

Impact of 'Free From Side Effects' and 'Efficacy' as Marketing Slogans on Consumers Phytomedicine Purchase Intention: An Empirical Study

*Sheikh Basaharul Islam**

*Mushtaq Ahmad Darzi***

*Syed Owais Khursheed****

*Suhail Ahmad Bhat*****

(Abstract)

The study is aimed to determine the effect of marketing slogans (free from side effects and efficacy) on the phytomedicine purchase intention. In order to establish these relationships the study adopted a survey by questionnaire method to collect data from the patients, who visited ayurvedic hospitals, clinics, and pharmacies for the treatment of their ailments. A convenient sampling method was adopted by using an intercept approach to collect the data from a sample of 225 patients. Data analysis was carried out in the SPSS using regression technique. Findings of the study reveal that both the marketing slogans (free from side effects and efficacy) have significant impact on the phytomedicine purchase intention. These two marketing slogans jointly explain 30 percent of the variance in phytomedicine purchase intention.

Keywords: *Phytomedicine, Free from Side Effects, Efficacy, Marketing USPs, and Purchase Intention.*

Introduction

Phytomedicine or herbal medicine as a part of traditional medicines consist of ancient ways and methods of treatment by using herbs. About 80% of the world's population, still rely on phytomedicines as a means of primary healthcare (Srivastava et al., 2019). Transferring progressively over numerous generations within civilizations before the invention of allopathic means of care, it has evolved in the form of globally recognized healthcare systems such as Ayurveda, Traditional Chinese medicine, Kempo, and Unani medicine.

The belief among people regarding traditional medicines was fostered due to some incomprehensible reasons. They learned the use of herbs through the trial and error method and started believing that medicines acquired from plants are completely free from side effects and have high efficacy in comparison to modern treatment methods (Ekor, 2014; Patwardhan, 2016). The belief is strongly backed by the studies of Karimi et al. (2015) who reported that more than one lakh deaths in the USA occur due to toxicities of allopathic medicines and very few die of adverse reactions to herbal medicines.

* Research Scholar, Department of Management Studies, University of Kashmir

** Professor, Department of Management Studies, University of Kashmir

*** Research Scholar, Department of Management Studies, University of Kashmir

**** Contractual Teacher, Department of Management Studies, University of Kashmir

It means that herbal drug toxicity accidents occur less frequently than synthetic drugs. This belief has fuelled the adoption of phytomedicine as an important source of treatment of several diseases in both developed and developing countries. Europeans are reported as the largest consumers of phytomedicines. The blend of plant extracts in standardized form is used to treat depression, headache, diarrhea, menopause, diabetes, allergies, burns, cold, and rashes. These medicines are made available to consumers in liquid, viscous or solid forms (Calixto, 2000).

The success of phytomedicines against modern synthetic drugs is a result of obscure beliefs strengthened by popular marketing gimmicks of ‘free from side-effects’ and ‘efficacy’ (Patwardhan, 2016; Odiboh et al., 2017). These are reported as the most widely used unique selling propositions (USPs) for phytomedicines. Marketing claims of phytomedicine manufacturers have an increased tendency to make hyperbolic claims through marketing campaigns (Ahmad et al., 2015). The advertisement promotions made related to efficacy and side effects are highly persuasive than being informational. Crawford, &Leventis (2005) argued that there is a huge discrepancy between the claimed quality and advantages of phytomedicines and the actual health benefits perceived by users. The reason is that the preparation of phytomedicines barely conforms to quality benchmarks (Gunjan, 2015).

USPs are primarily used to create a distinctive image of the product offering in the minds of consumers and the marketplace. Product USPs as marketing tactics are increasingly used to reshape customer intention to purchase phytomedicines (Blythe, 2004). The use of misleading marketing tactics popularising hyperbolic prepositions and exaggerated claims are also becoming increasingly common with an increase in the use of herbal medicine as means of safe and efficient healthcare alternative (Tyler, 2000; Roush, 2016). In light of the above discussion, it becomes imperative to understand the role of these unscientific claims marketed as product USPs in modulating consumers' preference to use phytomedicines. Further, the technological intervention in the production of phytomedicines also makes it a topic of prime interest. Thus, the study identifies two popular marketing USPs such as free from side effects and efficacy and attempts to understand their impact on consumers' intention to purchase phytomedicines. Phytomedicine purchase intention is taken as a dependent measure.

