



Analyzing consumer behavior towards the marketing of medicinal herbs in Iraq

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The research aims to analyze and know the behavior of the Iraqi consumer towards the marketing of medicinal herbs in Iraq. A questionnaire consisting of three axes was used to achieve the objectives of the research. In the first axis, we discussed the personal data of the sample (gender, age, educational attainment, number of family members, income level), while The second axis included questions about analyzing Iraqi consumer behavior towards the marketing of medicinal herbs, and the third axis included a set of questions related to the elements of the marketing mix for medicinal herbs. (71%), which is an acceptable degree, and the data was analyzed using the statistical program SPSS version 22. The research concluded that the Iraqi consumer is forced to buy medicinal herbs instead of medicines because of the high prices of medicines, as their prices are commensurate with the monthly income level of consumers. The research reached a set of recommendations, including the need to consult specialists when consuming medicinal herbs, the need for government control over herbalists' shops who sell medicinal herbs, and intensifying awareness campaigns about the dangers of consuming medicinal herbs and its repercussions on the health and safety of consumers.

Keywords: Consumer behavior, medicinal herbs, marketing mix, popular markets.

INTRODUCTION

The study of consumer behavior towards the consumption of medicinal herbs is among the topics that marketers of these herbs are interested in, whether they are producers or promoters of them, and it can be considered treatment with medicinal herbs or traditional, alternative or folk medicine, all of which mean the consumption of medicinal herbs to treat diseases that people suffer from issues community that has captured the attention of multiple communities.

Medicinal herbs are defined as part of raw plants, and they come in different forms, whether they are leaves, flowers, fruits, seeds, wood, bark, and roots. (Egyptian Standard Specifications, 2013).

The term medicinal plants or herbs, herbal medicine, traditional or folk medicine are all synonymous with the meaning of using medicinal plants in treating some of the symptoms and diseases that people suffer from. There has been a belief among some that everything that is natural is not harmful, or that returning to nature has absolute safety and truth. The thing is that medicinal plants are useful and poisonous. Many plants of medicinal importance that grow wild fall under a group of plants with a dangerous and rapid effect, and they must not be circulated or used except by specialists to avoid cases of poisoning, and they must be circulated under supervision and control. There are many plants whose

varieties or species may be dangerous without the other usually varies according to climatic conditions and soil conditions. Therefore, the circulation and trading of medicinal plants in developed countries is subject to scientific supervision and control by specialists with sufficient knowledge and experience of their types, varieties, geographical sources, and the most appropriate dates for their cultivation, collection, storage, preservation and evaluation methods. (Al-Mawsili, 2013)

As for consumer behavior, it means a set of desires, inclinations, and preferences that have turned into a real, effective demand for a particular good or service. This behavior is affected by several economic, social, psychological, and environmental determinants (Majlakh & Waleed, 2018: 5). It is also the behavior that the consumer performs when he searches, buys, and uses it. He evaluates the goods and services that he expects to satisfy his needs after consuming them. (Al-Majni and Ammar, 2020). (Al-Heali, 2022)

In line with modern marketing trends, it no longer makes sense to look at individuals in one way. Marketers today deal with segments with different preferences, needs and tastes. It is necessary for the marketer to understand these preferences and monitor changes in the tendencies of current and potential consumers within the target segments.

Among the factors influencing consumer behavior

are (Kotler, et al. 2005:231): (Al-Heali, 2021: 884)

- a. Cultural factors, which include culture, subcultures, and social classes.
- b. Social factors, including consumer groups, family, status, and social roles.
- c. Personal factors include age, occupation, economic status, lifestyle, personality, and self-concept.
- d. psychological factors, including motivation, perception, learning, and attitudes.

Because of the factors mentioned above, consumers' interest in consuming medicinal herbs increased, especially during the first decades of the twenty-first century, so that it became natural to go to shops selling medicinal herbs to obtain treatment for the various diseases they suffer from (Hussain et al. 2009).

