' market is growing at a global level , it is still considered a 'niche' market as compared to the women's cosmetic market (Gou, 2011). Many studies have argued that an increasing number of men consumers have changed their attitude towards physical appearances. Men consumers are now more concerned of their 'good-looking' aspect than ever before (McDougal, 2011). This change is observed as an opportunity for men's cosmetic industry across the world to gain optimum business from this segment of the society (Tai, 2008).

Review of Literature

According to Thanisorn, Byaporn, and Chanchai (2012), the marketing mix is a key factor influencing consumers' perception of cosmetic products. A study conducted by Hanzaee and Andervazh (2102) resulted in a positive and significant relationship between factors of brand loyalty (brand name, product quality, price, design, promotion, service quality, and store environment) with cosmetics purchase intention. Junaid and Nasreen (2012) observed that the purpose of using a skin care product was not affected by age group ; the place of buying a skin care product had no significance with the income of a person, and cosmetic consumers' income did not play any role while choosing a brand. However, it was also found that herbal (Makkar, Sehra, Tewari, Rai, Rao, & Sharma, 2007) and natural cosmetics (Chen, 2009), sophisticated packages (Topoyan & Bulut, 2008), sensory and emotional branding (Tan, 2008), convenience (Nair & Pillai, 2007), brand image (Zaveri, 2007) and brand loyalty (Dye, 2007) played an important role in the purchase of cosmetics.

It was also found that friends, family (Luiz, 1993), society, peers (Mascarenhas & Higby, 2004), social reference groups (Deutsch & Gerard, 2005), opinion leaders (Bertrandias & Goldsmith, 2006), and normative influences (Kwak, Zinkhan, Delorme, & Larsen, 2006 ; Singh, 2006) determined consumer behavior for purchases. A study conducted by Perlini, Marcello, and Pundey (2011) stated the importance of men's grooming in the society. Moreover, self image (Cheng, Ooi, & Ting, 2010), ethnicity (Femi, 2010), culture and self perception (Tan, 2010) appeared to fit in men's cosmetics buying behavior. The research conducted by Souiden and Diagne (2009) clarified the impact of personal variables (i.e. self-image, consciousness, aging effects, physical attractiveness, state of health), sociocultural variables (i.e. beliefs, lifestyle), and marketing variables (i.e. advertising, purchase situations) on the attitude of men towards the purchase and consumption of men's cosmetics.

Research Objectives

The use of cosmetics may be a routine / habitual phenomenon. People may also be aware of the fact that they may not get results of all cosmetics immediately. Hence, most of them might be deciding on the budget for such expenditures while considering expenditure on other needs. There could be a number of factors restricting the amount of budget for cosmetics based upon the income of families. Still, the sales of men's cosmetics are increasing substantially. Thus, I was interested in knowing the demographic psyche, product beliefs, self-image, normative influences, and attitude towards using men's cosmetics in this regard. Thus, the objectives of the study are :

(1) To get a detailed insight of attitudes and influence of men's cosmetics concept in the Indian society.

(2) To explore the dynamics of men's attitude towards grooming, various aspects of increasing importance behind personal appearance, and its effects on men's cosmetics market in Pune region.

(3) To study the effect of self image on consumers while buying men's cosmetics.

(4) To understand the impact of normative influence on consumers of men's cosmetics.

Hypotheses

In view of the above discussion and also the underlined objectives of the study, the following hypotheses were tested :

- **H1 :** Self-image positively affects attitude towards using men's cosmetics.
- **H2 :** Normative influence positively affects beliefs in product attributes.
- **H3 :** Normative influence positively affects self-image for men's cosmetics.
- **H4 :** Attitude towards using men's cosmetics and belief in product attributes positively affects the purchase intention.

Research Methodology

The present research study is of descriptive nature and has used the quantitative research method. The research was conducted during November 2013 to February 2015. A multi-stage sampling technique was adopted for selection of respondents from Pune Municipal Corporation (PMC) and Pimpri-Chinchwad Municipal Corporation (PCMC) areas, and responses were taken from the students, service class people, business class people, and professionals in the age group between 20 - 50 years. The sample size consisted of 563 respondents across the region.

A structured, undisguised questionnaire was developed from standard questions of relevant literature as a research instrument. For collecting data, I conducted scheduled interviews with the help of the developed questionnaire. However, secondary data were collected with the help of print media like books, magazines, research articles on Google Scholar, and related company literature. SPSS version 17.0 and IBM AMOS 20 were used in this study for all the statistical assessments. The data set was screened and examined for incorrect data entry, missing values, normality, and outliers. In this study, descriptive statistics followed by inferential statistics, including structural equation modeling (factor analysis, correlation, regression analysis, and path analysis) was applied.

Data Analysis and Interpretation

Cronbach's alpha reliability method was applied to check the reliability of all items in the questionnaire. The reliability coefficient value is highly significant, that is, 0.796 and depicts the high reliability of the questionnaire. Reliability test was applied using SPSS software. Further, the conceptual model based on the theory of reasoned action (TRA) developed by Martin Fishbein and Icek Ajzen was investigated by modifying and restructuring it by using structural equation modeling and the impacts of external constructs on internal construct are tested. In addition, investigating the measuring and structural section of model judgment is made based on the fitness indexes of the model.