Literature Review

An exponential rise has been witnessed in the intention of people towards using phytomedicines across the globe (WHO, 2004). In recent times, more than 4 billion people around the world depend on drugs derived from plants which also forms 25 percent of total prescribed drugs in the USA and around 50 percent of medical prescriptions issued in Germany (Nirmal et al., 2013; Srivastava et al., 2019; Dettweiler et al., 2019). China and India are the top producers and consumers of phytomedicines among Southeast Asian countries (Lange, 2006). In India, more than 8000 herbal remedies are

brought to the use of the public through the Ayush system (National Health Portal, 2016). The growth in the consumption of phytomedicines is attributed to the health benefits of traditional medicines, efficacy, increasing awareness of side effects of modern synthetic drugs, increasing use of preventive medicines and supplementary foods, and unaffordability of modern treatment procedures (Ekor, 2014; Srivastava et al., 2019). Moreover, the growing intention to use herbal medicines is also attributed to the perception among the public that phytomedicines are free from side effects and have high efficiency (The Vegan Business Magazine, 2019). It is because herbal drugs are widely promoted by using these prepositions in marketing campaigns (Thanisorn, & Bunchapattanasakda, 2011; Patwardhan, 2016). The claim of being free from side effects rests on the production-oriented philosophy of being handmade and 100 percent organic (Rowey & Spiezia, 2006) which also reinforces the perception of good quality. Thanisorn, & Bunchapattanasakda (2011) argued that perception of quality and being natural significantly affects consumer expectations and trust which in turn nurtures their intention to purchase.

Free from Side Effects

The Marketing punch line ‘Free from side effects’ is widely recognized in connection to phytomedicines because of its repetitive use in their promotion. Ahmad et al. (2015) in their study revealed that around 95 percent of advertisements and product labels promote herbal medicines as 100 percent safe. The high usage of the term with phytomedicine promotion and its endorsement by influential personalities has translated it into a belief among common people (Patwardhan, 2016) that has consequently led to increased use of phytomedicine as the first source of treatment. Researchers such as Chen (2010) and Suganya and Hamsalakshmi (2017) reported that people give high ratings to the perception of phytomedicine being a side effect free drug and it significantly affects their buying behavior. While Adlakha & Sharma (2019) deduced that 80 percent of people strongly hold the belief in them and agree that it affects their intention to use with a mean score of 4.70 on a five-point Likert scale. Based on the above discussion, the following hypothesis is proposed:

H1: The marketing slogan ‘free from side effects’ significantly affects consumers’ phytomedicine purchase intention.

Efficacy

Merriam Webster dictionary defines efficacy as, “the power to produce an effect” (Merriam Webster, 2022). The ability of phytomedicines to produce strong effects depends on the quality of plants or raw material used in the production process. The chemical properties and pharmacological behavior of final drugs are greatly affected by the quality of raw material which can not be standardized due to varying extraction or harvesting techniques, environmental conditions, and methods of storage (Bao et al., 2017). Some of the popular efficacy claims made by phytomedicine producers include

pure herbal medicine, being 100 percent diabetes free, quick weight loss, rapid relief, male genital enlargement in 30 days, treating erectile dysfunction in a single dose, etc. (Ahmad et al., 2015). Odiboh et al. (2017) reported that more than 60 percent of participants in Nigeria perceived high efficacy of phytomedicines. While Wang et al. (2008) and Adlakha, & Sharma (2019) found that efficacy is the strongest influencer of phytomedicine consumption. Sim et al. (2013) while studying the use of phytomedicines by breastfeeding women reported that they use herbal medicines because of perceived safety and efficacy. Customers’ conviction in the efficacy of herbal drugs propels their use. Based on above discussed literary findings, the following hypothesis is proposed:

H2: Efficacy of phytomedicine significantly affects consumers’ phytomedicine purchase intention.

In light of the above discussion, a conceptual framework is proposed as a tool to understand the underlying relationships between different predictor and criterion variables. It includes two marketing USPs viz. free from side effects and efficacy as independent measures and phytomedicine purchase intention is considered as a dependent variable (Figure 1).