Marketing: It means the work carried out by the producer in terms of integrated marketing activities of producing the commodity (products or services), pricing, distributing and promoting it, with the aim of satisfying current or future consumer demand (Soleimani, 2007). The marketing mix includes four elements: product, price, distribution and promotion, and is defined as the set of elements that the product adopts and through which it can influence consumers' reactions to a product. (Abu Alaqah, 2003).

MATERIALS AND METHODS

The importance of medicinal herbs has been strengthened within most societies at the present time, based on the opinion that these herbs are natural plants, and therefore consuming them, if it does not work, then it does not harm. We tried to discuss the issue of consumption of these herbs by the elements of the marketing mix (product, price, promotion and distribution). consumers towards consuming those herbs (as a dependent variable).

Research problem

The research stems from a problem that states to what extent consumer behavior in Iraq is affected by the marketing mix of medicinal herbs.

research importance

Addition of knowledge to the library on the topic of medicinal herbs, especially since this topic has captured the interest of all societies. Providing a cognitive study to show the relationship between the elements of the marketing mix and consumer behavior, providing recommendations to community members that can guide them in the process of consuming this type of herb.

research aims

- a. Conceptual introductory presentation on the topic of consumer behavior.
- B. Analysis of the consumption behavior of medicinal herbs and demographic variables of the research sample.

Table 1: Distribution of the sample according to personal information

T. Statement of the nature of the relationship between consumer behavior to consume medicinal herbs and the elements of the marketing mix.

w. Achieving a societal benefit for the results and recommendations reached.

research assumes

The elements of the herbal marketing mix have a role in influencing the behavior of the Iraqi consumer.

Research Methodology

A descriptive and analytical approach was used by collecting information on the consumption and marketing of medicinal herbs.

search limits

Human limits: our sample of consumers.

Spatial boundaries: We applied the questionnaire in the city of Baghdad.

Temporal limits: the period between January 1, 2022, and December 31, 2022.

RESULTS

Description of the research sample

The research was applied to a sample of consumers in the city of Baghdad, and the number of respondents was (400) people, whose ages ranged from 26-70 years, with an arithmetic mean of (46.25) years, at a standard deviation SD equal to $10.5 \pm$ years. The questionnaire was distributed to them electronically. The following table shows the characteristics of a sample search It is noted from the data of Table 1 the distribution of the respondents according to the following personal variables:

a. The percentage of females constituted about 70% of the total sample, while the percentage of males was relatively less than 30%. The reason for this may be that females are concerned with shopping.

b. The age group from 36-45 years represented the largest part of the sample, as they constituted about 45% of the sample, and the age group from 26-35 years was relatively the least, at 7% of the total number.

c. The percentage of those with a bachelor's degree constituted about half of the sample, at 48% of the total sample, while the percentage of those with a secondary certificate constituted about 2%, which is relatively the lowest.

d. About 61% of the respondents confirmed that they have an average level of monthly income.

Gender									
Male					Female				
Frequency		%			Frequency		%		
120		30			280		70		
Age									
26-35 Year		36-45 year		46-55 year		56-65 year		66 and above	
Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
28	7	180	45	100	25	64	16	68	17
Mean=46.25,SD= ±10.5 yrs.									
Academic achievement									
PhD.& M		Higher Diploma		BSc.		Diploma		Secondary school	
Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
180	45	116	29	192	48	12	3	8	2
Income level									
Good		Moderate		weak					
Freq.	%	Freq.	%	Freq.	%				
120	30	244	61	12	3				
Number of family									
1-3		4-6		7 and more					
Freq.	%	Freq.	%	Freq.		%			
80	20	256	64	64		16			
Total No.= 400									

search tool

The analysis of consumer behavior towards the marketing of medicinal herbs in Iraq required a survey tool / questionnaire to collect research information, where we divided it into two types of information. Each of them included four questions with a total of 16 questions. It was distributed to 400 Iraqi consumers in the city of Baghdad during the period from January to December 2022. The stability and validity coefficient for the study tool was verified using the Cronbag alpha coefficient, and the reliability and validity ratio was 0.81.

