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## IDENTIFICATION OF EFFECTING FACTORS ON THE ATTITUDE OF CONSUMERS TOWARDS HERBAL MEDICINES

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### ABSTRACT

Today herbaceous medicines consumption is growing around the world. People demand these product for disease prevention, cure, and also prosperous of health and beauty advantages. In this situation with positive changes in people attitude about advantages of these products it seems this market is very profitable, so it is very important for introducers and sellers to understand herbaceous medicines market segments then determine best target market and design appropriate marketing mix to satisfy customer demands. For this reason, identify consumer segments based on their attitudes about herbaceous medicines seems very important. Also this study shows whether there are differences among these consumer segments in terms of their value and life style, health orientation and degree of knowledge about herbaceous medicines. In this study used statistical method to segment herbaceous medicines market in Tehran, So 26 indexes cognition and then 3 main factor explorers about these indexes. A total of 295 consumers were surveyed at stores and herbaceous medicines stores in different areas of this city. The segment analysis performed indicates that there ate three segment based on consumer attitudes include: Positive, indifferent and negative. The results indicate that the consumer segment with different attitude exhibits different levels of health orientation, perceived value and perceived effectiveness in compared with other segments.

**Keywords:** Herbaceous Medicines, Segmentation, Attitude

### INTRODUCTION

In addition to the potential of the producing and supplying herbal medicines and money making capacity of herbal medicines, which in turn results in increased employment, increased welfare, increased export and economic growth, it can result in human and social development which in turn will realize economic growth. The health increases and improves labor. Consequently, powerful labor will have higher efficacy and production capacity and the increased production rate will result in decreased poverty, decreased non-development and increased economic growth. However, achieving such developmental goals demands practical requirements and formulating economic growth policies for this industry. The growth of culturing medicinal plants, constructing processing industries and the existence of expertise specialists and producers, who are familiar with the technical matters of production and processing of medicinal plants, are a number of such requirements. Considering the demand of Iran for the primary resources of medicinal industries which finally results in meeting users' needs, specialists should identify fit regions for culturing medicinal plants. Currently, the existence of different climates, talented lands, increased domestic consumption and the existence of consumption market in Arabian and Central Asia countries can make Iran a main supplier of

medicinal plants and herbal medicines. The realization of this goal, however, necessitates the involvement of the government through actions such as paying financial facilities to producers, supplying necessary inputs such as modified seed, allocating budgets to studies on medicinal plants and formulating and executing rules and laws prohibiting the smuggling of the products. On the other hand, market demand is an index for economic measurement of herbal medicines. This, in turn, makes it important to identify current status of the domestic market of the products based on potential and practical market demand, and to identify foreign markets based on some indices including economy size, trading status of countries and their importing potential. Recent changes in markets and customers and the increased competition between organizations have highlighted the necessity of developing optimal strategies for customer attraction. This necessitates the identification and satisfaction of customers' needs individually, not accumulatively, more than before. Some customers are more profitable and the attraction and retention of them is the art of a marketer. This highlights the importance of providing a fit technique for the identification and segmentation of customers. The presumption that all customers are not the same is the fundamental base of market segmentation. This is why enterprises try to determine that which customer should be positioned in which group or segment in order to decrease their costs and earn more money by defining fit marketing strategies for attracting customers being represented by relevant segments. The consumer segments in terms of three mentioned key factors will examine. The findings of this study highlight consumers underlying attitude to buy herbaceous medicines in Iran so that producers and managers can set appropriate strategies to expand the future demand for this product and also develop their marketing strategies to apply consumer demand base on attitude to purchase herbaceous medicines. According to Zakwoska- Biemans (2011) both demographic and socio metric characteristic are important factors to choice herbaceous products. Paul and Rana (2012) stated that the change in attitude about herbaceous medicines was initially seen at a political level first in Europe and then followed by north America and Japan, So the growth in attention and consumption herbaceous medicines market has caused a major change in how this product are produced, packaged, promoted, priced and distributed. It is vital for marketers to understand herbaceous medicines consumers'. This study attempt to identify consumers' attitudes toward herbaceous medicines based on 3 key indexes: value, life style and health orientation. Then the consumer profile in each segment determine and to formulate fit strategies for each segment based on the most important characteristics of that segment in order to realize both the satisfaction of customers with different tastes and achieve productivity in the production and market sectors of these products to a large extent.

### ***Statement of Problem***

The necessity of quick responses to customers' requests, the continuous change of customers' needs, the increased level of customers' expectations, increased marketing costs, the existence of ever-increasing competitions in different sectors, limited resources and the rapid growth of technology have made it difficult to attract customers and to survive in markets. The above mentioned changes indicate that it is necessary to further know customers and to accurately segment them in order to better respond their needs. Today, among mass marketing approaches, companies use targeted marketing, or in other words, micro-scale marketing in order to achieve customer satisfaction. Market segmentation is an essential concept of this approach. Organizations need to find approaches to defining, formulating and executing fit marketing