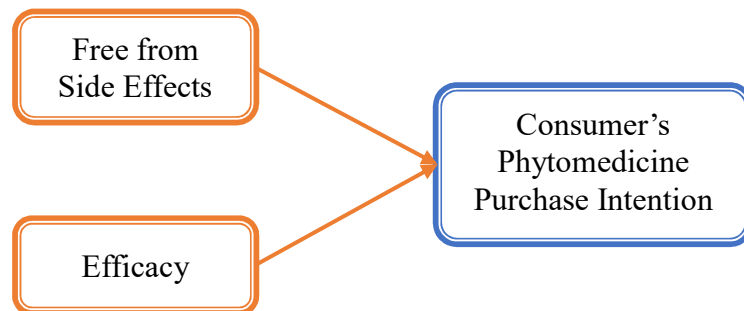


Figure 1: Conceptual Framework

Research Methodology

Population and Data Collection

The population for the study consisted of patients from the Kashmir Division visiting Ayurvedic hospitals, clinics, and pharmacies for the treatment of different ailments. The data was collected with the help of a well-structured questionnaire containing statements explaining the constructs under study. The data was collected through the intercept survey method (Schneider, 2013; Buschmann, 2019). The measurement instrument was divided into two parts. Part I captured information related to demographic characteristics of patients viz. age, gender, income, marital status, and education. Part II consisted of statements that captured information related to independent and dependent variables.

Sample Size and Sampling Technique

The sample size for the current study was decided following the itemized sampling criteria. Itemized sampling lays that a minimum of 10 respondents per item are required to test any theory or hypothesis (Hair et al., 1998). The measurement instrument for the study consisted of 14 items which means that a sample size of 140 respondents was appropriate. However, a sample of 225 respondents was considered adequate to conduct various statistical tests. The convenience sampling method was used to obtain a representative sample of respondents. Non-Probability sampling is generally considered when a sampling frame is not available to serve the purpose of using the probability sampling method (Sharma, 2017).

Operationalization of variables

Both dependent and independent variables are operationalized as reflective constructs. Reflective construct describes the items as a reflection of the constructed variable. The dependent variables consists of 05 items and independent variables of free from side effects consisted of 04 items and efficacy was measured using 05 indicators. The constructs were measured on a five-point Likert scale ranging from 01 to 05 (01 being strongly disagreed and 05 being strongly agreed).

Demographic variables were operationalized as categorical variables. Age consisted of 04 response categories identifying different classes of age such as Below 20 years, 21-40 years, 41-60 years, and Above 60 years of age. Gender has two mutually exclusive response categories such as male and female while income consisted of 04 response categories depicting different income classes such as Below 10,000, 10,001 to 30,000, 30,001 to 50,000, and Above 50,000. Education has four mutually exclusive and collectively exhaustive response categories such as Hr. sec and Below, graduation, post-graduation, and Above post-graduation.

Measurement Model, Reliability and Validity

The model consisted of 14 items measuring three constructs. The results of confirmatory factor analysis (CFA), reliability, and validity are presented in Table 1. A Maximum-likelihood approach was adopted for the present study. Various fit indices such as chi-square fit statistics/degree of freedom (CMIN/df), goodness-of-fit index (GFI), comparative fit index (CFI), root mean square error of approximation (RMSEA), and root mean square residual (RMR) were calculated to examine the fitness of the measurement model. The results deciphered that all fit indices are within acceptable range with CMIN/df=1.98 (Sig. @ 0.05), GFI=0.901, CFI=0.938, RMSEA=0.068 and RMR=0.054. All the criteria signify a good fit for the model. All the items belonging to three constructs have factor loading above the 0.70 threshold limit.

Reliability was established with the help of Cronbach's Alpha and composite reliability measures. All the constructs have a reliability score above the threshold limit of 0.70

(Hair et al., 2013). Validity was examined with the help of average variance extracted (AVE) and discriminant validity measures. All the constructs have an AVE score above 0.50 and the correlation coefficient for all the three variables are below the square root of their respective AVE estimates(Ozkara et al., 2017). The results presented in Table 1 infer good reliability, convergent, and discriminant validity of the measurement model.