Table 2: coefficient of reliability and validity of consumer behavior according to the questionnaire

Reliability Statistics	the hub
Cronbach's Alpha= %71	consumer's behaviour

1. Measuring consumer awareness towards the consumption of medicinal herbs in Iraq

Table 3 shows the relationship between consumers (the sample studied) and the consumption of the following medicinal herbs:

Table 3: Analysis of consumer behavior towards the consumption of medicinal herbs in Iraq

a. Three-quarters of the surveyed sample of consumers consume medicinal herbs, as they constituted about 72%, compared to 28% who do not consume them.

b. 60% of the sample suffer from chronic diseases (high blood pressure and diabetes), compared to 40% who do not suffer from chronic diseases.

c. With regard to the diseases that required consumers (the research sample) to take medicinal herbs, about half of the research sample consumed them to treat cold diseases, as they constituted about 54% of the total sample, followed by the segment of consumers who consume herbs for thinners and fatteners, as they constituted about 19%, and the least of them were herbs Used to treat headaches.

d. In order to identify the extent of awareness enjoyed by consumers (the research sample) as a result of the wrong use of medicinal herbs, we note that a third of the research sample believe that the wrong consumption of medicinal herbs leads to death, they constituted about 32%, while 68% of them confirmed that they do not believe or know that , by 18% and 50%, respectively.

I consume medicinal herbs											
YES						NO					
Freq.		%				Freq.		%			
248		72				152		28			
One of the family members suffers from chronic diseases											
YES						NO					
Freq.		%				Freq.		%			
240		60				160		40			
The most cases in which herbs are consumed, according to your opinion											
Headaches		vitamins		Fattening and slimming herbs		Cold and flu		Hair and beauty		joints	
Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
12	3	24	6	76	19	216	54	56	14	16	4
Do you believe that fatal cases occur due to the wrong use of medicinal herbs?											
Yes				No				I don't know			
Freq.		%		Freq.		%		Freq.		%	
128		32		72		18		200		50	
Do you believe in the need for government support for drug prices so that the consumer can buy them without resorting to herbs?											
Yes						No					
Freq.		%				Freq.		%			
364		91				36		9			
Total = 400											

This answer indicates a relative absence of a culture of consumption of medicinal herbs, although half of the research sample members have a good level of education, as the percentage of holders of a baccalaureate degree constituted about 48%, which means that there is no relationship between the level of education and the culture of consumption Medicinal herbs, so it is necessary to intensify efforts to raise awareness in this field.

e. With regard to government support for drug prices, about 91% of the respondents stressed the need for government support, and this could be related to the tendency of large numbers of individuals to consume medicinal herbs, due to the high prices of medicines in pharmacies, and their lack of availability in government hospitals, and this could be The answer is consistent with what came in the first question, as about three-quarters of the survey sample confirmed that they consume medicinal herbs when they feel ill, and this is related to the level of income that the sample members receive(Shahwanietal., 2020)

2. Analysis of the elements of the marketing mix for medicinal herbs in Iraq

A. . Analysis of the sample data towards the product variable (one of the elements of the marketing mix).

The data are shown in Table 4 regarding the research sample's answers about the medicinal herbal products variable (as one of the independent variables) and its impact on the consumption of the following medicinal herbs:

Answers to the question: Be sure to provide medicinal herbal products at home if...

There is a category of people covered in the survey, they constituted about 25%, and they confirmed that they strongly agree with that, by 100 individuals, while the percentage of those whose answer was in agreement constituted about 59%, by 236 individuals, and when collecting the outcome of the answers that confirm that they are keen to provide these products,

Table 4 Analysis of the research sample's responses to the variable medicinal herbal products

Strongly Disagree number %		Not agree number %		Neutral number %		Agree number %		Strongly Agree number %		The independent/ variable/product	N0
0	0	8	2	56	14	236	59	100	25	Be sure to provide medicinal herbal products at home.	1
28	7	108	27	76	19	160	40	28	7	Consume medical herbal products without hesitation, because if they do not work, they do not harm.	2
12	3	76	19	60	15	188	47	64	16	Medication with herbal products is a basic alternative to medical medicine.	3
32	8	140	35	56	14	140	35	32	8	Be sure to buy medicinal herbal products from places that have official licenses.	4

we find 84% It is a large percentage, which means that most of the respondents, despite their level of education, find it necessary to provide products at home. We also note that the percentage of neutrals has reached about 14%, which is a large percentage.