strategies. This is practiced by more accurate identification of their customers' attitude and segmenting them so that the differentiation of segments can result in the differentiation of similar intra-segment and different out-segment requirements on the one hand and developing fit marketing strategies for each segment proportional to intra-segment similarities and out-segment differences on the other hand. From long time age, human has used drug to meet his primary needs i.e. mitigating his pains. In older times, human would use only natural drugs for this purpose the majority of them were being made of medicinal plants. Up to the past century, the development and advancement of pharmacy industry had not exceeded the use of natural drugs and the majority of them were being made of medicinal plants. In recent century, however, the advancements in formulating chemical drugs changed the mechanism and appearance of drug and pharmacy industry and they were completely evolved. Due to such changes, chemical drugs are available and are being used as the main drugs for treating different diseases. By the emergence of chemical drugs, the importance and role of medicinal plants in human health was forgotten. However, herbal medicines have considerably been welcomed overtime due to the increased awareness of people of the negative side effects of chemical drugs on the one hand and the popularity and acceptance of herbal medicines on the other hand so that today the industry of herbal medicines is one of the rare industries with a growth rate with two digits. In recent years, the majority of developed countries have tried to produce herbal medicines, instead of chemical medicines, and to effectively consume them. Quoted by Mohammad Bagher Rezaei, the CEO of the Herbal Medicines Association, and Mohsen Mohandeszade, the CEO of the Scientific Society of Management and Economy, as the authorities of the market of herbal medicines in Iran, the interest of people in consuming herbal medicines has been increased in recent years more than before and the medicines have a special place in Iranian shopping basket. A major part of such drugs is used to prevent diseases and another major part is used to treat diseases. According to evidences, the interest of Iranian people in health issue has been increased so that a group of customers who trust herbal medicines and are the fans of herbal medicine has been created. Despite the increased number of the consumers of herbal medicine in Iran and the importance of the identification of the medicines' features and their segmentation, there is no study on this field. Considering the positive attitude of many consumers to the preventive and treatment advantages of herbal medicines, especially in recent years, the researcher based on existence theoretical basis concern attitude and psychological and behavioral factors that affecting on attitude specially toward organic food, vegetable and cosmetic products tries to description three factors include health orientation, perceived value and perceived effectiveness as effecting Factors on the attitude of consumers towards herbal medicines, segment consumer based on these three factors, identification the most important characteristics of the customers of each segment and ultimately express the best fit marketing strategy meeting the expectations of each segment.

### *Literature*

Brand and Kumar (2003), in a study entitled, Detailing gets personal: Organic executive, according to the researchers, in the health market, Mentality effects of curative herbaceous medicines is considered as an affected factors to purchasing. Psychological factors that introduce from Kotler model was selected as the basics of segmentation of this market and were given to 12 pharmaceutical experts. On the other hand, factors influencing attitudes toward these products were introduced. Product shape, color, package, product compounds were identified



as a factors affected on attitude. These product consumers had some differences in terms of psychological characteristics.

Hosseini and Ziaee Bideh (2013) conducted a study entitled “Segmentation and determining profiles of green users using self-organizing maps.” The purpose of the study was segmentation of green market based on demographic, psychological, and behavioral variables as well as studying the relationship between each variable with the attitude of green consumers. Based on the results of their study, four market segments were identified and named as intense greens, potential greens, dark egoist, and intense darks. Moreover, the results show that demographic variables such as age, gender and income and psychological and behavioral variables including personal values, religiosity, attitudes, and environmental knowledge have a key role in predicting attitude of green consumers.

Dopaco, et al. (2009) segmented green consumers based on attitudes and knowledge of environmental and demographic characteristics of each sector. These researchers divided green consumer-market into three segments: non-aligned greens, active greens, and undefined.

In a cluster analysis conducted, Diaz and Hoefkens (2009) identified three groups of organic consumers: non-consumers, those who always consume, and those who sometimes. These three groups of consumers were primarily distinct at the level of their knowledge of organic products and consumption of these products in Spain. Demographics of these three groups had distinctive features. Moreover, the study showed that those who always consume are willing to pay extra price for organic foods.

Bartles (2011) examined consumers based on consumption patterns in choosing organic foods as non-consumers, light consumers, and heavy organic food consumers, and segmented them based on K-Mean clustering technique. He concluded that there are significant differences between three groups of consumers in the specific domain of innovation, social identity, and attitude towards the antioxidants in fruits and fresh vegetables.

Research was not conducted specially in the field of herbal medicine, as a result researches in the field of organic and plant products was studied. The organic and plant market area is largely similar with the market is under review in this research. The majority of the studies about consumer purchase and consumption of herbaceous food and products show that consumer with higher level of perceived health have more positive attitudes to purchase these products (Krystallis et al., 2006; Rointer et al., 2008). Research also indicate that people who have knowledge about herbaceous products tend to have a more positive attitude toward buying natural product for beauty, health advantages and they are willing to pay a premium price (Williams et al., 2007).

Most of the studies about perception of herbaceous medicines specified that purchase and consumption of herbaceous medicines related to perceived health benefits (Lee, 2005; Chen, 2009; Hoefkens et al., 2009). Chryssohoidis (2005), found that consumers who purchased herbaceous medicines place greater importance to health orientationsuch as avoid using foods with additives and preservatives, generally attentive to their inner feelings about their health. A study conducted by chen (2009), showed that a healthy lifestyle exerts effective mediating effects on the positive relationships between health consciousness and consumer attitudes toward herbaceous foods. Similarly, in a study conducted by Michaelidou (2008), safety was the most important predicator of attitude, while health consciousness appeared to be the least important motive. A variety of studies relating to herbaceous medicines consumption indicates that



consumer perceived values are important in impacting consumer attitudes about herbaceous medicines (Grankvist et al., 2007; Arvola et al., 2008; Krystallis et al., 2006). Mirakzadeh et al., 2012, explained herbaceous products consumption decision related with perceived effectiveness such as believe that herbaceous medicines is curative and harmless, It is so important lateral illness or indisposition arise from medicines consumption and so on.

## THEORETICAL BASES

### *Differentiation of herbal medicine with medical plants*

Herbal medicines are the result of converting some herbs into medicines in pharmaceutical plan during a specific sterile process, but medical plants contain parts of the plant, which after drying are sold without any changes in shop and creams.