Table 1: Results of Confirmatory Factor Analysis and Reliability/Validity Estimates

Constructs	Items	Std. Factor Loadings	AVE	CA	CR	Discriminant Validity		
						FSE	EFF	PPI
Free from Side Effects (FSE)	FSE1	0.934	0.848	0.960	0.957	0.921		
	FSE2	0.909						
	FSE3	0.928						
	FSE4	0.912						
Efficacy (EFF)	EFF1	0.953	0.847	0.963	0.965	0.523	0.920	
	EFF2	0.948						
	EFF3	0.969						
	EFF4	0.931						
	EFF5	0.789						
Phytomedicine Purchase Intention (PPI)	PPI1	0.892	0.792	0.953	0.950	0.601	0.625	0.890
	PPI2	0.914						
	PPI3	0.879						
	PPI4	0.895						
	PPI5	0.868						

Source: Data collected by the scholars for the study.

Results and Discussion

Sample Characteristics

Table 2 portrays the sample characteristics of the survey participants. The descriptive statistics of demographic variables such as age, gender, income, and education are presented in the form of frequency, percentage, and cumulative percentage. The results reveal that the highest percentage of respondents belong to the age group of 41-60 years (41 percent) while the lowest percentage belong to the age group of Below 20 years (13 percent).

Table 2. Sample Characteristics.			
Sample Categories	Frequency	Percentage	Cumulative Percentage
Age (years)			
Below 20	30	13%	13%
21-40	65	29%	42%
41-60	93	41%	83%
Above 60	37	16%	100%
Gender			
Male	142	63%	63%
Female	83	37%	100%
Income (monthly/INR)			
Below 10,000	67	30%	30%
10,001 - 30,000	98	44%	73%
30,001 - 50,000	36	16%	89%
Above 50,000	24	11%	100%
Education			
Hr. sec and Below	43	19%	19%
Graduation	108	48%	67%
Post-graduation	61	27%	94%
Above post-graduation	13	6%	100%

Source: Data collected by the scholars for the study.

The low percentage of young consumers may be due to their increased tendency towards using modern allopathic medicines due to their quick effects and low faith in herbal drugs. The maximum percentage of participants were males (63 percent) and the rest were females (37 percent). The monthly income was asked to know the buy-ability of survey participants. The results depict that the highest percentage of respondents earned a monthly income between 10,001-30,000 (44%) while a small percentage (11 percent) of respondents earned a monthly income of Above 50,000. It infers that most people belong to lower-middle-class income strata. Lastly, the descriptive statistics of educational background portray that the highest percentage of respondents have pursued their graduation degree (48% percent) and the lowest percentage are qualified above post-graduation level (6% percent).

Regression Results

The linear regression results are presented in Table 3. It displays the standard regression estimates along with T-value and significance level. The results in the table reveal a significant positive effect of free from side effects marketing slogan on phytomedicine purchase intention with $\beta=0.397$ significant at <0.001 level of confidence. Hence, H1 is supported. It is because the phytomedicine consumers from generations have acquired the understanding that herbal drugs do not cause adverse drug reactions which still needs

scientific validation (Tayade and Kulkarni, 2011). The claim still stands true to a limited extent when compared to modern synthetic drugs (Karimi et al., 2015). The results corroborate the findings of Suganya and Hamsalakshmi (2017) and Adlakha and Sharma (2019), who reported that consumers weighted the safety concern highest among the factors that influence their intention to consume phytomedicines. Adlakha and Sharma (2019) further mentioned that the highest mean score of 4.70 was reported for safety i.e. medicine being free from side effects on the five-point rating scale.

Results displayed in Table 3 also show that efficacy has a significant positive effect on phytomedicine purchase intention with $\beta=0.253$ significant at <0.05 level of confidence. Therefore, H2 is also supported. It can be attributed to the blind belief of consumers they acquired from tall claims made by phytopharmaceutical companies through advertisement and other promotional activities, which are not extensively true (Ahmad et al., 2015). The results find support in the arguments of Wang et al. (2008) and Sim et al. (2013) who deciphered that the efficacy belief of phytomedicines is the strongest influencer of consumer purchase intention. A similar claim was made by Odiboh et al. (2017) while studying the consumption behavior of Nigerian consumers.