The results of the answers of the researched sample regarding the question showed: Consume medical herbal products without hesitation, because if they do not work, then they do not harm you....

About half of the researched sample consumed these herbs, where they strongly agreed about 7%, and only about 40% who agreed. As for the neutral, they constituted 19%, and the percentage of those who strongly disagreed reached about 27%, and those who disagreed about 7%.

The results of the answers of the researched sample regarding the question showed: Medication with medicinal herbal products is a basic alternative to medical medicine that...

16% of the sample strongly agree, while the percentage of those who answered in agreement constituted about 47%. Consuming herbs does not need to see a doctor and pay examination fees, but the person goes to herbalists to ask for the herbs he wants to consume.

The results of the answers of the sample surveyed regarding the question: Make sure to buy medicinal herbal products from places that have official licenses if...

43% of the research sample are keen to buy these products from places that hold official licenses, as their answers were strongly agreed, agreed by about 8%, and agreed by 35%, respectively. These answers, of course, indicate a positive point.

14% of the sample had a neutral answer, as they are not interested in the place of selling medicinal herbs, whether it is licensed or not, and this is a clear indication of the need to intensify efforts to demonstrate the importance of providing health conditions for the places where these products are sold.

43% of the sample answered strongly disagree and disagree, as they constituted 35% and 8% respectively, and this is a real problem, as we believe, as it is necessary for the individual to know the place where these products are sold, their suitability for human use, methods of storage, and so on. Conditions must be met.

B. Analysis of the sample data regarding the price variable (one of the elements of the marketing mix).

The data presented in Table 5 regarding the answers of the researched sample to the questions of the price variable (as one of the elements of the marketing mix) and its impact on the consumption of medicinal herbs show the following results:

Answers to the question: The prices of medicinal herbs are commensurate with the level of income that I get...

The largest percentage of the sample answered strongly agreeing and agreeing, as it reached 39% and 35%, respectively, while the percentage of neutrals constituted about 14%, while those who disagreed formed about 9% of the sample, while those who strongly disagreed formed about 3%, these results indicate that prices Medicinal herbs and their suitability with the income of consumers is the reason why people tend to buy them for the purpose of consumption.

Answers to the question: Some consumers are forced to buy medicinal herbs instead of medicines because of the high prices of medicines that...

The highest percentage had answers between strongly agreeing and agreeing, as they constituted about 44% and 38%, respectively. This is a confirmation of the sample's answers to the first question, which means that the high prices of medicines is the main reason why consumers tend to buy medicinal herbs, because they do not need a prescription from a specialized doctor. And also, the ease of obtaining it from a variety of places, and the percentage of neutrals constituted about 18%.

Table 5: Analysis of the research sample's responses to the price variable

Strongly Disagree Number %	Not agree Number %	Neutral Number %	Agree Number %	Strongly Agree number %	The independent variable/price	No
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12	3	36	9	56	14	140	35	156	39	The prices of medicinal herbs are commensurate with the level of income that I get.	1
0	0	0	0	72	18	152	38	176	44	Some consumers are forced to buy medicinal herbs instead of medicines because of the high prices of medicines.	2
0	0	19	5	72	18	104	26	205	51	The prices of medicinal herbs vary according to the places where they are sold (shops with or without official licenses and popular markets).	3
0	0	12	3	112	28	92	23	184	46	Buy medicinal herbs from popular markets for their cheapness.	4

Answers to the question: The prices of medicinal herbs vary according to the places where they are sold (shops with or without official licenses, and popular markets).

About 51% strongly agreed with that, while the approval rate was about 26%, and these are, as we can see, high percentages, which indicates the lack of government control over the sale of medicinal herbs, in addition to the consumer's lack of interest in obtaining them from officially licensed places because he believes in the principle that medicinal herbs if it did not work, it does not harm, which requires more measures that concern consumers with this issue.

Answers to the question: I buy medicinal herbs from popular markets because they are cheap.