### *The economic potential of herbal medicines*

According to estimations in recent years, the global market value of **herbal medicines** including medicinal plants and their products has had significant growth. Given that much of the world market of medicinal plants is related to the production and supply of secondary products derived from these plants is concerned, the secondary products are usually of very high value added. According to statistics, the global market value of drugs derived from herbs in 2012, with growth of 10.7% compared to a year earlier, reached 23.6 billion dollars. This value reached roughly 30.8 billion dollars in 2014. However, it is expected that the value of this market reach 5 trillion dollars by 2050 (Zarrin, 2014). Given the high economic potential of medicinal plants in exchange and earning income, by reconstructing field conditions and growing medicinal plants demanded by domestic and global markets, and in fact, targeted use of less fertile lands of our country for the production of medicinal plants and effective processing of it, one can not only revive these regions, but also create a favorable labor market, and ultimately increase revenue of the country and thus pave the ground for accelerating the process of development. Studies conducted in Iran indicate that some medicinal species natives to Iran have high medicinal value and in case of harvest and process in addition to supplying the domestic market, they can enter global markets without competitors.

According to statistics and data published in the national document of medicinal plants and traditional medicine of the country, Iran has 11 favorable climate conditions for planting and production of these products and the number of medicinal plants in the country is 1800 species the size of the whole Europe. However, unfortunately, the number of drugs obtained from these plants and sold as herbal medicines officially in pharmacies in the country is only 220 drugs, of which only 10 types are covered by insurance. Despite the ability and potential that Iran has in this area, the world's medicinal plants market is taken over by Germany, the US, and China. The share of Iran of the billions of dollars of profits is only 1.9 billion dollars of the whole market of sales and exports, and domestic consumption is not as much as it should be and consumers prefer chemical drugs to herbal medicines.

HMs make up about 4 percent of the medicines used in our society, whereas 71 percent of the drugs used in Germany are herbal medicines. Use of herbal medicines in Switzerland is 35%, in the US and Britain 25%, Japan 40%, and in China and India more than 50% (Zarrin, 2014). In the last 5 years, again after many years of marginalization of the market, position of HM in the country has become more systematic by scientific and technical developments. The establishment of headquarters of herbs and Iranian medicine, the establishment of traditional



medicine school, creating clinics and research centers, and training teams of doctors and pharmacists are a symbol of transformation and systematic status of the Iranian traditional medicine and herbal treatment.

#### *Economic theories related to consumer attitude*

Studying consumer attitude is an interdisciplinary science and a combination of the fields of psychology, sociology, economics and marketing. Consumers allocate their limited income to diverse needs. This allocation is based on a rule. Rule of allocation raises concepts of economy, such as ultimate utility, indifference curves and revealed preference theory. According to the utility theory, the consumer selects a product, which in numerical terms (imaginary unit) is more desirable. In mainstream economics, theories of consumer attitude are based on the assumptions that the goal of consumer is maximizing utility. The desirability of the person is a function of his consumption of products, the person can evaluate and rank his utility by consumption of goods, and ultimately, any rational consumer has an objective function, whose variables are values of consumed products to gain the most favorable level of utility. According to the theory of indifference curves, products are assessed as categorizations compared to each other, and the consumer preferences are assessed in preferring categories of products. Moreover, in revealed preference theory, which is of the important theories in the field of capitalist economy, the ultimate goal of consumer attitude is to maximize hedonism, and to maximize utility is the intermediate goal of this ultimate goal. Consumer uses preference index to select and using preference index, he ranks the products and chooses the top ones to maximize his satisfaction. Neoclassical theory, in consumer attitude, has examined selection, succession, and the impact of these issues on demand.

According to the neoclassical view, people make their consumption decisions based on the ultimate utility of any product. Thus, they raised the concept of Ordinal Utility, in which, due to preferring one product to another, one can prove the properties of demand curves of the market. After that, it was raised whether there is the possibility of substituting one product to another considering the constant amount of utility, which this theory leads to the concept of indifference curves (Katler and Armstrong, 2013). Furthermore, analysis of demand issues also suggests that the demand curve is directly related to the theory of consumer attitude. If consumer attitude was analyzed properly, one can gain a proper understanding of the demand. Attitude specifications in the discussion of attitude foundations show the factors affecting attitude and consumption of the consumer; predicting their demand and market segmentation will be presented. In segmentation based on the aspect, consumers are divided into some groups based on knowledge, attitudes, preferences and expectations of the product, use cases, reaction to products, and tastes. In herbal medicines market, different consumers have different expectations. Interested and potential consumers are indifferent to price, while efficiency, quality, and effectiveness of these products are important to them. Customers who were named value-oriented have good attitudes to these goods, are loyal consumers, and are sensitive to price. On the other hand, price-oriented customers with a poor attitude are sensitive to both price and distrust these products. Thus, each segment looks for a combination of needs and preferences. Prices as a characteristic willingness to pay is considered as a factor effective in buying decision in some articles. Specifically, in the field of herbal medicines, no theoretical bases were found, but in the organic market, theoretical fundamentals suggest that consumers have announced that they are even willing to pay extra if ensure the quality and variety of these products.



The findings of this study, in segment 3 of 4 segments identified in herbal medicines market consider price as an important factor. This emphasis of the consumers should be of interest to manufacturers and marketers: price should reduce or the current prices should be justified. Applying law Weber would be useful. According to this law, there is a relationship between JND value and intensity of the stimulus. Rising prices are applied less than JND, and reduction of prices is applied more than JND. Media advertisement and displaying processing of HM, which can be an attest to hard work, quality, safety, and health of drugs, can lead to change of perception of the value of money compared to the benefits received from these products. Attitude-based herbal medicines market is indivisible to alternative products that are chemical drugs too.