Finally, the adjusted R-square value of 0.305 presents that the two exogenous variables such as free from side effects and efficacy explain more than 30 percent of the variance in the endogenous variable of phytomedicine purchase intention. The remaining 70 percent of the variance is explained by other variables not considered for the study.

Table 3: Regression Results.					
DV: Phytomedicine Purchase Intention					
Variables	Std. Coefficients	Std. Error Coefficients	T-Value	Sig.	Decision
Constant		0.393	1.712	0.090	
Free from Side Effects	0.397	0.109	4.239	0.000	Supported
Efficacy	0.253	0.106	2.699	0.008	Supported
Adjusted R-square	0.305				

Source: Data collected by the scholars for the study.

Conclusion

The study attempted to evaluate the effect of marketing slogans namely free from side effect and efficacy on the phytomedicine purchase intention. After a proper analysis of the data, study finally concludes that patients are more conscious about the side effects of phytomedicines while taking any purchase decision. Patients are of the belief that phytomedicine are safe and secure to use as endorsed by the ayurvedic drug manufacturing companies in their marketing slogans. But, to what extent these medicines are free from any kind of side effect is still a question mark that need scientific validation.

Further efficacy is priority of every patient while purchasing any kind of medicine. The study has found significant results regarding the relationship between efficacy and phytomedicine purchase intention. Patients are in agreements to the marketing slogans of companies claiming to have high level of phytomedicine efficacy. Therefore, need of an hour is to scientifically validate the impact of both the marketing slogans i.e. free from side effect and efficacy on consumers purchase intention before making generalization of the results.

References

- Adlakha, K., & Sharma, S. (2019). Brand Positioning Using Multidimensional Scaling Technique: An Application to Herbal Healthcare Brands in Indian Market. *Vision*, 1-11.
- Ahmad, A., Patel, I., Parimalakrishnan, S., Mohanta, G. P., & Nagappa, A. N. (2015). Advertisement on medicines/treatment in newspapers violating Indian laws?. *International Journal of Current Pharmaceutical, Review and Research*, 6(1), 49-58.
- Bao, J., Ding, R. B., Liang, Y., Liu, F., Wang, K., Jia, X., et al. (2017). Differences in chemical component and anticancer activity of green and ripe forsythia-fructus. *The American journal of Chinese medicine* 45(7), 1513-1536.
- Blythe, J. (2004). *Essentials of Marketing* (3rd ed.). New York: Financial Times Prentice Hall. p. 250. ISBN 9780273693581.
- Buschmann, A. (2019). Conducting a street-intercept survey in an authoritarian regime: the case of Myanmar. *Social Science Quarterly*, 100(3), 857-868.
- Calixto, J. B. (2000). Efficacy, safety, quality control, marketing and regulatory guidelines for herbal medicines (phytotherapeutic agents). *Brazilian Journal of medical and Biological research*, 33(2), 179-189.
- Chen, Y.S. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics* 93(2), 307-319.
- Crawford, S. Y., & Leventis, C. (2005). Herbal product claims: boundaries of marketing and science. *Journal of Consumer Marketing*, 22(7), 432-436.
- Dettweiler, M., Lyles, J. T., Nelson, K., Dale, B., Reddinger, R. M., Zurawski, D. V., et al. (2019). American Civil War plant medicines inhibit growth, biofilm formation, and quorum sensing by multidrug-resistant bacteria. *Scientific reports*, 9(1), 1-12.
- Ekor, M. (2014). The growing use of herbal medicines: issues relating to adverse reactions and challenges in monitoring safety. *Frontiers in Pharmacology: Ethno pharmacology*, 4(177), 1-10

