The Economic Impact of Marketing Campaigns on the Lebanese Consumer: Implications for the Pharmaceutical Industry

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Abstract

Pharmaceutical companies in Lebanon are implementing marketing activities for their "Over The Counter" (OTC) pharmaceutical products in the pharmacy channel, within promotional regulations posed by the Lebanese Ministry of Health. These activities are intended to have an influence on consumers' behavior towards OTC products, and to increase sales volume.

This paper highlights the behavior of the Lebanese consumers towards marketing activities inside the pharmacy, and attempts to evaluate the effectiveness of marketing efforts associated with Pharmaceutical products. It also reflects the in-pharmacy marketing trends carried out today to affect consumer's perception, beliefs, attitudes and buying decisions, by utilizing merchandising and promotional techniques followed in retail stores.

The pharmacy channel is the only legal place to find, purchase and promote over the counter pharmaceutical products that are available to all consumers in Lebanon.

The effect of promotion on consumers' behavior is a key determinant for the success of promotional campaigns at pharmacies; promotional specifications include the product promotional displays and location of the product, the pharmacist recommendation,

price, word of mouth and emotional attachment to the product. This combination of promotional elements will allow the development of new marketing strategies that can best achieve planned objectives.

The study of consumer behavior depends on quantitative research tools, mainly regression analysis; utilized to affect consumer choice. The results indicated that 74.7 % of the respondents have noticed OTC products promotion inside the pharmacy. Moreover, OTC product posters at the entrance or inside the pharmacy were the most attention grabbing for 55.45% of the consumers.

The results also showed that 70.43% of the consumers will include an OTC medicine in their Top Of Mind (TOM) choices when comprehending the message of the related poster.

Keywords: Marketing campaigns, Lebanese consumers, pharmaceutical industry, Over the Counter (OTC), economic impact

JEL Classification: M1; M2; M3, C1, C5

1. Introduction
Marketing practices worldwide have been subject to many changes in their strategies and visions, mainly due to the fast pace of change related to consumer behavior and preferences.

Nowadays consumers are pickier, more demanding and more knowledgeable about the products that they want; how they want it, when they want it, and why they want it.

Marketers and marketing strategies are becoming more consumer centric, taking into consideration, the needs, wants, perceptions, and expectations of consumers, and by working on many factors that stimulate the curiosity of the consumer and push him/her closer to the buying decision.

Theoretical and empirical evidence from marketing and psychology, aid in developing models for consumer behavior, buying behavior, attitudes and perceptions towards products and services.

Amid all the stimuli directed at the consumer, along with the advancement in technology and ease of access to information, the consumer is now more aware about products that can influence his/her health status, the products that are labeled as "Over The Counter" products(OTC) which can be bought directly by the consumer without any medical prescription. This research seeks to explore the impact of OTC marketing campaigns utilized by pharmacies in Lebanon on consumer buying behavior. Pharmacy OTC trade promotion and the pharmacists' role were considered as key determinants for the consumer buying behavior.

2. Overview
The pharmaceutical market is considered to be the essential part of the global healthcare system, and global OTC medications are growing year after year, outpacing prescription medicines' growth that is influenced by patent expiry dates. With a 5.6 % growth in their OTC medications in 2013, global pharmaceutical companies are shifting their OTC strategy from being "Pharmaceuticals for the consumer" to "Consumer products about health and wellness" thus focusing more on the sufferer and being more consumer oriented (Slideshare,2013).

The United States is considered to be the leader in pharmaceutical products spending; emerging markets are playing key roles in driving the global OTC products' growth. Latin America and China are considered to be the leading regions driving such growth, and the Middle East and Europe regions are also contributing positively to the global growth.

In Europe, consumers have shown confidence in non-pharmacy channels when purchasing an OTC product, and this was reflected by the non-pharmacy channels' growth, with the pharmacy channel still holding the biggest share of OTC purchases. Pharmaceutical companies are now moving

towards building strong brand identity inside the stores and defining the role of each brand within each category, by utilizing shopper marketing and trade marketing activities to enhance their competitive advantage (Tisman 2013; Bond, 2008).

Consumers in the Middle East do not have the same awareness, perception or behavior of their peers in Europe. In Lebanon, consumers have limited knowledge about OTC medication, and their perception and behavior comes from limited information available to the public, their exposure to certain promotional materials inside the pharmacy and the guidance of their health care professionals.