46% and 23% were strongly agreeing and agreeing, respectively, about their purchase of medicinal herbs, and that, as we notice, is a large percentage (about three quarters of the sample) amounting to about 69% of the survey sample, and the remaining percentages were distributed between neutral, as they constituted about 28% and 3% were not in agreement.

These answers clearly indicate the impact of the big price factor on consumers' attitudes towards the acquisition of medicinal herbs.

Analyzing the sample data towards the distribution variable (one of the elements of the marketing mix).

The data of Table 6 regarding the answers of the researched sample about the questions of the distribution variable (as one of the elements of the marketing mix) and its impact on consumers' tendency to acquire medicinal herbs for the purpose of consuming them, show the following results:

Answers to the question: Get medicinal herbs from the apothecary easily and without the need for a medical prescription from a specialist...

Most of the research sample confirmed that they get medicinal herbs from apothecaries, as the category whose answer was in strong agreement constituted about 73%, while the percentage of those who answered in agreement was about 22%, and that, as is evident, is a high

percentage, meaning that the majority of the sample, by 95%, get herbs Without a prescription and easily, while the answer was about 3% neutral, and the percentage of those who did not agree was about 2%.

Answers to the question: There is no governmental control over the herbalists' shops who sell medicinal herbs.

96% of the sample surveyed agreed that there is no real government control over herbalists' shops who sell medicinal herbs to consumers, with 91% strongly agreeing and 5% agreeing, which means that there is no oversight over herbalists' shops, but despite consumers' knowledge of that, they consume medicinal herbs as evident One of the previous questions is due to the fact that herbs are characterized by low prices, in contrast to the large increase in the prices of medicines. While the percentage of neutral respondents to this question was about 4%.

Answers to the question: I do not care about the place from which I buy medicinal herbs, whether he holds a license to do so or not, because...

44% of the sample strongly agreed, while the percentage of those who agreed was about 46%, and these are very high percentages, as the lack of interest of consumers in the place from which they acquire herbs is evidence of their lack of awareness of the great dangers that could befall them as a result of consuming herbs without providing appropriate conditions for their storage.

Answers to the question: Buy medicinal herbs with a prescription if...

The majority of the researched sample owns and consumes medicinal herbs without a prescription, as the percentage of those who strongly disagreed was about 43%, while the percentage of those who agreed was about 49%, which confirms the consumers' lack of interest in this aspect.

Table 6: Analysis of the answers of the researched sample for the distribution variable

Strongly Disagree	Not agree	Neutral	Agree	Strongly Agree	The independent/ variable/distribution	No
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Number	%	Number	%	Number	%	Number	%	Number	%		
0	0	7	2	15	3	88	22	290	73	Get medicinal herbs from Al Attarin easily and without a prescription from a specialist.	1
0	0	0	0	11	4	23	5	366	91	.There is no government control over the herbalists' shops who sell medicinal herbs	2
8	3	5	1	25	6	185	46	177	44	I don't care where I buy medicinal herbs from, whether they have a license or not.	3
173	43	196	49	0	0	16	4	15	4	Buy medicinal herbs with a prescription.	4

D. Analysis of the sample data towards the promotion variable (one of the elements of the marketing mix).

The data of Table 7 regarding the answers of the researched sample about the promotion variable (one of the elements of the marketing mix) and its impact on consumer orientation towards the consumption of medicinal herbs shows the following:

Answers to the question: The method of packaging and packaging of medicinal herbs and the information written on the method of use affect my possession of medicinal herbs for consumption if...

Half of the research sample had a neutral answer, which constituted about 47%, while the percentage of those who strongly agreed was about 20% and 17% for those who agreed. As for the non-agreeers, they constituted about 16%, with 12% not agreeing and 4% strongly agreeing, which means that the consumer does not care about the packaging method. And information about the use of medicinal herbs, which confirms that the consumer is not aware of the importance of providing information on the packaging when consuming those herbs, so it is necessary to raise awareness of this issue.

Answers to the question: The way medicinal herbs are presented makes me consume them without thinking that...