Attitudes to the products compared to alternative products in the model presented by Horn (1997), Lerer (2002), Greengroove (2002), Kumar (2003) and Williams & Heller (2007) are as a behavioral factor contributing to the breakdown of customers. Some consumers believed that herbal medicine like completely organic product could not be defined because if pesticides and fertilizers are not used for the production of medicinal plants, soil and water pollution disrupt the definition of natural and healthy.

Others believe in inaction or late effects of herbal medicines and preferred chemical drugs. Many believed in preventive and strengthening effect of these products and did not believe in therapeutic effects of herbal remedies such as chemical products. Issues obtained indicate the point, to producers and marketers, that the majority of consumers consider these products as more for prevention and strengthening. Thus, it is better for manufacturing and market sectors to produce and introduce products more with this aspect and always remind effects and lack of side effects, which are important difference points of these products compared to the substitute chemical products.

#### ***Market segmentation-the bases of segmentation***

Segmentation is an important instrument used to understand the diversity of customers. Segmenting customers to different groups and identifying the characteristics of each group result in developing better marketing approaches (Williams and Heller, 2007). The bases of market segmentation refer to a group of variables or characteristics used to segment customers to homogeneous groups. Different authorities have introduced the bases of segmenting consuming product and service customers and relevant variables of each base. Wendell Smith (1956) has introduced social class and economic condition of customers as segmentation bases. Katler (1955), Horn (1997), Lerer (2002), Green Grow (2002), Kumar (2003) and Williams and Haller (2007) have introduced psychological and behavioral factors as segmentation bases. Bloch et al (1994) and Punch (1994) have introduced the shopping activities of customers as segmentation bases. Katler (1995) has introduced demographic, psychological and attitude factors as segmentation bases. Sitinor and Nurita (2010) have introduced nutrition style with the components of purchasing motivation, consumption position, quality dimensions of health, innovation and method of purchasing as food industry-specific segmentation bases (Ahmadi, Azar and Samami, 2010; Hoseini and Ziaei Bide, 2013; Lendel Kad, 2015). Specifically, in the field of plant and organic products, Bartels and Vanden Berg, 2011, segmented consumers as non- users, light users and heavy users of organic products based on consumers' consumption patterns and conclude that there are significant differences among the three consumer groups on domain specific innovativeness and attitude toward this product advantages. Diaz et al.



(2010), also conducted cluster analysis and identified three distinct groups of organic product namely, non- consumers, habitual and occasional consumers. These three consumer groups differentiated primarily in their levels of knowledge and consumption. In this study consumer segment three clusters namely positive, indifference, negative based on their attitude.

## METHODOLOGY

This is an applied study in terms of objective and a survey-analytical study in terms of method. It evaluates data associated with a special scope of time and therefore it is a cross-sectional study. Data was collected using questionnaire. The items of this questionnaire were scored using Likert five-scale method; unless items where the studied variables had nominal scales. The population of this study consists of all end users of different herbal medicines in Iran. Since there was no accurate information about the number of population, it was considered unlimited. Of 60 items used for calculating reliability, 29 items were introduced as the main variables following calculations. Since sample size should be at least 10 times higher than the number of the main variables, 290 questionnaires were distributed 290 of which were valid and usable. Samples were selected using stratified sampling method as follows. In stratified sampling, the units of the studied population are grouped within groups which are more homogeneous in terms of the variable attribute. In this way, changes occurring inside groups are minimized. Generally, a variable which correlates with the attribute of the studied variable is considered as the criterion. In this study, the 22 municipality regions of Tehran constituted the strata in which 67 herbal pharmacies are active. The number of samples for each region was selected proportional to the pharmacies of that region.

### *Questioner description*

The consumers, who were shopping in grocery stores or shopping malls, were asked to complete the questionnaire. A total of 460 surveys were collected and the data collected from this sample were analyzed by using SPSS. The first section of the survey included the values and life style scale which was developed by Kahle 1983 with 9 point scale (ranging from 1= very non important to 9= very important) and also used the original nine- items list of value scale without any modification. Then constructed attitude toward herbaceous medicines, factor based on 11 behavioral belief statements of which 10 were previously used by Eves et al, (2004). All of the behavioral belief items were measured on a five point Likert scale. The second part of the survey included health orientation. Health orientation scale was developed by combining two different scales, namely health consciousness scale that consisting nine items (Gould, 1988) and health behavioral control scale that consisting 12 items (Moorman and Matulich, 1993). Three items from the health consciousness scale and seven items from health behavioral control scale considering the scope of this study. Therefore 10 statements from this scale selected and measured on a 5- point Likert scale (1= strongly disagree to 5= strongly agree). The third section of the survey included Perceived effectiveness about herbaceous medicines. Using Sangkumchaliang and Huang (2012), theory of consumer perception and attitude, the survey also include five questions about Perceived effectiveness about herbaceous medicines. This question measured on a five- point Likert scale and also the other section of the survey is perceived value about herbaceous medicines and using Kwany (2012), This question measured on a five- point Likert scale. Mentioned scales and the descriptive statistics are rendered in table 2.