Lebanon is considered a controlled pharmaceutical market, were pharmaceutical promotion is regulated by the Lebanese Ministry Of Health (MOH). Laws and regulations control medical promotion, and prohibit direct advertising to the public. Any promotional activity or materials, including those related to OTC products need to have an approval from the MOH prior to their utilization in the market, yet enforcement of the law is weak.

Many marketing activities, related to OTC products, which target directly consumers, are being implemented today in Lebanese pharmacies despite the MOH regulations which control pharmaceutical promotion in the market. These activities try to influence consumers' decision making process and their perception by acquiring merchandising and promotional techniques used in retail stores. The OTC market in Lebanon is growing, and more companies are implementing in-pharmacy promotional activities that are influencing consumer and patient behavior.

3. Need for the Study

Marketers in the pharmaceutical industry in Lebanon, and more specifically in the OTC market are continuously seeking new ways to promote their pharmaceutical products and to reach consumers within the pharmaceutical regulatory boundaries and laws that limits sometimes their choices.

Marketers are investing in OTC marketing activities in pharmacies with expectations to influence consumers' perception, increase product visibility, awareness, and sales. Furthermore, OTC promotional activities in pharmacies increase consumer offtake for the promoted products and changes consumers' perception.

This paper will explore the correlation between regulated OTC promotion in pharmacies and consumer perception to sort out the likely impact on consumer consumption.

4. Problem Definition

Although marketing activities for OTC products in pharmacies in Lebanon are being implemented with an increased rate, and the importance of these activities is also increasing, there are no specific data quantifying their effect in the Lebanese pharmacies on consumer buying behavior.

Rishi (2013) contends that understanding a consumer/patient behavior is very important in designing an effective and efficient marketing campaign.in addition; researchers need to understand how patients react to certain types of marketing materials, and the context of these materials in influencing the consumer response.

5. Purpose of the Study
5.1: Research Hypotheses

The following hypotheses will be tested to indicate the impact of marketing campaigns on consumer behavior when considering OTC products:

H1:   Consumers will buy impulsively an OTC product, after being exposed to a marketing campaign inside the pharmacy.

H2:   Specific OTC brands having pharmacy displays will affect consumer purchasing behavior.

H3: Specific OTC brands promoted are in majority bought for a future use and not for a current use.

H4: The benefits of the OTC product will influence the consumer emotional attachment to it and its buying decision.

H5: Consumer's OTC purchases due to Word Of Mouth (WOM) promotion will affect their emotional attachment to the product.

H6: WOM product promotion will lead consumers in pharmacies to a purchase decision.

H7: Pharmacy OTC promotion along with the pharmacist recommendation creates a synergy for the buying decision.

6. Previous Research

According to Thomas (1995), what will matter in marketing in the future, will be the ability of companies to detect consumer buying and purchasing behavior at the moment of purchase and during consumption.

The availability of OTC medication has expanded rapidly. More than 700 OTC products that are available today were previously rated as prescription medicines.

The FDA is seeking ways for making some medications that treat common and mild conditions, available to consumers; the consumer will have a better control on his /her health and will benefit more (Sapienza, Toldra, and Zingales, 2007).

When people get mild ailments, they tend to choose between three different options to go with. They can choose to do nothing, this is when their ailment won't interfere with their daily activities, or they can choose to self-treat themselves, with an OTC product, or with herbal remedies, or they can go and seek professional help.

Consumer Behavior is influenced by many factors, some of them are social, and others are personal. Within the social environment, there is the main-stream culture, this is when Americans are more likely to have egg and ham for breakfast rather than rice which is more dominant in the Asian countries, and there is also a subculture, like the rap music that appeals to a segment in a population that seeks to distinguish itself; so cultural and social influences have a big role in defining consumer's purchases.

In addition to that, the physical state also affects consumer purchasing pattern, for example, food manufacturers are more likely to advertise on their products in the afternoon when consumers are hungry. The consumer self-image will also influence what he or she will buy, if the consumer is a manager, he /she is more likely to buy a glamorous car that show him/her in that position.

Learning is also an important factor, since it builds up the consumer's experience related to a certain product, and determines the probability of next time purchasing depending on the experience gained (Perner, 2014).