The breakup of the respondents' demographic characteristics is shown in the Table 1. Responses were obtained from 563 respondents. Out of 563 respondents, 139 respondents were in the age group of 20 - 25 years, followed by 127 respondents, who were in the age group of 26 - 30 years, and total of both contributed to 48% of the total sample respondents. The remaining 300 respondents were in the age group of 31 - 50 years, contributing to 52% of the total respondents. Out of the total respondents, 295 respondents were 'single' and 268 respondents were either 'married' or 'widower & divorcee,' contributing to 53% and 47% of the total sample respondents, respectively. Thus, the data is an adequate representation of each group.

Table 1. Demographic Characteristics of the Respondents

Sr. No.	Characteristics	Category	Frequency	%
1	Age of the Respondents	20 to 25	139	24.7
		26 to 30	127	22.6
		31 to 35	116	20.6
		36 to 40	81	14.4
		41 to 45	64	11.4
		46 to 50	36	6.4
2	Marital Status of Respondents	Single	295	52.4
		Married	266	47.2
		Widower & Divorcee	2	.4
3	Occupation of Respondents	Student	231	41.0
		Business	67	11.9
		Service	189	33.6
		Professionals	76	13.5
4	Family's Monthly Income (INR)	15,000 to 25,000	58	10.9
		25,001 to 35,000	68	12.8
		35,001 to 45,000	89	16.8
		45,001 to 55,000	114	21.5
		55,001 and above	202	38.0
5	Respondent's Presently Living-With	Family	280	49.7
		Single	46	8.2
		Friends	188	33.4
		Colleagues (Peer group)	49	8.7

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.750
Bartlett's Test of Sphericity	Approx. Chi-Square	8252.514
	df	903
	Sig.	.000

The data of the respondents from various occupations is also reflected in the Table 1. Majority of the respondents were 'students' (231 respondents), followed by 189 respondents, who were from the 'service class,' thus contributing to 75% of the total respondents. However, respondents from the business class and professionals contributed to 143 respondents, that is, comprised of 25% of the total sample.

The Table 1 also provides the income wise breakup of the respondents. It can be inferred from the Table 1 that 38% of the respondents had a monthly family income of more than ₹ 55,000. Though it is a sizable group of the 'high-income' category, the majority of the respondents were from the 'middle income' category, who earned from ₹ 35,001 to ₹ 45,000 and ₹ 45,001 to ₹ 55,000 per month, thus contributing to 203 responses, which is 38.3% of the total responses obtained. Out of 563 respondents, 280 were living 'with family' followed by 188 respondents, who were living 'with friends,' and 95 respondents were either 'living single as well as those with peer group,' which made up 50%, 34%, and 16% of the total responses, respectively.

Table 3. Communalities

	Initial	Extraction		Initial	Extraction
Do not feel awkward (Buying cosmetics)	1.000	.561	Female friends	1.000	.430
Do not feel awkward (Using cosmetics)	1.000	.530	Male friends	1.000	.447
Not only a woman's area	1.000	.255	Parents / Family, etc.	1.000	.337
Not afraid of being teased as feminine	1.000	.407	Doctors	1.000	.388
Urban fashionable man	1.000	.301	Sales representative	1.000	.570
Used irrespective of age	1.000	.355	Celebrity endorsement	1.000	.502
Important to keep-up with latest trends	1.000	.288	Other customers	1.000	.421
Using is good idea	1.000	.442	Manufacturer's credibility	1.000	.338
I like to use cosmetics	1.000	.557	Affordability	1.000	.366
Fairness	1.000	.350	Packaging	1.000	.346
Personal hygiene	1.000	.320	Ingredients	1.000	.440
Improving skin	1.000	.484	Product is domestic	1.000	.352
Anti-aging	1.000	.339	Texture of product	1.000	.427
Skin care	1.000	.397	Promised effects	1.000	.312
Fragrance	1.000	.527	Usage experience	1.000	.334
Self-esteem	1.000	.558	Suitability to skin type	1.000	.415
Anxiety	1.000	.386	Innovativeness	1.000	.467
Self-presentation	1.000	.423	Price	1.000	.432
Conformity	1.000	.397	Brand	1.000	.169
Emotional stability	1.000	.553	Quality	1.000	.255
To distinguish image (Social Field)	1.000	.592	Store location	1.000	.216
To distinguish image (Professional Field)	1.000	.573			

Exploratory Factor Analysis

Kaiser – Meyer – Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity : The Kaiser - Meyer - Olkin measure (Table 2) of sampling adequacy value is 0.750, indicating that the sample is adequate to consider the data as normally distributed. The Bartlett's test of sphericity tests the null hypothesis that the item-to-item correlation matrix is an identity matrix. The hypothesis is tested using the chi-square test ; the value of chi-square is found to be 8252.514, which is significant at the 1% level of significance. Therefore, the null hypothesis is rejected; indicating that the item-to-item correlation matrix is not an identity matrix, and is therefore, suitable for factor analysis.

