



# ASSESSING THE DISCRIMINATING POWER OF USER-PERCEIVED BRAND PERSONALITY ON BEHAVIOURAL AND ATTITUDINAL LOYALTY OF E-PHARMACY CUSTOMERS

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*Abstract:* The image of brand personality in the minds of customers is an essential factor in the formation of behavioural and attitudinal loyalty of customers. It is imperative for the companies to assess their brand personality that is perceived by their customers and its effect on customers' attitudinal and behavioral loyalty because customer loyalty increases the likelihood in making repeat purchases. The survey was carried out with an aim to determine the discriminating power of brand personality on high and low attitudinal and behavioural customer loyalty towards E-pharmacy.

**Index Terms - Brand Personality, Attitudinal Loyalty, Behavioral Loyalty**

## I. INTRODUCTION

Brand personality is a set of human characteristics that are accredited to a brand name. A brand personality is something which the consumer can relate to. An effective brand improves its brand equity by having a consistent set of essential features that a specific consumer section enjoys. Behavioural loyalty is when a customer continues to buy/use a specific product, service or brand more than or at least as much as before.

Attitudinal loyalty is when a customer chooses to be loyal to a particular brand or service, because of that brand or service's positive influence on them. A brand fulfils the vital or key functional and/or emotional needs of a consumer. Or, the customer has an emotional affiliation with that particular brand.

Research studies indicate that brand personality affects the type and strength of the relationship that consumers maintain and continue to maintain with brands. It is a useful tool for managers to direct or reinforce the lasting relationship they want to develop or maintain between their brands and the current and target consumers. The attitudinal loyalty of a consumer towards a brand influences his/her behavioural loyalty. The brand personality thus has an effect on influencing the consumer's attitudinal loyalty and behavioural loyalty in a positive way.

## II. Literature Review

Jason & David (2011) conducted a survey among patients in a small city in Western Canada. The purpose of the study is to determine the effectiveness of differentiating via developing a corporate brand personality in the pursuit of customer trust. The results exhibited that there exist brand personality differences among various types of pharmacies. Independent pharmacies turned out to be more trustworthy than multinational and national chain pharmacies.

S.V. Chordiyal and B. M. Garge (2018), in their study on “E-pharmacy vs conventional pharmacy” have discussed about difference between the E-pharmacy and conventional pharmacy with their pros and cons. USFDA has given certain guidelines to the people to stay alert against all illegal online pharmacies. However, whether these online pharmacies are a boon or bane still remains a question that is to be answered. Finally summing, it can be concluded from their research that online pharmacies do not have the personal touch that a physical pharmacy has. One cannot talk to a pharmacist to get advice about side effects or drug interactions the way you can at local pharmacy.

Marketa Curdovaa and Vladimira Vlckovaa (2014), on their study on “Consumer survey on perception of online pharmacies” have aimed to understand the perception of consumers towards ‘E Pharmacy’. The research was done through detailed assessment of feedback from prospective users by conducting a cross country survey. The study was conducted using secondary and primary survey. The research tool was created for primary data collection including ‘Semi-Structured Questionnaire’ in a pre-conceived format. Sample size was to be with 4600 consumers. The survey findings revealed that a considerable share of the respondents tend to buy medicine either once in a month (46 percent) or once in 15 days (37 percent). Some of the respondent consumers reported that they buy medicines as and when needed or prescribed by their respective doctors. Further, it would be required to understand the effects of different parameters on the medicine buying frequency of consumers to get a detailed perception on the same.

Kirsi Punakivi (2019), in her study on “Acceptance and use of online pharmacies and the online customer journey for the purchase of OTC medicines” aims to explore the acceptance and use of E-pharmacies for the purchase of OTC medicines. The aim was to find out what are the drivers and roadblocks to purchase OTC medicines online and which factors could facilitate to overcome customer perceived barriers. This study was conducted with the help of quantitative survey and qualitative interview. The data was gathered with an online survey (n=262), one focus group discussion (n=5) and one-to-one interview (n=3). Participants of both, the survey and interviews, were chosen by convenience sampling and they were chosen via social media. Independence from time and place, convenience and time saving were the biggest drivers to shop OTC medicines online, while the biggest hurdle was the lack of additional value, high price of the delivery and long delivery time. Low-price of the medicine on online was the strongest factor that could get people considers buying online.