- Gunjan, M., Naing, T. W., Saini, R. S., Ahmad, A., Naidu, J. R., & Kumar, I. (2015). Marketing trends & future prospects of herbal medicine in the treatment of various disease. *World Journal of Pharmaceutical Research*, 4(9), 132-155.
- Hair, J. F., Jr., Black, W. C., Babin, B. J., & Anderson, R. E. (2013). *Multivariate data analysis: A global perspective* (7th ed.). Pearson Education.
- Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis* (5th ed.). Pearson.
- Karimi, A., Majlesi, M., & Rafieian-Kopaei, M. (2015). Herbal versus synthetic drugs; beliefs and facts. *Journal of Nephro pharmacology*, 4(1), 27–30.
- Lange, D. (2006). International trade in medicinal and aromatic plants: actors, volumes and commodities, Bogers, R.J., Craker, L.E., & Lange, D., (eds.). Netherlands :Frontis-Springer, 155-170.
- Merriam Webster (2022). Efficacy. Available from: <https://www.merriam-webster.com/dictionary/efficacy>. Accessed 15.02.2022.
- National Health Portal (2016). Introduction and Importance of Medicinal Plants and Herbs. Available from: https://www.nhp.gov.in/introduction-and-importance-of-medicinal-plants-and-herbs_mtl. Accessed 16.02.2022.
- Nirmal, S. A., Pal, S. C., Otimenyin, S. O., Aye, T., Elachouri, M., Kundu, S. K., et al. (2013). Contribution of herbal products in global market. *The Pharma Review* (DEC. 2013), 95-104.
- Odiboh, O., Omojola, O., Okorie, N., & Ekanem, T. (2017). Sobotone, ponkiriyaon, herbal marketing communication and Nigeria’s healthcare system. In *Proceedings of SOCIOINT 2017- 4th international conference on education, social sciences and humanities, 10–12 July 2017- Dubai* (pp. 1395–1401).
- Ozkara, B. Y., Ozmen, M., & Kim, J. W. (2017). Examining the effect of flow experience on online purchase: A novel approach to the flow theory based on hedonic and utilitarian value. *Journal of Retailing and Consumer Services*, 37, 119–131.
- Patwardhan, B. (2016). Ayurvedic drugs in case: Claims, evidence, regulations and ethics. *Journal of Ayurveda and Integrative Medicine*, 7, 135-137.
- Roush, R. A. (2016). *Complementary and alternative medicine*. New York: Routledge-Taylor & Francis group.
- Rowey, J. & Spiezia, M. (2006). SpieziaOrganicsan SME Marketing. *The Marketing Review*, 6, 253-264.

- Schneider, R. J. (2013). Measuring transportation at a human scale: An intercept survey approach to capture pedestrian activity. *Journal of Transport and Land Use*, 6(3), 43-59.
- Sharma, G. (2017). Pros and cons of different sampling techniques. *International journal of applied research*, 3(7), 749-752.
- Sim, T. F., Sherriff, J., Hattingh, H. L., Parsons, R., & Tee, L. B. (2013). The use of herbal medicines during breastfeeding: a population-based survey in Western Australia. *BMC complementary and alternative medicine*, 13(1), 1-10.
- Srivastava, A., Srivastava, P., Pandey, A., Khanna, V. K., & Pant, A. B. (2019). Phytomedicine: A Potential Alternative Medicine in Controlling Neurological Disorders. *New Look to Phytomedicine-Academic Press*, 625-655.
- Suganya, R., & Hamsalakshmi, R. (2017). A study on customer buying behaviour of selected Ayurvedic healthcare products. *International Journal of Advanced Research and Development*, 2(2), 13–18.
- Tayade, M., & Kulkarni, N. B. (2011). Accuracy of the drug advertisements in medical journals in India. *Journal of Clinical and Diagnostic Research*, 5(3), 583-585.
- Thanisorn, R., & Bunchapattanasakda. (2011). Marketing Strategies of Imported Herbal Cosmetic Products in Thailand. *Information Management and Business Review* 3(4), 217-221.
- The Vegan Business Magazine (2019). Plant Extracts Market: Global Scenario & Market Highlights. Available from: <https://vegconomist.com/studies-and-numbers/plant-extracts-market-global-scenario-market-highlights/> Accessed 15.02.2022.
- Tyler, V. E. (2000). Herbal medicine: from the past to the future. *Public Health Nutrition* 3(4a), 447-452.
- W H O. (2004). WHO Guidelines on Safety Monitoring of Herbal Medicines in Pharmacovigilance Systems. Geneva, Switzerland: World Health Organization.
- Wang, W., Keh, H. T., & Bolton, L. E., (2008). Consumer perceptions of traditional Chinese versus Western medicine in China. *Advances in Consumer Research* 35, 39-43.