47% of the sample answered neutrally, while the percentage of those who strongly agreed and agreed

constituted about 20% and 17%, respectively, while those who disagreed constituted about 12% and did not agree with about 4%.

Answers to the question: I am affected by advertisements for medicinal herbs on social media and I acquire them for the purpose of consumption, if...

64% of the sample are affected, as their answer was strongly agree, and 28% answered agree. This indicates, of course, that social networking sites have a role in promoting medicinal herbs, and encouraging the consumer to acquire them, although about half of the sample are holders of a bachelor's degree, and this clearly indicates that The need to intensify government efforts to educate consumers about the dangers of using medicinal herbs without a specialist prescription or purchasing them from places that do not have official approvals. In contrast, about 7% of the sample answered neutrally, and 1% did not agree.

Answers to the question: I am influenced by the advice of relatives and friends regarding the consumption of medicinal herbs, that...

87% of the sample strongly agree, while the category of agreeers constituted about 13% of the total sample, which means that there is a lack of a culture of consuming medicinal herbs among the sample studied, which calls for intensifying efforts in this field to achieve more awareness about the dangers of consuming them without medical advice.

Table 7: Analysis of the responses of the researched sample for the promotion variable

Strongly Disagree		Not agree		Neutral		Agree		Strongly Agree		The independent/ variable/promotion	No
Number	%	Number	%	Number	%	Number	%	Number	%		
17	4	47	12	187	47	67	17	82	20	The method of packaging and packaging of medicinal herbs and the information written on the method of use affects my acquisition of medicinal herbs for consumption.	1
7	2	30	7	205	51	83	21	75	19	The way medicinal herbs are presented makes me consume them without thinking	2
0	0	3	1	30	7	112	28	255	64	I am influenced by advertisements for medicinal herbs on social media and I buy them for consumption.	3
0	0	0	0	0	0	52	13	348	87	I am influenced by the advice of relatives and friends regarding my consumption of medicinal herbs.	4

In Iraq, a license to practice selling medicinal herbs in private herbariums is granted by the National Center for Herbal Medicine affiliated to the Ministry of Health / Department of Technical Affairs, in accordance with the instructions and legislation for selling medicinal herbs

DISCUSSION

published in the official Iraqi Gazette, which requires participation in a course organized by the center for a period of 9 months to grant the license. In practicing the profession. The person shall have a secondary education as a minimum, and the holder of the license shall be present exclusively for the disposal of herbs. And that the Ministry is renewing licenses for the sale of medical herbs by participating in at least one developmental course during the year and passing its exam. If the license is renewed for a period of two years, the license will be considered canceled (Al-Aboudi, 2022).

CONCLUSION

1-The Iraqi consumer has a health awareness towards the consumption of medicinal herbs, but he consumes some herbs to treat some disease symptoms without consulting a doctor.

2- The Iraqi consumer is interested in the presence of data on the outer cover of the medicinal herbs box (such as the name of the company, its address, the country of origin, and storage conditions).

3- Some consumers are forced to buy medicinal herbs instead of medicines because of the high prices of medicines and the commensurate prices of medicinal herbs with the level of monthly income that the consumer gets and buys medicinal herbs from apothecaries.

4-The advertisements of medicinal herbs through social networking sites and the influence of acquaintances and friends have a role in the acquisition and consumption of medicinal herbs

Recommendations

1- The need to consult specialists when consuming medicinal herbs by consumers.

2- The need for governmental control over herbalist shops that sell medicinal herbs.

3- Taking care of the place that sells medicinal herbs in terms of obtaining a license to sell medicinal herbs or not.

4. Not to be affected by advertisements for medicinal herbs on social networking sites, and not to be affected by acquaintances and friends when consuming medicinal herbs.

CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

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AUTHOR CONTRIBUTIONS

W.A.H, A.N.A and H.H.K were responsible in the design of the research. W.A.H contributed to the data collection for this research and wrote the first draft of the manuscript. A.N.A and H.H.K contributed by writing a theoretical framework for the research and to submit questionnaire to the research sample and obtaining respondents answers, also W.A.H, A.N.A and H.H.K reviewed manuscript. All authors read and approved the final version.

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