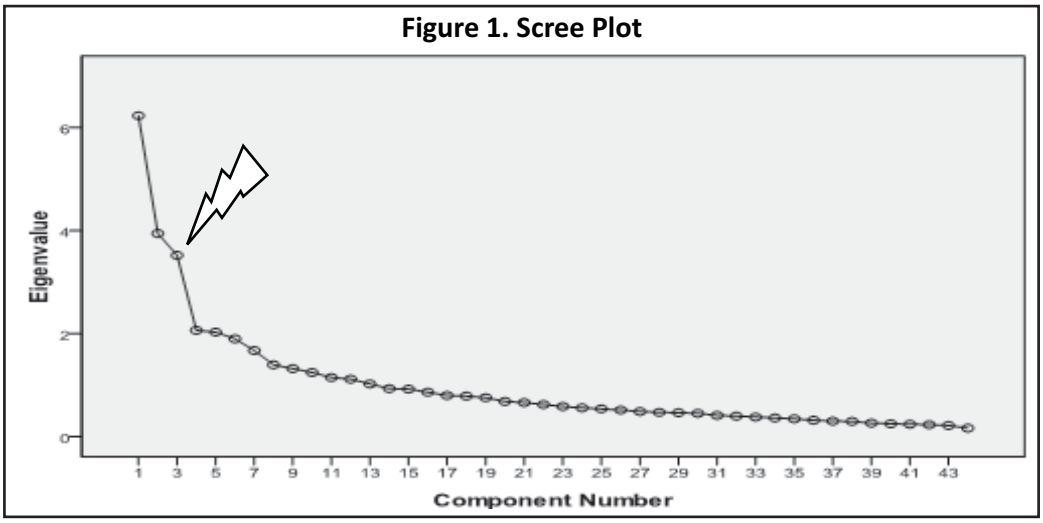
The Table 3 shows the table of communalities before and after. The communalities in the column labeled 'Extraction' reflects the common variance in the data structure ; 56.1% of the variance associated with question 1 is common or shared variance.

The Table 4, labeled Total Variance Explained, lists the Eigen values associated with each factor before extraction, after extraction, and after rotation. Before extraction, it has identified 43 linear components within the data set. The Eigenvalues associated with each factor represent the variance explained by that particular linear component and the table also displays the Eigenvalues in terms of the percentage of variance explained (Factor 1 explains 14.294% of the total variance). It should be clear that the first few factors explain relatively large amounts of variance (especially factor 1) ; whereas, subsequent factors explain only a small amount of variance. The Table

Table 4. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.146	14.294	14.294	6.146	14.294	14.294	4.344	10.102	10.102
2	3.898	9.064	23.358	3.898	9.064	23.358	3.753	8.729	18.831
3	3.476	8.083	31.441	3.476	8.083	31.441	3.299	7.672	26.503
4	2.043	4.752	36.192	2.043	4.752	36.192	3.117	7.250	33.753
5	1.996	4.643	40.835	1.996	4.643	40.835	3.045	7.082	40.835
6	1.891	4.398	45.233						
7	1.525	3.547	48.780						
8	1.384	3.218	51.998						
9	1.321	3.072	55.070						
10	1.224	2.847	57.917						
11	1.137	2.645	60.562						
12	1.054	2.450	63.012						
13	1.014	2.359	65.371						
14	.930	2.163	67.534						
15	.871	2.026	69.560						
16	.865	2.012	71.572						
17	.791	1.841	73.412						
18	.790	1.837	75.249						
19	.735	1.708	76.958						
20	.685	1.592	78.550						
21	.640	1.488	80.038						
22	.624	1.451	81.489						
23	.579	1.346	82.835						
24	.551	1.282	84.117						
25	.533	1.239	85.356						
26	.517	1.202	86.558						
27	.489	1.138	87.695						
28	.473	1.101	88.796						
29	.465	1.082	89.878						
30	.438	1.019	90.897						
31	.412	.959	91.856						
32	.393	.913	92.769						
33	.379	.881	93.650						
34	.363	.844	94.494						
35	.345	.801	95.295						

Figure 1. Scree Plot



extracts five factors , where 40.835% of the cumulative variance is displayed. In the final part of the table, the Eigenvalues of the factors after rotation are displayed. Rotation has the effect of optimizing the factor structure and one consequence for these data is that the relative importance of the five factors is equalized. Before rotation, Factor 1 accounted for considerably more variance than the remaining five (14.294% compared to 9.064% , 8.083%, 4.752%, and 4.643%), however, after extraction, it accounts for only 10.102% of the variance (compared to 8.729%, 7.672%, 7.250%, and 7.082%, respectively).

The Scree Plot (Figure 1) shows a thunderbolt, indicating the point of infliction on the curve. This curve is difficult to interpret because the curve begins to tail off after three factors, but there is another drop after five factors before a stable plateau is reached. Therefore, it is justified to retain five factors.

The Table 5 shows the component matrix before rotation. This matrix contains the loading of each variable onto each factor. As calculated that all loading less than 0.4 be suppressed in the output, and so, there are blank spaces for many of the loadings.