Forsythe. S (2006), in his study on “Influence of consumer’s past experience while purchasing meds online” studies the direct link between past experience and intentions of consumers and it seems now that there is a direct impact of an individual’s past experience on intention. Generally, prior experiences will strongly affect future behavior. The author suggests that experience with online shopping directly increases the consumer’s intention to use the Internet. The study also shows that people with no previous experiences are more likely to reject web-shopping, exaggerating of the security risk involved in web-shopping transactions. From the above discussed evidence it seems that past experience with Internet and online shopping plays important role. There is no evidence identified showing different pattern in case of online shopping pharmaceuticals. Hence the following hypothesis is formulated: There is a positive relationship between past experience with online shopping and the consumer’s intention to shop medicaments online.

Ankit Anand and Gopal Sharon (2010), in their study on “Internet pharmacy: Need to be implemented in India”, have investigated the consumer’s expectations on e-pharmacies and whether there is a need to have the same in India. With the help of both primary and secondary sources of data collection, they have done their research regarding the need. The consumers expect the same quality meds through online at lower cost. The e-pharmacies offer meds at least 40% lesser price to consumers. The consumers claim that buying meds online have made their purchase convenient. Just like the pros, there are some cons too. Doctors are prescribing drugs over the Internet for patients they’ve never met, attracted by easy money. Such acts by the doctors are professionally unethical. Even when their doctors don’t prescribe some medicines to patients, people buy them online and directly obtain those medicines from an internet chemist.

Viktor Jounoch (2012), on his study on “Purchase Behavior of Online Pharmacy Clients” has investigated to study the behavior of consumers purchasing drugs online. Quantitative research was carried out. By a simple random selection, 1200 customers were chosen of an E-pharmacy from the population of 5630 people. The research was conducted via internet polling. 761 clients returned complete questionnaire, representing a 63.4% rate of questionnaire return. The data were processed and analyzed using IBM SPSS Statistics and through synthesis of the findings obtained. The research was focused on mapping the way of searching and purchasing pharmaceutical products in the e-pharmacies and the reasons for repeat purchase.

Gunther Eysenbach (2017), in his study on “Cyber drugs: a cross-sectional study of online pharmacies characteristics” studies how e-commerce and online pharmacies arose, the potential impact of the internet on the world of health shifted from merely the spread of information to a real opportunity to acquire health services directly using analysis method. The research performed using Google search engine led the way to an examination of 118 online pharmacies. Only 43.2% of them stated their precise location. 81.4% online pharmacies did not demand any form of medical prescription from the customer’s physician. Online pharmacies raise complex issues in terms of patient-doctor relationship, consumer empowerment, drug quality and statute and public health enforcements. Pharmaceutical companies can ameliorate the customer journey by providing the information

consumers usually search at their product pages and already at Google-view as quick links. In addition, online pharmacies should be provided with sufficient information about their products so that they can adhere to any consumer queries.

### III. Objectives of the study

The objectives are as follows:

- 1) To examine the discriminant power of established brand personality on behavioral loyalty and attitudinal loyalty.
- 2) To assess the brand personality dimensions that influence attitudinal and behavioral loyalty

### IV. Research Instrument

The study was conducted at Indus Life Science Pvt. Ltd., which exports pharmaceutical products ( and prescribed drugs) to other countries. The information was collected through questionnaire (primary source). The questionnaires were prepared and sent through Google-forms to respondents by sending the link to their respective mobile numbers. The selection of brand personality attributes followed a two-step process, guided by Aaker's (1997) brand personality study. In the first step, to ensure familiarity and relevance, a free-association task was conducted to generate a list of personality attributes for e-pharmacy brands. Twenty undergraduate students at a university were invited to participate in this free-association activity. Some of the following brands were on the list: MedPlus, PharmEasy, Practo, etc. A total of 20 personality attributes were generated. Secondly, 8 attributes were compiled and developed from diverse sources such as the Big Five personality factors and other refined scales used by academics and practitioners. Finally, from this list of personality attributes, certain attribute which were redundant, ambiguous, or irrelevant to e-pharmacy brands were taken out. This resulted in a final set of 8 traits used to examine e-pharmacy brands' personality.