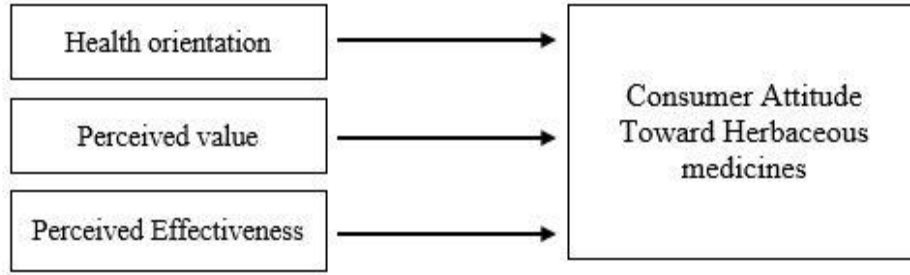
Table 1: Constructs and sources

Constructs and sources	Indicators	Mean	Standard Deviation
VALS scale alpha= 0/70 (Sitinor and Nurita, 2010)	Sense of belonging	7/09	2/06
	Excitement	7/01	1/76
	Good relationship with others	7/54	1/44
	Self- fulfillment	8/17	1/20
	Being well-respected	7/73	1/69
	Fun and enjoyment in life	8/23	1/28
	Security	7/87	1/60
	Self-respect	8/34	1/31
	A sense of accomplishment	8/06	1/35
Health Orientation, alpha= 0/73 (Mirakzadeh et al., 2012)	It is too hard to eat herbaceous food regularly	3/41	1/11
	Going for an annual physical exam is easy for me	2/45	1/12
	I find it easy to maintain a balance between rest and work	3/30	1/01
	I am constantly examining my health	3/17	0/96
	I am very self- conscious about my health	3/71	0/90
	As hard as I try, I cant reduce the stress in my life	2/67	1/09
	I avoid using foods with additives and preservatives	3/49	1/02
	It is too hard for me to exercise 5 days a week	2/90	1/33
	I'm generally attentive to my inner feelings about my health	3/73	0/87
	It is not easy to cut back on treats	2/63	1/23
Perceived effectiveness, alpha=0/86 (Sangkamchaling and Chi-Huang 2012)	I will recommend herbaceous medicines to my friends and my family	3/70	0/90
	I will try to find herbaceous medicines even is not available and find it very hard	2/69	1/01
	I believe that herbaceous medicines is curative and harmless	3/53	0/86
	It is so important lateral illness or indisposition arise from medicines consumption	3/49	0/85
	Consumption of herbaceous medicines create good mentality effects	3/30	0/88
Perceived value alpha=0/86 (Kwanyi, 2012)	I prefer herbaceous medicines because it hasn't any chemical and preserve material	3/53	0/86
	Security of consumption is very important	3/30	0/88
	I believe that herbaceous medicines has a good quality	3/49	0/85
	Faster cure possibility is very important	2/69	1/01
	herbaceous medicines is healthy and safe	3/70	0/90



Table 2: consumer segments based on their attitudes toward herbaceous medicines

Statements about herbaceous medicines	Cluster 1: positive attitude	Cluster 2: indifference attitude	Cluster 3: negative attitude	F value	Significance
Are rich in vitamins and minerals	4/29	3/62	3/25	35/57	0/01
Have less chemical residual	4/63	4/52	3/57	43/67	0/01
Are healthy and curative	4/75	4/21	3/52	54/90	0/01
Have a good flavor	4/28	3/28	3/34	49/43	0/01
Are easy to obtain in the shops	2/95	2/12	3/00	33/29	0/01
Are expensive to purchase	4/11	4/19	3/11	32/74	0/01
Are associated with an alternative lifestyle	3/27	3/20	2/46	14/29	0/01
Have a good package	3/37	2/16	2/57	68/53	0/01
Are in bad external and outward shape	3/62	3/88	2/56	48/99	0/01
Are environmentally friendly	4/63	4/52	3/57	43/67	0/01
Are fresh because they have a shorter shelf- life	4/46	4/15	3/48	34/65	0/01
Number of cases in each cluster(N)	122	112	61		



**Figure1: Main Factors effecting on consumer attitude toward herbal medicines.**

Sources: (Magnusson et al, 2001 and 2003, Yiridoe et al., 2005, Krystallis et al, 2006 and Williams et al., 2007).

Using behavioral and psychological beliefs about herbaceous medicines as a base for attitudes toward herbaceous medicines, we expect that there are differences among consumers with positive, indifference and negative attitudes toward herbaceous medicines in terms of perceived value, health orientation and perceived effectiveness. There fore the fallowing hypothesis determined.

### *Hypothesis*

**H1:** The consumer segment with positive attitudes toward herbaceous medicines exhibit higher levels of health orientation when compared to other segments.

As indicated in the literature review, concern about health is commonly stated driver of purchasing and consuming herbaceous medicines (Horne,1997; Lerer, 2002; Stremersch, 2008; Williams and Heller, 2007). Today consumer are more conscious about their health and lateral illness or indisposition of medicines and prefer herbaceous products and favor companies that produce this product with higher quality.

**H2:** there is a difference among herbaceous medicines consumer segments in terms of the perceived values. Another purpose of this research was to examine the consumer segments from the perspective of values. There are several studies that focus on the relationship between values and attitudes toward herbaceous medicines (Greengrove, 2002; Lerer, L, 2002; Stremersch, 2008). Assert that herbaceous medicines are associated with the values of welfare for all people and protection of nature where the value "universalism" has a positive correlation, while the value "power" has a negative correlation with the attitude toward herbaceous medicines. Another study (Lerer, 2002; Williams and Heller, 2007), showed that consumer who purchase herbaceous medicines place greater importance on internal values such as self- respect and enjoyment of life rather than external values such as belonging. Mirakzadeh et al. (2012), explained herbaceous medicines consumption decision by relating attributes of herbaceous medicines to values such as "security", "hedonism", "universalism", "stimulation" and "conformity".