The Table 6 labeled as the Rotated Component Matrix contains the same information as the component matrix is calculated after rotation. Factor loadings less than 0.4 have not been displayed because these loadings had to be suppressed. Out of 43 variables - four variables, that is, Not only a woman's area, Urban fashionable man, Important to keep-up with latest trends, and Brand are not included in any of the factors extracted. Thus, principal component factor analysis has resulted into five factors considering 39 variables out of 43 variables.

Confirmatory Factor Analysis

After exploratory factor analysis, I employed the confirmatory factor analysis with the help of 'maximum likelihood' extraction method. Table 7, labeled Total Variance Explained, lists the Eigenvalues associated with each factor before extraction, after extraction, and after rotation. The Table 8 explains the goodness-of-fit and the Table 9 explains Rotated Component Matrix, which contains the information as the component matrix is calculated after rotation.

(i) Product Beliefs (Factor 1) : The rotated matrix reveals that 11 out of 39 variables load significantly on this factor, which includes manufacturer's credibility, affordability, packaging, ingredients, product is domestic, texture of product, promised effects, previous usage experience, suitability to skin type, innovativeness, and price (value for money).

Table 5. Component Matrix

	Component				
	1	2	3	4	5
Do not feel awkward (Buying cosmetics)			.530	.406	
Do not feel awkward (Using cosmetics)			.595		
Not only a woman's area					
Not afraid of being teased as feminine			.509		
Urban fashionable man	.423				
Used irrespective of age			.462		
Important to keep-up with latest trends	.485				
Using is a good idea		-.422			
I like to use cosmetics					
Fairness	.411				
Personal hygiene					
Improving skin	.459			-.428	
Anti-aging				-.413	
Skin care	.480				
Fragrance	.451				
Self-esteem	.595				
Anxiety					
Self-presentation	.462				
Conformity					
Emotional stability	.470		-.407		
To distinguish image (Social Field)	.479				
To distinguish image (Professional Field)		-.461			
Female friends	.435		-.448		
Male friends			-.429		
Parents / Family members / Spouse	.432				
Doctors					.421
Sales representative			-.534		
Celebrity endorsements / presenter				.507	
Other customers			-.470		
Manufacturer's credibility		.449			
Affordability					
Packaging		.447			
Ingredients	.420	.482			
Product is domestic		.482			
Texture of product	.402	.500			
Promised effects					
Previous usage experience					
Suitability to skin type .440					
Innovativeness .498 .426					
Price (value for money)					
Brand					
Quality					
Store location					

Extraction Method: Principal Component Analysis and 5 components extracted.

Table 6. Rotated Component Matrix

	Component				
	1	2	3	4	5
Do not feel awkward (Buying cosmetics)			.726		
Do not feel awkward (Using cosmetics)			.696		
Not only a woman's area					
Not afraid of being teased as feminine			.597		
Urban fashionable man					
Used irrespective of age			.557		
Important to keep-up with latest trends					
Using is a good idea			.591		
I like to use cosmetics			.681		
Fairness				.559	
Personal hygiene				.500	
Improving skin				.674	
Anti-aging				.548	
Skin care				.578	
Fragrance				.675	
Self-esteem		.633			
Anxiety		.588			
Self-presentation		.493			
Conformity		.573			
Emotional stability		.701			
To distinguish image (Social Field)		.749			
To distinguish image (Professional Field)		.746			
Female friends					.558
Male friends					.647
Parents / Family members / Spouse					.435
Doctors					.575
Sales representative					.725
Celebrity endorsements / presenter					.660
Other customers					.595
Manufacturer's credibility	.569				
Affordability	.554				
Packaging	.513				
Ingredients	.653				
Product is domestic	.584				
Texture of product	.639				
Promised effects	.476				
Previous usage experience	.488				
Suitability to skin type	.539				
Innovativeness	.633				
Price (value for money)	.582				
Brand					
Quality	.410				
Store location	.439				

Table 7. Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.703	14.622	14.622	4.811	12.337	12.337	3.624	9.293	9.293
2	3.706	9.502	24.124	3.053	7.828	20.164	2.857	7.324	16.617
3	3.458	8.867	32.991	2.991	7.670	27.834	2.492	6.390	23.007
4	2.018	5.173	38.164	1.459	3.740	31.574	2.432	6.235	29.242
5	1.954	5.010	43.174	1.403	3.596	35.170	2.312	5.928	35.170
6	1.742	4.466	47.641						
7	1.403	3.597	51.237						
8	1.235	3.166	54.403						
9	1.143	2.930	57.333						
10	1.057	2.710	60.043						
11	1.019	2.613	62.656						
12	.988	2.534	65.189						
13	.921	2.362	67.551						
14	.860	2.204	69.756						
15	.852	2.185	71.941						
16	.793	2.033	73.974						
17	.750	1.923	75.897						
18	.729	1.869	77.766						
19	.636	1.631	79.397						
20	.628	1.610	81.007						
21	.595	1.525	82.532						
22	.579	1.484	84.016						
23	.535	1.371	85.387						
24	.518	1.327	86.714						
25	.496	1.272	87.986						
26	.467	1.198	89.184						
27	.456	1.170	90.355						
28	.409	1.048	91.402						
29	.405	1.039	92.441						
30	.386	.990	93.431						
31	.376	.964	94.395						
32	.349	.895	95.290						
33	.334	.857	96.147						
34	.301	.772	96.919						
35	.276	.708	97.627						
36	.268	.687	98.313						
37	.251	.644	98.957						
38	.233	.598	99.555						
39	.174	.445	100.000						