### V. Data Analysis

Reliability statistics test was applied for the constructs Brand personality, attitudinal and behavioural loyalty.

**Table 1: Reliability statistics for Brand Personality**

Cronbach's Alpha	N of Items
.877	8

High values of Cronbach's alpha indicate that all items included in the scale are measuring the same thing and their correlations between each other and with latent variable measured through the items are very strong (De Vellis, 2003) shown in the table as the average inter-item correlation increases Cronbach's alpha increases well in this study, a cut off value of 0.5 indicates an acceptable level of internal consistency (hair et al,1998). The Cronbach Alpha in the above table is 0.877 indicating that the items measuring brand personality is reliable.

**Table 2: Reliability statistics for Behavioural Loyalty**

Cronbach's Alpha	N of Items
.801	7

High values of Cronbach's alpha indicate that all items included in the scale are measuring the same thing and their correlations between each other and with latent variable measured through the items are very strong (De Vellis, 2003) shown in the table as the average inter-item correlation increases Cronbach's alpha increases well in this study, a cut off value of 0.5 indicates an acceptable level of internal consistency (hair et al,1998). The Cronbach Alpha in the above table is 0.801 indicating that the items measuring Behavioural loyalty is reliable.

**Table 3: Reliability statistics for Attitudinal Loyalty**

Cronbach's Alpha	N of Items
.886	2

High values of Cronbach's alpha indicate that all items included in the scale are measuring the same thing and their correlations between each other and with latent variable measured through the items are very strong (De Vellis, 2003) shown in the table as the average inter-item correlation increases Cronbach's alpha increases well in this study, a cut off value of 0.5 indicates an acceptable level of internal consistency (hair et al,1998). The Cronbach Alpha in the above table is 0.877 indicating that the items measuring Attitudinal loyalty is reliable.

## Discriminant Analysis Test

To meet the objective of the study, Discriminant analysis was used to determine the discriminant power of brand personality on attitudinal and behavioural loyalty of E-pharmacy customers.

### Discriminating Power of Brand Personality on Attitudinal Loyalty

Ho: There is no discriminating power of brand personality on Attitudinal loyalty

H1: There is discriminating power of brand personality on Attitudinal Loyalty

**Table 4: Wilks' Lambda**

Test of Function(s)	Wilks' Lambda	Chi-square	Df	Sig.
1	.690	31.485	8	.000

The lower Wilks Lambda value indicates that it is good to proceed for discriminant analysis. In the above table the Wilks lambda value is 0.690. The Chi-square is 31.485 with 8 degree of freedom, which is based on the groups present in the categorical variables. The significant value is 0.000 which is lesser than the cut off value 0.05, therefore null Hypothesis is rejected and alternate Hypothesis is accepted.

**Table 5: Eigenvalues**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.448 <sup>a</sup>	100.0	100.0	.556

a. First 1 canonical discriminant functions were used in the analysis.

The Eigen value provides the proportion of variance explained. A larger Eigen value elucidates a strong function. The canonical correlation is a correlation between the discriminant scores and the levels of these dependent variables. The higher the correlation value, the better the function that discriminates the values. 1 is considered as perfect. Here, we have the correlation of 0.556 is comparatively high.