When it comes to factors influencing an OTC medication purchase, Americans are influenced by a variety of factors including advertisement, the severity of sickness, the safety of the OTC drug, and the relief from symptoms, along with a very important factor which is the economic factor (Kohli & Buller, 2013).

According to Parikh, Sattigeri, Kumar and Brahmbhatt (2013), Indian pharmacists and doctors play a very important role in educating patients about OTC medications, and self-medication by Indian consumers is dependent on four main factors which are, availability of drugs across the counter without a prescription, uncontrolled medical advertising, low medical literacy rate, and a compulsive need to reduce health care costs.

Mobach (2007) contends that customers waiting for service in a pharmacy are typically having a negative consumer experience that can cause impatience, frustration and annoyance. Customers will usually overestimate their waiting time, which will lead to a low service evaluation.

Bhatia (2012) stated that there are 5 key factors that influence consumers for using over the counter medications that are:

- The consumers' time and money, since consumers are tending now a days to lower the cost of their treatment by not going to a doctor, and purchasing directly a non-prescription medicine from a drugstore to save time.
- The pharmacist and his important role in giving a correct advice to the consumers in mild ailments such as cold and flu, aches, muscle strains. Sometimes a pharmacists in considered as a doctor is small towns.
- Self-medication is growing more and more between people and consumers are having an increased belief that they can treat mild cases by their own without going to a doctor.
- Increased awareness between consumers that some medications should be available in-house at all times, such as pain killers, cough syrups.
- Consumers' Lifestyle is changing; this is leading to a number of urban diseases that require herbal remedies that might be the best solution. Healthcare products are now being now classified as consumer care products.

Companies are also trying to influence consumer's buying behavior by promoting OTC medicines as Fast Moving Consumer Goods (FMCG)products, they are creating an emotional link and positive brand associations with consumers, building brand loyalty and increasing awareness to break through the clutter in the market (ibid).

Dr. Day revealed in her studies at the Duke University Medical Cognition Laboratory, that people overestimate what they think they know versus what they know in reality, in terms of medical information. Her studies were cast in a context of comparing cognition and metacognition; cognition is related to the processes of perception, attention, memory, problem solving, comprehension and decision making, while metacognition is experiencing the cognition. Also she suggested doing more research on how cognition declines in older adults which affect the use of OTC medication (Consumer Health products Association, 2013).

In the United States, Americans spend around 20 billion dollars a year on OTC medications, with limited research details conducted on consumers' purchasing patterns of OTC drugs (Kolhi & Buller, 2013).

In a related study based on 5,000 American consumers to shed light on purchasing behavior for prescription and non-prescription medications, Fahey (1996) contends that 45% of consumers do not ask for any professional help when it comes to non-prescription drugs, and when they do ask, they ask the pharmacists more often than physicians.

7. Lebanese Consumer/Patient

According to Karam (2005), the Lebanese consumer or patient prefers very well-known pharmaceutical trademarks in the Lebanese market, since he/she has low confidence in the Local manufactured generic drugs, and also has low trust in the local authorities' measures to control the quality of the local generic medicines, and this is why the generic local medicines are not preferred.

Lebanese consumers have limited knowledge about medicines; this is why they mainly rely on guidance, protection, authorization, and advice from their physicians (UNDP, 2000).

The Lebanese consumers are very interested in learning about the quality of the medicines that they consume, however information destined specifically to them or to the general public is not always available, so the consumer takes distrustful attitudes towards the medicinal products that he/she consumes and relies only on the available information he/she has, from physicians, pharmacists and his/her surroundings consequently with higher prices (ibid).

Pharmaceutical companies target Lebanese consumers according to their place in three categories: high income consumers, middle income, and low income consumers. Although that the prices of medicines in Lebanon are already set by the MOH according to a set of procedures, the distributors of medicinal products have some flexibility in terms of having discounts on the products from the supplier at the country of origin, or through other cost maintaining methods (ibid).

Lebanese consumers rely primarily on themselves when faced with a common healthcare problem, and they resort to a doctor when the healthcare problem is serious or it needs a special treatment. They use a variety of OTC products, viewing them as generally safe, knowing that they are not completely risk free. Some Lebanese consumers confessed using an OTC product more than the recommended dose.