**H3:** The consumer segment with positive attitudes toward herbaceous medicines exhibit higher levels of perceived effectiveness when compared to other segments.

The consumers with more positive attitudes toward herbaceous medicines will recommend herbaceous medicines to his friends and his family, try to find herbaceous medicines even is not available and find it very hard, believe that herbaceous medicines is curative and harmless, lateral illness or indisposition arise from medicines consumption is so important for them and also they believe that Consumption of herbaceous medicines create good mentality effects.

**Table 3: consumer segment differences for perceived value, health orientation and perceived effectiveness**

Clusters	Perceived value	Health orientation	Perceived effectiveness
Positive			
Mean	3/17	3/63	3/91
SD	0/682	0/489	0/488
Indifference			
Mean	3/08	3/66	3/84
SD	0/531	0/523	0/519
Negative			
Mean	3/13	3/47	3/77
SD	0/456	0/551	0/458
Total			
Mean	3/13	3/61	3/85
SD	0/582	0/518	0/496
F-value	0/46	2/54	2/83
p-value	0/63	0/08	0/06
Tukey post-hoc tests		2/3	1/3

As seen in table 3, consumers who have positive attitudes toward herbaceous medicines have higher levels of perceived value and perceived effectiveness when compared to the other segments. However, consumers who have indifference attitude toward herbaceous medicines have higher levels of health orientation. These differences are only marginally significant as indicated by the probability levels ( $p = 0/06$  for perceived effectiveness and  $P = 0/08$  for health orientation). Therefore H2 and H3 are marginally supported, where as H1 is rejected, indicating that the consumer segment with positive attitude toward herbaceous medicines does not have higher level of health orientation when compared to other segment.



### *Description of Clusters*

#### *• Positive Cluster*

This segment consists of consumer who hold positive attitude toward herbaceous medicines. Respondents of this segment find herbaceous medicines healthy and think that herbaceous foods are rich in vitamins and minerals and have less chemical residue. However, consumer in this segment believes that herbaceous medicines are not easy to obtain in the shops. They also think that there is a limited product and also sale store. In compared to indifference and negative segments, positive segment gives highest importance to all of the values, nevertheless. The consumers in this segment differentiated from other segments by the importance that they attach to the values of "sense of accomplishment" and "sense of belonging". This segment has high health orientation in consumption and higher level of perceived value and perceived effectiveness when compared to other segment.

#### *• Indifference Cluster*

This cluster consists of consumers who have indifference attitude toward herbaceous medicines. Similar to the positive segment, respondents of indifference segment also find herbaceous foods healthy and believe that they are rich in minerals. Further more this cluster has higher level of health orientation in consumption. This segment among the three segments is the one which finds herbaceous medicines expensive to purchase. Finally, the consumer in the indifference

cluster gives most importance to health orientation but they find herbaceous medicines least attractive in terms of physical appearance and packaging.

- **Negative Cluster**

This cluster consists of consumer who have negative attitude toward herbaceous medicines. When compared to positive and indifference segments, consumers in the negative segment find herbaceous medicines least hygiene and healthy. This segment does not strongly believe that herbaceous medicines are natural, they believe that today every thing is not herbaceous because of pollution of weather, water, earth and soil. In compare to other segments, the consumer in this segment have low scores for health orientation, perceived value and also perceived effectiveness.

### **Strategies for Each Segment**

- **Strategies for Positive Segment**

Consumer in the positive segment believes that herbaceous medicines are not easy to obtain in stores: so herbaceous food companies should expand their channels of distribution, using major national and local retail chain stores. It appears that there are many opportunities in this market for producers and sellers. Another important issue is the use of values such as "sense of accomplishment" and sense of belonging" in communication message to persuade people to consume in greater amounts in the positive segment. So marketers should highlight the values of sense of belonging and sense of accomplishment in their communication strategies. Interpersonal relations such as sense of belonging could be used in advertising message to increase the herbaceous medicines purchase as well as the amount of purchases. To attract the attention of the consumers in the positive segment, it would be beneficial to associate herbaceous medicines consumption with Perceived effectiveness. Consumer in this segment give high score to VALS points so, Interpersonal communication and increased sense of belonging with an emphasis on the concept of friendship with oneself in advertising messages to increase the frequency of shopping and purchase amount to be used. Measuring the dominant values of a person and the approach to quantity values can be done by using the psychological questionnaire (list of values). This model divided dominant values in two classes. External class with sub scales (sense of belonging, being respected, security, fun and pleasure) and personal value with internal nature with sub classes (self actualization, excitation, achievement and esteem). Identifying consumer dominant values will be effective in identifying life style and consumption patterns. Consumers with internal dimension cares to quality of products, no side effects and avoid additives, while consumer with external dimension conformity with the community and also have a pattern of day consumption and fun in life or pleasure are important for them. The people of this section have a lot of weight to buy and consumption, they try to get herbal medicine, offer their friends to take these products, have a loyalty, then it is important to pay attention to their interest and their emphasis. With the positive promotion they are doing, each one plays a role of marketers for these products. Use loyal customer incentive programs, which have been alternating and loyal purchaser recommended. In identifying the intention to buy and use the following concepts will be useful:

- ✓ Attention to the concept of motivation in avoiding risk (physical and psychological consciousness) can be used to incitement to buying and consuming. Marketing advertising should be consistent with reducing the risk. Concept of consumption herbal medicines equal quality of products, no side effects and avoid additives, the messages for reduction physical risk that are motivation concepts to increase purchase in



consumption intention.