**Table 6: Standardized Canonical Discriminant Function Coefficients**

Brand Personalities	Function
	1
Authentic	.417
Consistent	.123
Resourceful	.151
Confident	.346
Secure	.037
Sincere	.222
Original	.051
Honest	.155

The standardized canonical discriminant is used to calculate the discriminant score. The score is calculated as a predicted value from the linear regression using the above standardized coefficients and the standardized variables.

Based on the coefficient above, the relative important predictor variables are ranked as follows:

**Table 7: Ranking of the Brand Personalities**

Ranking of the variable	Predictor Variable& Function
1	Authentic (0.417)
2	Confident (0.346)
3	Sincere (0.222)
4	Honest (0.155)
5	Resourceful (0.151)
6	Consistent (0.123)
7	Original (0.051)
8	Secure (0.037)

From the above ranking table, it can be inferred that the brand personality, Authentic, is associated with the preferred e-pharmacy, followed by Confident, Sincere, Honest, Resourceful, Consistent, Original and lastly, Secure.

**Table 8: Discriminant analysis classification results**

Level of Attitudinal Loyalty- Original	Level of Attitudinal Loyalty- Prediction		Total
	Low	High	
Low	6 (20.7%)	23 (79.3%)	29
High	49 (79.1%)	13 (21%)	62

Note: 1. 79.1% of original grouped cases correctly classified.

2. The value highlighted within brackets refer to row percentage

It has been observed that 79.1% of data was correctly classified as high loyal customers and low loyal customer based on the factors of brand personality. It has also been noticed that out of 62 consumers, 49 have been correctly classified as High loyal consumers. Out of 29 Low loyal consumers, 23 consumers have been correctly classified as Low loyal consumers

#### Discriminating Power of Brand Personality on Behavioral Loyalty

Ho: There is no discriminating power of brand personality on Behavioural loyalty

H1: There is discriminating power of brand personality on Behavioural Loyalty

**Table 9: Wilks' Lambda**

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.625	28.690	8	.000

The lower Wilks Lambda value indicates that it is good to proceed for discriminant analysis. In the above table the Wilks lambda value is 0.625. The Chi-square is 28.690 with 8 degree of freedom, which is based on the groups present in the categorical variables. The significant value is 0.000 which is lesser than the cut off value 0.05, therefore null Hypothesis is rejected and alternate Hypothesis is accepted.

**Table 10: Eigenvalues**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.601 <sup>a</sup>	100.0	100.0	.613

a. First 1 canonical discriminant functions were used in the analysis.

The Eigen value provides the proportion of variance explained. A larger Eigen value elucidates a strong function. The canonical correlation is a correlation between the discriminant scores and the levels of these dependent variables. The higher the correlation value, the better the function that discriminates the values. 1 is considered as perfect. Here, we have the correlation of 0.613 is comparatively high

**Table 11: Standardized Canonical Discriminant Function Coefficients**

	Function
	1
Authentic	.309
Consistent	.513
Resourceful	.341
Confident	.297
Secure	.233
Sincere	.414
Original	.189
Honest	.140

The standardized canonical discriminant is used to calculate the discriminant score. The score is calculated as a predicted value from the linear regression using the above standardized coefficients and the standardized variables.

**Table 12: Ranking of the Brand Personalities**

Ranking of the variable	Predictor Variable & Function
1	Consistent (0.513)
2	Sincere (0.414)
3	Resourceful (0.341)
4	Authentic (0.309)
5	Confident (0.297)
6	Secure (0.233)
7	Original (0.189)
8	Honest (0.140)

From the above ranking table, it can be inferred that the brand personality, Consistent, is associated with the preferred e-pharmacy, followed by Sincere, Resourceful, Authentic, Confident, Secure, Original and lastly, Honest.



**Table 13: Discriminant analysis classification results**

Level of Behavioural Loyalty- Original	Level of Behavioural Loyalty- Prediction		Total
	Low	High	
Low	25 (92.6)	2 (7.4%)	27
High	10 (25)	30 (75%)	40

Note: 1. 82.1% of original grouped cases correctly classified.