Lebanese consumers also rely on their pharmacist's recommendation and on the labeling of the product, when using and choosing an OTC drug. The pharmacist plays an important role in guiding Lebanese consumers on what medication they select and how to use it; they also provide consumers with general and specific information about the medication. The important role that the pharmacist plays and the weight of his recommendation can lead to changing the Lebanese consumer's decision in buying a certain product. More than 50 % of consumers stated that they started using an OTC medication based on the recommendation of the pharmacist. The relationship between the consumer and the pharmacist can extend to having a "personal" pharmacist, same as consumers have a "family" physician (ibid).

8: Research Methods
This paper has used quantitative research technique in order to reflect the true reality of OTC marketing.

8.1: Quantitative Research

Quantitative research is much more concerned with the use of numerical data and it is based on using mathematically based methods, in particular, statistics to analyze the data (Hejase & Hejase, 2012).

8.2: Sampling Technique.
The sampling technique used in this research is a non-probabilistic stratified sampling technique, while randomly choosing the stratum which is consumers who have entered pharmacies in order to buy a certain pharmacy item or medication, and they were given the questionnaire to fill.

Ninety pharmacies in Lebanon were chosen in order for the researchers to sample three consumers in each pharmacy to fill the questionnaire. The pharmacies were distributed in 6 different states in Lebanon: 16 pharmacies in Beirut, 16 pharmacies in Mount Lebanon (including Beirut Southern Suburb), 13 pharmacies in Metn and Keserwen, 15 pharmacies in South, 15 pharmacies in North, and 15 pharmacies in Beqaa.

Questionnaires were distributed to two hundred and seventy people inside 90 pharmacies, in order to gather as much as information as possible .Out of these 270 questionnaires, only 253 questionnaires were valid representing a percentage of 93% response rate. The Research questions of the study will explore many key aspects related to consumer behavior in pharmacies and the effect of OTC promotion on consumer's behavior. The following Interview questions included in the questionnaire:

1. What is your title, the company you work for and your relation with consumer behavior towards nonprescription OTC promotion at pharmacies?
2. Do you believe that the consumer/patient in Lebanon, is well informed and knowledgeable of "nonprescription OTC medication", if yes, what do you think are his main sources of information?
3. What do you think that triggers consumer purchasing decision for an OTC medicine inside the pharmacy?
4. Please describe how are you able to promote non-prescription OTC medication, in a controlled pharmaceutical market such as Lebanon, with a fixed medicine price and regulations that limits OTC products promotion.

5. Do you believe that promoting non-prescription OTC medications will influence consumer's perception by labeling them as medications?
6. Do you believe that OTC products Point Of Sale Material (POSM), placed in Lebanese pharmacies will increase consumer consumption for these products?
7. What elements or promotional factors are implemented in order to attract consumer's attention for OTC products? And what element has proven to be the most effective one?
8. Given the presence of many OTC trade promotions in pharmacies, how do you distinguish your product from the competition?
9. How would you compare between consumer behavior in retail stores for FMCG products, and consumer behavior in pharmacies for OTC products?
10. Do you agree that promoting non-prescription OTC medicine in pharmacies would increase consumer's emotional connection to the specific OTC brand?
11. How do you assess the perception of consumers towards OTC medicines?
12. How do you assess a success of an implemented OTC promotional campaign, in terms of consumer satisfaction?
13. Do you take into consideration consumer's expectations when planning for an OTC promotional campaign?
14. Do you think consumers in a pharmacy have an impulse purchasing behavior for popular OTC medication?
15. When it comes to OTC medication, do you think that word of mouth can have a stronger effect on consumer's behavior than in pharmacy promotion?
16. How important, in your opinion, is the role of the pharmacist in Lebanon in recommending a non-prescription OTC medicine, and do you believe that he can switch the consumer buying decision from a well-known popular OTC medication to another substitute?
17. What do you think would be the future of non-prescription OTC medication in Lebanon?

9. Results and Findings
9.1: Regression Analysis

Regression analysis is a statistical instrument for the investigation of relationships between variables. The investigators seek in general, to ascertain the causal effect of one variable upon another. To explore such issues, the investigators gather data on the underlying variables of interest and uses regression to estimate the quantitative effect of the causal variables upon the variable that they influence (Sykes, 1993).