- ✓ making emotional arousal like happiness and health helpful in buying and consumption intent.
- ✓ The concept of sensitivity elasticity can lead to shopping intent. Marketers should know the customer sensitivity elasticity and encourage the customers to buy their products. In the field of herbal medicines client have sensitivity elasticity about accuracy and health, or in a field of beauty and cosmetic have sensitivity elasticity from beauty aspects. People in this segment have a positive attitude so to maintain and approve their attitude considered, people in this section important to co-operations and attention of consultants and physicians based in the pharmacy, and stated that, their advice is an effective factor in making purchasing decisions.

- ***Strategies for Indifference Segment***

Suitable strategy to target the indifference segment, it may be wise to justify that herbaceous medicines do not have a physically attractive appearance because of the additive, preservative and or color free production process. In addition, herbaceous medicines are perceived as very expansive by the indifference segment. Hence, it will be necessary to inform consumers in the indifference segment about the reason such as distinctive production process and other factors that cause high prices. For the target consumers in the indifference segment. It will be beneficial and effective to put emphasis on Perceived effectiveness aspects such as herbaceous medicines is curative and harmless or lateral illness or indisposition arise from medicines consumption is so important, because this segment gives high value to perceived effectiveness. Marketer and producers can apply these vision in design their advertising strategies. interestingly health orientation Index in this segment are in highest level in compare with other segment, so point out aspects of this dimension such as self- conscious about health, avoid using foods with additives and preservatives and generally attentive to the inner feelings about health and so on, seems so important to market penetration in this segment and have a more loyal customer.

- ***Strategies for Negative Segment***

The customers of this segment distrust herbal medicines. Therefore, marketers should provide them with real references i.e. they should introduce people who have used the products before or currently buy them in order to attract the confidence of the customers. In addition, marketing department should collect the feedback of customers or should distribute questionnaires between consumers in order to find that why they distrust herbal medicines. These customers assigned a very low weight to the components of health. They are disinterested in their health status. Consulting along with provide incentives can change their attitude about this products and maintaining their health. It is important to inform the consumers and increase their level of awareness about herbaceous medicines. The attributes of herbaceous medicines should be clearly explained to the consumers in this segment through communication strategies. For this segment certification and labeling can also be important to increase their trust and awareness as well. Therefore, informational promotional campaigns and incentives such as free samples, price reduction and free health consulting may motivate the consumers to try herbaceous medicines in this segment. In briefly, this study indicate that perceived value, health orientation, perceived effectiveness with their aspects such as sense of belonging, sense of accomplishment, sense of health, believe of herbaceous medicines in offensive harmless and curative and so on are construct which guide consumer preference that can be used in promotional campaigns directed



at any of the herbaceous medicines market segment.

## DISCUSSION AND CONCLUSIONS

The result of this study reveals that the herbaceous medicines market can be segmented in to three groups based on their attitude. Hence, the herbaceous medicines market segmented as consumers who have positive, indifference and negative attitudes toward herbaceous medicines. The consumer segment with positive attitude toward herbaceous medicines has higher level of perceived value and perceived in consumption attitude. However, the consumer segment with indifference attitudes has the highest level of health orientation. The literature also provides support for our findings that attitudes toward herbaceous produced medicines were significantly related to perceived health advantages (Horne, 1997; Lerer, 2002; Williams and Heller, 2007; Stremersch, 2008). Our results show that the consumer segment with positive attitudes toward herbaceous medicines has higher level of health orientation attitude as indicated earlier in the literature review section (Robertson, 2005; Brand, Kumar, 2003; Greengrove, 2002; Lerer, 2002). And also our results indicate that there is different between segments in terms of perceived effectiveness.

As previous review confirmed this difference (Horne, 1997; Greengrove, 2002; Lerer, 2002; Williams and Heller, 2007; Stremersch, 2008). Finally, this study also analyzed whether there are differences among the three consumer segments in terms of their purchase and consumption attitude. Results indicate that there are significant differences among this segments almost in every purchased and consumption related statement about herbaceous medicines. Furthermore, it is demonstrated that consumer who hold positive attitude toward herbaceous medicines have the highest levels of current herbaceous food consumption and if the herbaceous medicines that they look for is not available in the closest market they will go to other markets that sell the herbaceous medicines that they are looking for. Many statements about the purchase and consumption of herbaceous medicines exhibit differences among three consumer segments.

### *Suggestions for other researchers*

Study the impact of marketing factors on the attitude and intention of buying these products to help the marketing and producing department to be very important separately. The evaluations of the role of the government and economic policy makers in the development of this industry and the evaluation of the contribution of the development of herbal medicines to the indicators of human resource and economy development are of high importance.

## References

- Ahmadi, parviz, Azar, Adel., & amami, Fardis. (2011). drug market segmentation, business management journal, 2(6),1-20.
- Arvola, L, Chowdhary, S.H., & Mercy, S. (2008). Artificial neural network: a tool for understanding green consumer behavior, Marketing intelligence and planning, 32(5), 552-566.
- Bartles, Deventer., & Vanden Berg, A. (2011). Beliefs about organic products, British Agriculture Journal, 8 (4), 143-151.
- Bloch, P.H, Ridgway, N.M., & Dawson, S. (1994). The shopping mall as consumer habit, Journal of Retailing, 70(1), 23-42.