Extraction Method: Maximum Likelihood

Table 8. Goodness-of-fit Test

Chi-Square	*df*	Sig.
2410.437	556	.000

Table 9. Rotated Factor Matrix

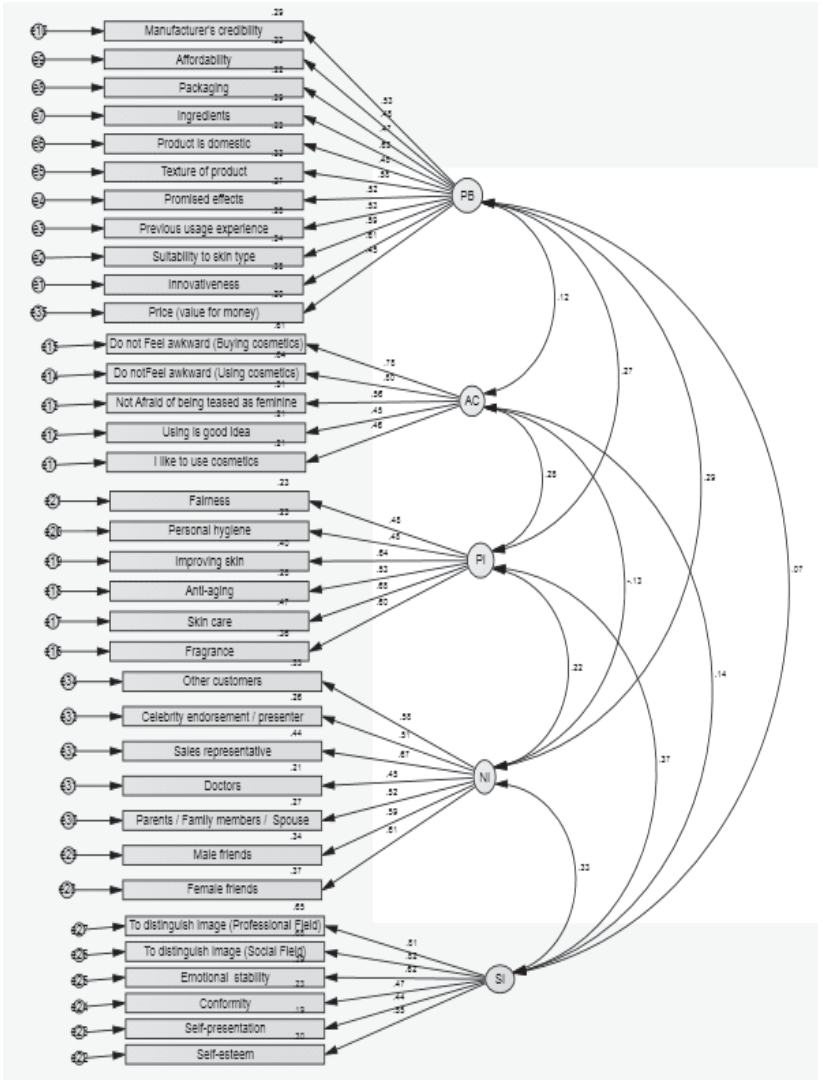
	Factor				
	1	2	3	4	5
Do not feel awkward (Buying cosmetics)			.776		
Do not feel awkward (Using cosmetics)			.752		
Not afraid of being teased as feminine			.592		
Used irrespective of age					
Using is good idea			.472		
I like to use cosmetics			.470		
Fairness					.423
Personal hygiene					.427
Improving skin					.600
Anti-aging					.519
Skin care					.581
Fragrance					.611
Self-esteem		.519			
Anxiety					
Self-presentation		.406			
Conformity		.438			
Emotional stability		.590			
To distinguish image (Social Field)		.816			
To distinguish image (Professional Field)		.809			
Female friends				.470	
Male friends				.483	
Parents / Family members / Spouse				.415	
Doctors				.487	
Sales representative				.679	
Celebrity endorsements / presenter				.607	
Other customers				.526	
Manufacturer's credibility	.521				
Affordability	.487				
Packaging	.418				
Ingredients	.604				
Product is domestic	.470				
Texture of product	.568				
Promised effects	.492				
Previous usage experience	.540				
Suitability to skin type	.580				
Innovativeness	.593				
Price (value for money)	.523				
Quality					
Store location					

Extraction Method: Maximum Likelihood
Rotation Method: Varimax with Kaiser Normalization
a. Rotation converged in 6 iterations.