The researchers are interested in measuring the effect of OTC promotion in pharmacies on consumer buying decision and behavior. Seven hypotheses were formulated, and will be tested. Stepwise regression was used to calculate the effect of each hypothesis on the dependent variable (The seven hypotheses are stated above).

It is important to mention that in order to test the seven hypotheses, the authors had to consider a second regression line, since during the analysis of the first regression line with its dependent variable, not all of the models considered related to that regression line. The first regression line would be utilized to test hypotheses one, two, three, six and seven, taking "Promotional purchase" as an independent variable, and the second regression line utilized for hypotheses four and five, taking "Emotional attachment" as an independent variable.

9.2: First Regression Analysis:

Table 1: First Regression Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Consumers influenced by word of mouth promotion of OTC medication	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Consumers consideration of an OTC product as a TOM choice for a future need	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	Consumers will buy OTC products having a stand or shelf design	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	Consumers always purchase the recommended OTC product by the pharmacist	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
5	Consumers popular OTC product impulse buying	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
a. Dependent Variable: Consumers will buy a popular OTC product after seeing its promotion inside the pharmacy			

Table 1, Shows the five independent variables comprising the regression line that was extracted based on the stepwise method. All questions in the questionnaire were included and inserted in the technique of regression analysis, and only the above five independent variables appeared, while the rest of the questions were removed, noting that the dependent variable is "Consumers will buy a popular OTC product after seeing its promotion inside the pharmacy".

Table 2: First Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.409[a]	.168	.162	.83454	.168	28.978	1	144	.000
2	.508[b]	.258	.247	.79071	.090	17.409	1	143	.000
3	.569[c]	.324	.310	.75738	.066	13.860	1	142	.000
4	.609[d]	.371	.353	.73312	.047	10.555	1	141	.001
5	**.627[e]**	**.393**	**.372**	**.72243**	**.023**	**5.204**	**1**	**140**	**.024**

a. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication

b. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Consumers consideration of an OTC product as a TOM choice for a future need

c. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Consumers consideration of an OTC product as a TOM choice for a future need , Consumers will buy OTC products having a stand or shelf design

d. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Consumers consideration of an OTC product as a TOM choice for a future need , Consumers will buy OTC products having a stand or shelf design, Consumers always purchase the recommended OTC product by the pharmacist

e. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Consumers consideration of an OTC product as a TOM choice for a future need , Consumers will buy OTC products having a stand or shelf design, Consumers always purchase the recommended OTC product by the pharmacist, Consumers popular OTC product impulse buying

Table 2, shows the model summary of the regression line. As each independent variable is being added to the table according to their sequence in Table 2, a change in every measurement is noticed, with an improvement in correlation coefficient and coefficient of determination, while staying under the level of significance of 5 %, that reached a maximum of α=.024, so there is statistical significance between the 5 variables within 95% certainty.

As for Pearson's R correlation, which is used to measure if there's a relationship between the dependent variable and the independent variables, the results showed a Pearson correlation equal to

Pearson's R = 0.627, so there's a strong positive correlation between the considered variables. However, as the independent variables increase, the increase is also expected in the dependent variable.

The coefficient of determination (R^2) was also calculated, $R^2 = 0.393$, showing that 39.3 % of the variation in percentage of OTC products promotional purchasing is attributed to the variations of the 5 independent variables.

R square adjusted is also calculated in Table 2, since R square is sensitive to a large sample size, and the bigger the sample size, the higher R square becomes. Adjusted R square gives the standard coefficient and takes into account the sample size. Adjusted R square is equal to 0.372, which shows a decrease of 2.1 % of R square.

It is important to mention here that it is hard to measure consumer behavior, attitudes and expectations, also in a qualitative manner the measurements are challenging, but relying on a good level of significance, the authors intend to set important conclusions.