2. The value highlighted within brackets refer to row percentage

It has been observed that 82.1% of data was correctly classified as High loyalty and Low loyalty customers based on the Brand personality. It has also been noticed that out of 40 customers, 30 have been correctly classified as High loyal customers. Out of 27, 25 customers have been correctly classified as Low loyal customers. The accuracy of the model may hence be considered accurate.

## VI. Discussion

There have been mixed reviews about such online pharmacies from various groups of people. The rise in the popularity of online pharmacies often meets with resistance from offline pharmacies. On the other hand, huge support from the public and government is more than inclined to create specific policies which cater to online medicine shops.

It is always a hardship faced by companies, be it any, to gain the trust of the consumers. Online pharmacies are no less and they have additional drawbacks, according to the consumers, which they think are not worthy to trust. The perception and acceptance levels of consumers towards a product or service will vary according to each individual as no two consumers are same

However, there are few suggestions which might help the e-pharmacies in improving their strategies:

- E-pharmacies have to create their Brand voice by listing out the key words that could be used strategically in communications. The unique phrases could be used in mission statement or strategic plan or in any external communications that include marketing material, social media, website or E-advertisement.
- Company's logo and website are the most important identifiers for any kind of customers. Therefore, care should be taken in the design process elements such as typography, images, space, colour and shape
- The most important part of building brand personality is to identify the type of audience, their ideas, behavior and opinions. Customers of E-pharmacy are always connected to the net - they research, share and explore. These customers expect personal interactions and they also compare with other brands. The study reveals that Authenticity, consistency and sincerity factors of brand personality influences the behavioural and attitudinal loyalty of customers, Hence it is imperative for E-pharmacy companies to demonstrate in building the brand personality.
- Many respondents have faced problems with online purchase of medicines in the past, which has stopped them from ordering the same again. Thereby, precautions must be taken from the e-pharmacy's sides in order to make sure that no mistakes are being committed while delivering the ordered medicines.

## VII. Conclusion:

One might never know whether e-pharmacy is a boon or bane. Even in today's changing world, there are people who prefer the existing form of physical purchase of medicines as it has been the tradition for a very long time. On the other hand, there are people who easily adapt to new changes and go in for such online purchase of medicines, but creating a strong brand personality helps in bringing in high loyal customers under one's fold. Giving brand a face turns it into an identifiable, relevant entity, that people can view it as a human and develop trust towards it.

## REFERENCES

- [1] Jason Perepelkin & David Di Zhang, 2011. Brand personality and Customer trust in community pharmacies. *International Journal of Pharmaceutical and Healthcare marketing*, 5 (3): 173-193.
- [2] DeVellis, R.F. 2003. *Scale Development: Theory and Applications*, Thousand Oaks, CA; Sage publications.
- [3] Hair et al. 1998. *Multivariate Data Analysis*. New Jersey: Prentice Hall.
- [4] S.V. Chordiyal and B. M. Garge, 2018. E-pharmacy vs conventional pharmacy. *IP International Journal of Comprehensive and Advanced Pharmacology*, 5 (3): 121-123.
- [5] Marketa Curdovaa and Vladimira Vlckovaa, 2014. Consumer survey on perception of online pharmacies. *Science Direct*. 150: 552-562
- [6] Kirsi Punakivi, 2019. Acceptance and use of online pharmacies and the online customer journey for the purchase of OTC medicines. *Helsingfors Universitet*.
- [7] Forsythe. S, 2006. Influence of consumer's past experience while purchasing meds online. *Journal of Interactive Marketing*. 20 (2): 55-75.
- [8] Ankit Anand and Gopal Sharon, 2010. Internet pharmacy: Need to be implemented in India. *Chronicles of Young Scientists*. 1 (1): 1-8.
- [9] Viktor Jounoch, 2012. Purchase Behavior of Online Pharmacy Clients. *Economics and Management*. 17 (3): 21-47
- [10] Gunther Eysenbach ,2017. Cyber drugs: a cross-sectional study of online pharmacies characteristics. *National Center for Biotechnology Information*.