Table 10. Measurement Fit Index Model

Model Fit Index	Recommended Value	Structural Model
X^2/df	≤ 5	4.87
RMSEA	≤ .08	0.08
RMR	≤ .90	0.08
NFI	> .90	0.92
GFI	> .80	0.86
AGFI	> .80	0.83
PGFI	> .50	0.67
PNFI	> .50	0.55

Figure 2. Measurement Model



Chi-Square = 2680.548, *df* = 550, *p*-value = 0.000, RMSEA = 0.08

Table 11. Reliability Statistics

Construct	Item	Factor Loading	't'	R^2	Cronbach's Alpha (α)
Attitude Towards		0.76	-*	0.57	0.709
Using Cosmetics (AC)	I like to use cosmetics	0.72	7.80	0.52	
	Using cosmetics is a good idea				
Beliefs in Product	Innovativeness	0.56	-*	0.31	0.759
Attributes (PB)	Suitability to skin type	0.69	10.64	0.47	
	Previous usage experience	0.63	10.12	0.30	
	Promised effects	0.59	9.71	0.34	
	Texture of product	0.50	8.74	0.25	
	Ingredients	0.55	9.36	0.31	
	Product is domestic	0.52	8.92	0.27	
Self-Image (SI)	To distinguish image (Professional Field)	0.83	-*	0.60	0.783
	To distinguish image (Social Field)	0.86	18.42	0.74	
	Emotional stability	0.60	13.63	0.36	
	Self-esteem	0.48	10.77	0.23	
Normative	Female friends	0.63	-*	0.40	0.745
Influences (NI)	Male friends	0.59	10.29	0.35	
	Parents/Family members/ Spouse	0.49	8.88	0.24	
	Sales representative	0.65	10.89	0.42	
	Celebrity endorsements/ presenter	0.50	9.13	0.25	
	Other customers	0.59	10.23	0.35	
Purchase Intention (PI)	Fragrance	0.46	-*	0.34	0.712
	Skin care	0.65	10.6	0.50	
	Anti-aging	0.54	9.07	0.29	
	Improving skin	0.71	10.20	0.42	
	Personal hygiene	0.58	8.13	0.21	

*-parameter set equal to 1.0 for identification model

(ii) Self-Image (Factor 2) : The rotated matrix reveals that six out of 39 variables load significantly on this factor, which includes variables - self-esteem, self-presentation, conformity, emotional stability, to distinguish image (social field), and to distinguish image (professional field).

(iii) Attitude Towards Cosmetics (Factor 3) : The rotated matrix reveals that six out of 39 variables load significantly on this factor, which includes variables - do not feel awkward (buying cosmetics), do not feel awkward (using cosmetics), not afraid of being teased as feminine, using is good idea, and I like to use cosmetics.

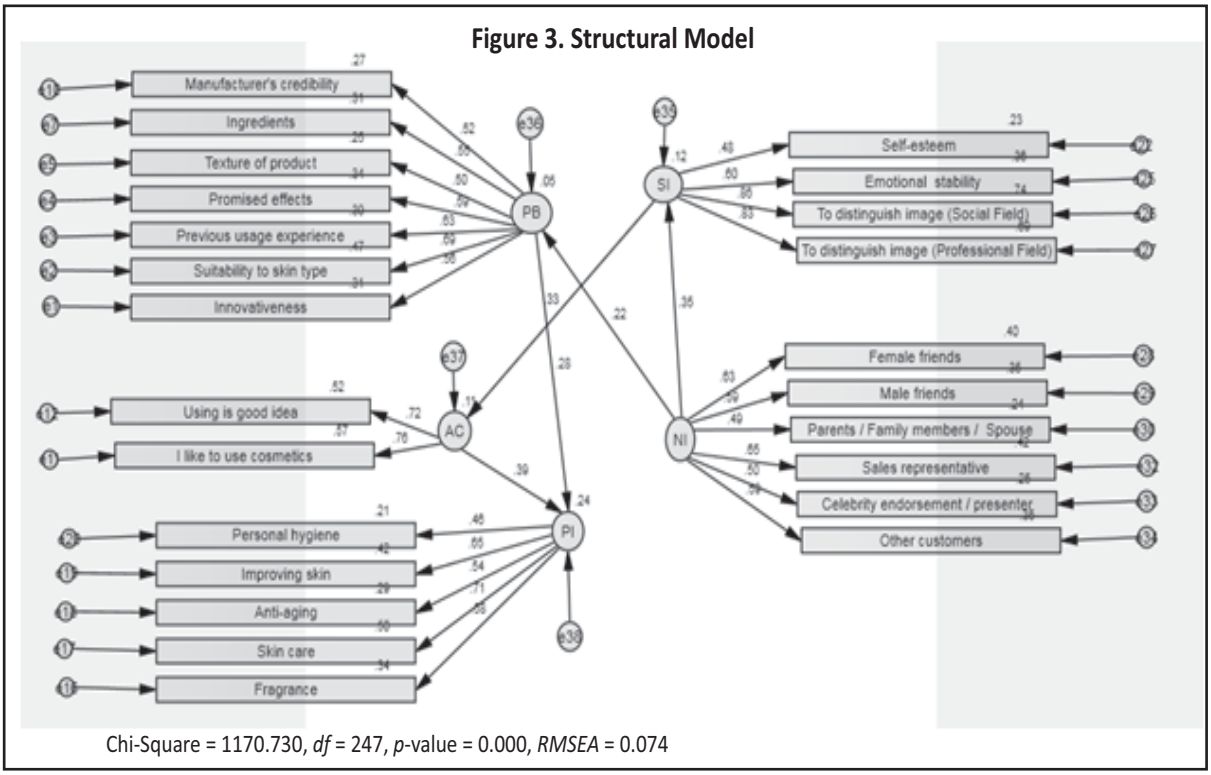
(iv) Normative Influences (Factor 4) : The rotated matrix reveals that seven out of 39 variables load significantly on this factor, which includes variables - female friends, male friends, parents/family members/spouse, doctors, sales representatives, celebrity endorsements/presenters, and other customers.