Table 3: First Regression ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.182	1	20.182	28.978	.000[b]
	Residual	100.291	144	.696		
	Total	120.473	145			
2	Regression	31.067	2	15.533	24.845	.000[c]
	Residual	89.406	143	.625		
	Total	120.473	145			
3	Regression	39.017	3	13.006	22.673	.000[d]
	Residual	81.455	142	.574		
	Total	120.473	145			
4	Regression	44.690	4	11.172	20.787	.000[e]
	Residual	75.783	141	.537		
	Total	120.473	145			
5	Regression	47.406	5	9.481	18.166	.000[f]
	Residual	73.067	140	.522		
	Total	120.473	145			

a. Dependent Variable: Consumers will buy a popular OTC product after seeing its promotion inside the pharmacy
b. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication
c. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Consumers consideration of an OTC product as a TOM choice for a future need
d. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Consumers consideration of an OTC product as a TOM choice for a future need , Consumers will buy OTC products having a stand or shelf design
e. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Consumers consideration of an OTC product as a TOM choice for a future need , Consumers will buy OTC products having a stand or shelf design, Consumers always purchase the recommended OTC product by the pharmacist
f. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Consumers consideration of an OTC product as a TOM choice for a future need , Consumers will buy OTC products having a stand or shelf design, Consumers always purchase the recommended OTC product by the pharmacist, Consumers popular OTC product impulse buying

Table 3, shows the analysis of variance for the five models. The regression row measures the amount of variation in the dependent variable that is explained by the variation in the independent variable; while the residual row measures the amount of variation that isn't measured by the regression line, and the total is the summation of the variation in the dependent variable attributed to both the explained and the unexplained parts (Hejase & Hejase, 2013). The five models show a high F-test result accompanied with a zero level of significance; so the regression lines in the five models in the table above explain the variations and are not due to a random chance.

Table 4: First Regression Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.431	.208		11.689	.000
	Consumers influenced by word of mouth promotion of OTC medication	.309	.057	**.409**	5.383	**.000**
2	(Constant)	1.461	.305		4.796	**.000**
	Consumers influenced by word of mouth promotion of OTC medication	.258	.056	**.342**	4.629	**.000**
	Consumers consideration of an OTC product as a TOM choice for a future need	.310	.074	**.308**	4.172	**.000**
3	(Constant)	.661	.362		1.823	**.070**
	Consumers influenced by word of mouth promotion of OTC medication	.232	.054	**.307**	4.311	**.000**
	Consumers consideration of an OTC product as a TOM choice for a future need	.310	.071	**.309**	4.365	**.000**
	Consumers will buy OTC products having a stand or shelf design	.266	.071	**.259**	3.723	**.000**
4	(Constant)	-.030	.410		-.072	**.943**
	Consumers influenced by word of mouth promotion of OTC medication	.264	.053	**.350**	4.984	**.000**
	Consumers consideration of an OTC product as a TOM choice for a future need	.277	.070	**.275**	3.976	**.000**
	Consumers will buy OTC products having a stand or shelf design	.243	.069	**.237**	3.504	**.001**
	Consumers always purchase the recommended OTC product by the pharmacist	.213	.065	**.223**	3.249	**.001**
5	(Constant)	-.213	.412		-.516	**.607**
	Consumers influenced by word of mouth promotion of OTC medication	.231	.054	**.307**	4.264	**.000**
	Consumers consideration of an OTC product as a TOM choice for a future need	.262	.069	**.260**	3.795	**.000**
	Consumers will buy OTC products having a stand or shelf design	.177	.074	**.172**	2.373	**.019**
	Consumers always purchase the recommended OTC product by the pharmacist	.215	.064	**.225**	3.332	**.001**
	Consumers popular OTC product impulse buying	.172	.075	**.173**	2.281	**.024**

a. Dependent Variable: Consumers will buy a popular OTC product after seeing its promotion inside the pharmacy

Table 4, shows the un-standardized coefficients and the standardized coefficients of the regression equation, with the corresponding levels of significance. In this table it is shown that the observed level of significance is smaller than the significance level α <5%, so the entire null hypotheses can be rejected.

First Regression Equation:

Promotional Purchase = 0.307(Word of Mouth) + 0.260(OTC future need) + 0.172(Pharmacy Displays) + 0.225(Pharmacist Recommendation) + 0.173 (Impulse buying)

9.3. Second Regression Analysis:

Table 5:   Second Regression Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Consumers influenced by word of mouth promotion of OTC medication	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Awareness on the existence of OTC medication in Lebanon	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	Surveyed consumers' income range in USD	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	Consumers OTC purchase decision related to attributes or benefits	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
a. Dependent Variable: Consumers buying decision is influenced by emotional attachment to OTC medication			

Table 5 shows four independent variables which make the regression line that was extracted using the stepwise regression method. All questions in the questionnaire were included and inserted in the process of regression analysis and only the above four independent variables appeared, while the rest of the questions were removed, noting that the dependent variable is question twenty in the questionnaire; "I purchase an OTC medication because I trust it, and I feel it will be good for me".