- Brand, R., & Kumar, P. (2003). Detailing gets personal: Pharmaceutical executive, 23(8), 66-69.
- Chen, J., & Burgers, W, P. (2007). Winning the Vitamin war by building a strong brand, International journal of Pharmaceutical and Health Care Marketing, 1(1), 79-95.
- Chryssohoidis, G.M. (2005). Herbal consumer intension, preference of consumers, 17(8), 238-247.
- Diaz, Nick., & Hoefkens, Carl. (2009). needs based segmentation: principles and practice. International Journal of Market Research, 44(12), 405-422.
- Dopaco, Arminda.M. Finisterra, Dopaco, Mario.Lino. Barata, Raposo Filho., & Walter, Leal. (2009). identifying the green consumer; A Segmentation study, Journal of targeting, 17(1), 37-46.
- Eves, R, Kim, K.j., & Ahn, h. (2004). Attitude toward organic drug among British consumers, Bretish food journal, 10 (3), 209-226.
- Gould, C.L. (1988). consumer perception and attitude in purchase decision making, consumer behavior journal, 6(3), 262-269.
- Grankvist, T.I, Lam, Edvin, H.W, Chan and et al. (2007). Factors affecting the implementation of green specifications in construction, journal of environmental management, 91(12), 654-661.
- Greengrove, K. (2002). Needs- based segmentation: principles and practice. International Journal of Market Research, 44(12), 405-422.
- Hoefkens, C, Camp, J.V., & et al. (2009). The nutritional values of organic food, British Food Journal, 11(10), 1062-1067.
- Horne, Juliec. (1997). A Psychographic segmentation analysis of prescription drug users. Master of Science thesis. Uni of Guelph, Ottawa.
- Hoseyni, yaghoob., & ziayi bideh, Alireza. (2014). green consumer portfolio and market segmentation based on SOM, management research in Iran, 2(17), 26-39.
- Kahle, M.S., Aikenhead A., & Allen, E. (1983). The Theory of planned behavior. *Organized behavior and human decision process*, 50(4), 179-211.
- Kotler, Philips., & Armstrong, k. (2013). Marketing Management, International edition, Upper Saddle River: NY Prentice Hall.
- Kotler, Philips. (1995). Marketing Management, International Edition, Upper Saddle River: NY Prentic Hall.
- Krystallis, Athanassios, Vassallo, Marco, Chryssohoidis, George and Perrea, Toula. (2008). Societal and individualistic drivers as predictors of organic purchasing revealed through a portrait value questionnaire (PVQ)-based inventory, Journal of Consumer Behaviour, 7 (2): 164-187.
- Kumar, pallana. (2003). Detailing gets personal: Pharmaceutical executive, International journal of Consumer behavior, 23(8), 66-69.
- Kwan.yi, Lau. (2012). Consumer behavior towards organic food consumption in HongKong: An



Emperical study project of Bachelor of Business Administration, Hong Kong Baptist University.

Lee, H. (2005). Consumer's beliefs, attitudes and loyalty in purchasing organic foods. *British food journal*, 116(6), 918-930.

Lehrer, Richard. (2002). Pharmaceutical marketing segmentation in the age of Internet, *International of market research*, 2(2), 159-166.

Lendel Kade, Narine, WayneGanpat., & Govind, seeparsad. (2015). Demand for organic produce, *Journal of agribusiness in developing and emerging economies*, 5(1), 76-91.

Magnusson, M.K, Arvoal, A., & et al. (2001). Attitude toward organic medicines among British consumers, *British food journal*, 103(3), 209-226.

Michaelidou, Nicosia. (2008). the role of Health Consciousness, food safety concern and ethical identify on attitudes, *International journal of consumer studies*, 27(6), 163-170.

Mirakzadeh, B., Darnhofer, I., & et al. (2012). Consumer perception of organic food in Bangkok, *food policy*, 33(2), 112-121.

Moorman, Christine., & Matulich, Erika. (1993). A Model of Consumer; Preventive Health Motivation and Health Ability, *Journal of Consumer Research*, 20(2), 208-228.

Paul, S.H., & Rana, J. (2012), consumer attitude and purchase intention for herbal products, *Journal of consumer marketing*, 31(8), 583-589.

Robertson, B. (2005). Ten rules of Product Positioning, *Medical Marketing and Media*, 40(5), 52-56.

Roediger, Manika., & Ulrich, Hamm. (2015). How are organic food prices affecting consumer behavior? *Food Quality and preference Journal*, 43 (9), 10-20.

Rointer, V, Meyer H, Sina, N., & Achim S. (2008). Is there an expectation gap? Consumers expectations towards organic, *Bretish Food Journals*, 117(5), 1527-1546.

Sangkumchaliang, J., & Huaang, C.H. (2012). Perceived effectiveness in consumption, *marketing management journal*, 22(6), 174-189.

Sitiner, K.I., & Nurita, P. (2010). Identification consumer personality based on value and life style dimensions, *journal of marketing research*, 33(4), 93-108.

Stremersch, Stefan. (2008). Health and Marketing: The emergence of a new field of research. *International Journal of Research Marketing*, 25 (8), 223-229.

Williams, Stephenes., & Heller, Monica. (2007). Patient activation among Medicare beneficiaries: Segmentation to Promote informed health care decision making. *International Journal of Pharmaceutical and health care Marketing*, 1(3), 199-213.

Yiridoe, E.K., Bonti-Ankomah, S. (2005). Comparison of consumer perception toward organic versus conventionally product, *Renewable Agriculture Systems*, 20(4), 193-205.

Zakowskabiemans, Sylwia. (2011). polish consumer food choices and beliefs about organic food, *Bretish food Journal* 113(1), 122-137.

Zarrin, M. (2014). Iranian medicines quality, *Information Journal*, 2444: 13-17.