(v) Purchase Intention (Factor 5) : The rotated matrix reveals that six out of 39 variables load significantly on this factor, which includes variables - fairness, personal hygiene, improving skin, anti-aging, skin care, and fragrance.

Table 12. Fit Index Model

Model Fit Index	Recommended Value	Structural Model
X^2/df	≤ 5	4.740
RMSEA	≤ .08	.074
RMR	≤ .90	.081
NFI	> .90	.91
GFI	> .80	.90
AGFI	> .80	.81
PGFI	> .50	.69
PNFI	> .50	.63

Figure 3. Structural Model



Chi-Square = 1170.730, *df* = 247, *p*-value = 0.000, *RMSEA* = 0.074

Measurement Model

The measurement model (Figure 2 and Table 10) represents how measured variables come together to represent the constructs.

Model Fit Summary

The conceptual model is investigated by using structural equation modeling and the impacts of external constructs on internal construct are tested. In addition, investigating the measuring and structural section of model judgment is made based on the fitness indexes of the model. In the measuring section (Table 11), the relationship between the items and the related structure is clarified, in other words, factor loading of items is larger than 0.40 and *t*- value of the same is greater than 1.96. This value supports the reliability of the structure using measurement. As it can be

seen in Table 11, all factor loadings are above 0.40 since the overall fit of the model is acceptable. The reliability of the construct is assessed based on Cronbach's alpha.

The results of the fit-index is depicted in the Table 12. The model tested subsumed the specified relationship proposed in the hypotheses. The overall fit indices for the structural model reveal a chi-square value of 1170.730 with 247 degrees of freedom. For this model, *RMSEA* = 0.074 and *RMR* = 0.081, both within the acceptable level. The *GFI* = 0.90, *NFI* = 0.91, and *PNFI* = 0.63, all except for *GFI* are acceptable. The analysis of SCM on the proposal model has generated results, which are illustrated in the Figure 3.

Validation of Hypotheses

- **H1:** Self-image positively affects the attitude towards usage of men's cosmetics products.

The respondents were asked to rate their opinion towards applying men's cosmetics products reflecting their self-image on seven variables such as 'I see myself as an urban fashionable man,' 'cosmetics is not only a woman's area,' and so forth. Principal component analysis was applied to reduce the data set, and four variables were selected with factor loading of more than 0.40. The value of reliability scale, that is, Cronbach's alpha is 0.783. Similarly, the respondents were asked to rate their attitude towards applying men's cosmetics products with nine constructs like 'applying cosmetics is a good idea,' 'I like to apply cosmetics products,' and so forth. The value of reliability scale, that is, Cronbach's alpha is 0.709. The relationship between self-image and attitude towards using men's cosmetics is tested with the multiple regression analysis in the conceptual model. When self-image goes up by one standard deviation, attitude towards using men's cosmetics goes up by 0.228 standard deviation, which is positive in nature. Hence, it is proved that self-image positively affects attitude towards using men's cosmetics products and the alternative hypothesis H1 is accepted.

- **H2 :** Normative influence positively affects beliefs in product attributes.

The respondents were asked to rate their opinion on normative influences with seven items as female friends, male friends, parents/spouse/family members, doctors, sales representatives, celebrity endorsements/presenter, and other customers. Furthermore, I have dropped one item which was impacting low reliability in the data set. The value of Cronbach's alpha is 0.745. Likewise, respondents were asked to indicate their opinion towards beliefs in product attributes reflecting 14 items such as 'manufacturer's credibility,' affordability,' packaging,' 'ingredients,' and so forth. Principal component analysis was applied to reduce the data set and the selected seven variables with factor loading of more than 0.40. The value of the reliability scale, that is, Cronbach's alpha is 0. 759. The relationship between normative influences and beliefs in product attributes is tested with the multiple regression analysis in the conceptual model. When normative influences go up by one standard deviation, beliefs in product attributes go up by 0.167 standard deviation. Hence, it is proved that normative influence positively affects beliefs in product attributes and thus, hypothesis H2 is accepted.

- **H3 :** Normative influence positively affects self-image for men's cosmetics products.