Table 6:   Second Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.493[a]	.243	.238	.70229	.243	46.257	1	144	.000
2	.547[b]	.299	.289	.67809	.056	11.459	1	143	.001
3	.580[c]	.336	.322	.66245	.037	7.832	1	142	.006
4	**.601[d]**	**.362**	**.344**	**.65179**	**.026**	**5.682**	**1**	**141**	**.018**
a. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication									
b. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Awareness on the existence of OTC medication in Lebanon									
c. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Awareness on the existence of OTC medication in Lebanon, Surveyed consumers' income range in USD									
d. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Awareness on the existence of OTC medication in Lebanon, Surveyed consumers' income range in USD, Consumers OTC purchase decision related to attributes or benefits									

Table 6, shows a Pearson correlation equal to Pearson's R = 0.601, so there's a strong positive correlation between the studied variables. As the independent variables increase, the increase is also expected to happen with the dependent variable. The coefficient of determination (R^2) was also calculated, R^2= 0.362, showing that 36.2 % of the variation in percentage of OTC emotional attachment is attributed to the variations of the four independent variables. As for adjusted R Square, it is equal to 0.344, which shows a decrease of 1.8 % of R square.

Table 7: Second Regression ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.814	1	22.814	46.257	**.000[b]**
	Residual	71.022	144	.493		
	Total	93.836	145			
2	Regression	28.083	2	14.042	30.538	**.000[c]**
	Residual	65.753	143	.460		
	Total	93.836	145			
3	Regression	31.520	3	10.507	23.942	**.000[d]**
	Residual	62.316	142	.439		
	Total	93.836	145			
4	Regression	33.934	4	8.484	19.969	**.000[e]**
	Residual	59.902	141	.425		
	Total	93.836	145			
a. Dependent Variable: Consumers buying decision is influenced by emotional attachment to OTC medication						
b. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication						
c. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Awareness on the existence of OTC medication in Lebanon						
d. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Awareness on the existence of OTC medication in Lebanon, Surveyed consumers' income range in USD						
e. Predictors: (Constant), Consumers influenced by word of mouth promotion of OTC medication, Awareness on the existence of OTC medication in Lebanon, Surveyed consumers' income range in USD, Consumers OTC purchase decision related to attributes or benefits						

Table 7, shows that the four models show a high F-test result accompanied with a zero significance level, so the regression lines in the four models are explaining the variations, and the results are not due to chance.

Table 8: Second Regression Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.083	.175		17.620	.000
	Consumers influenced by word of mouth promotion of OTC medication	.328	.048	**.493**	6.801	.000
2	(Constant)	3.610	.230		15.711	.000
	Consumers influenced by word of mouth promotion of OTC medication	.329	.047	.494	7.051	.000
	Awareness on the existence of OTC medication in Lebanon	-.482	.142	-.237	-3.385	.001
3	(Constant)	3.003	.312		9.613	.000
	Consumers influenced by word of mouth promotion of OTC medication	.334	.046	.501	7.319	.000
	Awareness on the existence of OTC medication in Lebanon	-.399	.142	-.196	-2.807	.006
	Surveyed consumers' income range in USD	.214	.076	.196	2.799	.006
4	(Constant)	3.320	.335		9.912	.000
	Consumers influenced by word of mouth promotion of OTC medication	.320	.045	.481	7.087	.000
	Awareness on the existence of OTC medication in Lebanon	-.347	.142	-.171	-2.452	.015
	Surveyed consumers' income range in USD	.211	.075	.193	2.807	.006
	Consumers OTC purchase decision related to attributes or benefits	-.272	.114	**-.164**	-2.384	.018

Table 8, shows the coefficients, standardized and un-standardized for the second regression equation, the observed significance is smaller than the level of significance <5% which will enable the researcher to reject the entire null hypothesis.