The respondents were asked to rate their opinion towards applying male cosmetics products reflecting their self-image on seven variables, such as 'I see myself as an urban fashionable man,' 'Cosmetics is not only a woman's area,' and so forth. Principal component analysis was applied to reduce the data set and four variables with factor loading more than 0.40 were selected. The value of the reliability scale, that is, Cronbach's alpha is 0.783. Similarly, the respondents were asked to rate their opinion on normative influences with seven items as female friends, male friends, parents/spouse/family members, doctors, sales representatives, celebrity

endorsements/presenter, and other customers. Furthermore, I dropped one item which was impacting low reliability in the data set. The value of Cronbach's alpha is 0.745. The relationship between normative influences and self-image is tested with the multiple regression analysis in the conceptual model. When normative influences go up by one standard deviation, the self-image goes up by 0.412 standard deviation. Therefore, it is confirmed that there is a positive relationship between self-image and normative influence for men's cosmetics products, and therefore, the hypothesis H3 is accepted.

↳ **H4 :** Attitude towards using men's cosmetics products A and beliefs in product attributes B positively affects the purchase intention.

The respondents were asked to rate their attitude towards applying men's cosmetics products with nine constructs like 'applying cosmetics is a good idea,' 'I like to apply cosmetics products,' and so forth. The value of the reliability scale, that is, Cronbach's alpha is 0.709. Likewise, respondents were asked to indicate their opinion towards beliefs in product attributes reflecting 14 items such as 'manufacturer's credibility,' affordability,' packaging,' 'ingredients,' and so forth. Principal component analysis was applied to reduce the data set and seven variables with factor loading more than 0.40 were selected. The value of the reliability scale, that is, Cronbach's alpha is 0.759, and for purchase intention, they were asked to rate their opinions on various items such as 'fairness,' 'personal hygiene,' 'anti-aging,' and so forth. The score of Cronbach's alpha is 0.712. The relationship between attitude towards using cosmetics products A and beliefs in product attributes B towards purchase intention is tested with the multiple regression analysis in the conceptual model. When attitude towards using cosmetics products A goes up by one standard deviation, purchase intention goes up by 0.391 standard deviation ; and when beliefs in product attributes B goes up by one standard deviation, purchase intention goes up by 0.305 standard deviation. Thus, it proves and accepts the alternative hypothesis H4, that is, attitude towards using men's cosmetics products A and beliefs in product attributes B positively affects the purchase intention.

Conclusion and Managerial Implications

(1) Consumer behavior is related to attitude, and I attempted to establish the relationship of purchase intention with the attitude and it is found that attitude towards using men's cosmetics products positively affects purchase intention. This finding is in line with the earlier studies in this area. For example, Sandhya and Mohamed (2009) reported that attitude significantly influenced behavioral intentions. Buttle and Bok (1996) reported that attitude explained strong variance on intention to purchase and repurchase. This view was echoed by Souiden and Diagne (2009) who observed that attitude and motives impacted men towards the purchase and consumption of men's cosmetics. Furthermore, Sukato and Elsey (2009) reported that attitude had an impact on purchase intention and purchase behaviour in buying skin-care products among male consumers. The reason is that an individual's attitude plays a vital role in accepting or rejecting any category of products. An attitude is a learned tendency to respond to a given product in a particular way. The analysis reveals the fact that Indian consumers are not only accepting men's cosmetics products, but they have also shown readiness in using them in their day to day life.

(2) The modern man is expected to be well-groomed in his professional as well as societal life. I have considered factors like anxiety, self-esteem, self-presentation, conformity, emotional stability, distinguished image between social fields and professional fields, which are closely related to the personal appearance of the individuals. While analyzing the data, it is found that Indian men are more inclined towards using men's cosmetics notably for self presentation, self-esteem, and creating a distinguished image in the professional field. The result of the study strongly supports the findings of the earlier studies which revealed that now, men are quite conscious of being well groomed (Dutta, 2015; Nair & Pillai, 2007). Kaushik and Gupta (2009) reported that the prime reason for using

cosmetics was 'to look appealing' followed by 'to be with current trends'. Cash and Cash (2007) reported the role of cosmetics in self-image enhancement and social impression management.

(3) The process of buying men's cosmetics is associated with benefits that a consumer tries to seek from them. Whenever a consumer buys men's cosmetics, he is expecting that the product should give the desired benefits. In other words, every consumer has a self-concept, and he believes that the product will help him to look better and thus, would increase his social value. The Indian men's cosmetic market has been witnessing a sea change as many renowned multinational companies have entered into this market with a wide variety of products, thereby creating opportunities for Indian men consumers to select desired men's cosmetics from the product basket.

The implications of the study will be very useful for men's cosmetics manufacturers where attitude is the basis of purchase decision. The present conceptual model can give better results particularly when the marketing strategies are aimed at attitude, product belief, purchase intention, and self-image.

Limitations of the Study and Scope for Further Research

The present study is limited to the concept of men's cosmetics purchase in India. Furthermore, the limitations of the study are its geographical constraints, time-frame constraints, industry limitations, data collection constraints, conceptual and statistical limitations. I would like to clarify specifically that the present study does not pervade the scope of any particular cosmetics category, brands, specific companies and/or their products. A separate study can be suggested on the above areas which can further extend the depth of knowledge in this regard. Also, the scope of the study can be specified as the statistical model developed by the researcher can further be refined to predict the purchase outcome of cosmetics.

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