Second Regression Equation:

Emotional Attachment = 0.481 (Word of mouth) – 0.171 (OTC Awareness) + 0.193 (Consumer Income) – 0.164 (OTC Perceived Benefits)

9.4. Regression Analysis Results:

Hypothesis one H_1: Consumers will buy impulsively an OTC product, after being exposed to its marketing campaign inside the pharmacy.

Null hypothesis H_0**:** Consumers will not buy impulsively an OTC product, after being exposed to its marketing campaign inside the pharmacy.

Let the dependent variable here to be "**Promotional purchase**", "After seeing a popular OTC medication promotion inside the pharmacy, the consumer will buy it "Let the independent variable here be "**Impulsive Buying**", "If a popular OTC product is located at the pharmacy cashier in an easy reach, the consumer will buy it"

As per Table 4, the following causation is shown:

Promotional purchase = 0.173 (Impulsive buying), this means that an increase in one standard deviation in impulsive buying will lead to an increase of 17.3% standard deviation of OTC buying due to promotion, with a level of significance = 0.024 < 5% . This is sufficient evidence to reject the null hypothesis at a 5% level of significance, and proving that consumers will buy impulsively an OTC medication after being exposed to its marketing campaign inside the pharmacy.

Hypothesis two H_2: Specific OTC brands having pharmacy displays will affect consumer purchasing behavior.

Null Hypothesis H_0: Specific OTC brands displayed on pharmacy displays will not affect consumer purchasing behavior.

Let the independent variable here be **"Pharmacy Displays"**, Pharmacy stands and shelf designs of OTC products will make the consumer want to buy it". The dependent variable here is **"Promotional purchase**".

As per Table 4, the following causation is shown:

Promotional purchase = 0.172 (Pharmacy Displays), this means that an increase in one standard deviation in pharmacy displays, will lead to an increase of 17.2 % standard deviation of promotional purchase, with a level of significance equal to 0.019, which is below 5 % level of significance. This is sufficient evidence to reject the null hypothesis at 5% level of significance, and proving that specific OTC brands displayed on pharmacy display will affect pharmacy promotional purchase.

Hypothesis three H_3: Specific OTC brands promoted are in majority bought for a future use and not a current use.

Null hypothesis H_0: Specific OTC brands promoted are not bought for a future use, but a current use.

Let t_he independent variable here be "**OTC Future need**", "After comprehending the OTC medication promotion, the authors will consider it as a first choice to buy when there's a need for it in the future. "The dependent variable here is "**Promotional purchase**".

As per Table 4, the following causation is shown:

Promotional purchase = 0.26 (OTC Future Need), this means that an increase in one standard deviation in consumer OTC need, will lead to an increase of 26 % standard deviation of promotional purchase, with a level of significance equal to zero, which is below 5 % level of significance. This is sufficient evidence to reject the null hypothesis at 5% level of significance, and proving that specific OTC brands promoted are in majority bought for a future use and not a current use.

Hypothesis six H_4: Word of mouth with OTC product promotion will lead.

consumers in pharmacies to a purchase decision

Null hypothesis H_0: Word of mouth OTC promotion will not lead consumers in pharmacies to a purchase decision

Let the independent variable here be "**Word of mouth**", "the consumer will buy an OTC medication that someone know told him that it is good". The dependent variable here is "**Promotional purchase**".

As per Table 4, the following causation is shown:

Promotional purchase = 0.307 (Word of mouth), this means that an increase in one standard deviation in word of mouth promotion, will lead to an increase of 30.7 % standard deviation of promotional purchase, with a level of significance equal to zero, which is below 5 % level of significance. This is sufficient evidence to reject the null hypothesis at 5% level of significance, and proving that word of mouth OTC promotion will lead consumers in pharmacies to a purchase decision.

Hypothesis seven H_5: Pharmacy OTC promotion along with the pharmacist recommendation create a synergy for the buying decision.

Null Hypothesis H_0: Pharmacy OTC promotion along with the pharmacist recommendation do not create a synergy for the buying decision.

Let the independent variable here be "**Pharmacist recommendation**", "The consumer always buys the OTC medication that the pharmacist recommends". The dependent variable here is **"Promotional purchase"**.

As per Table 4, the following causation is shown:

Promotional purchase = 0.225 (Pharmacist recommendation), this means that an increase in one standard deviation in pharmacist recommendation, will lead to an increase of 22.5 % standard deviation of promotional purchase, with a level of significance equal to 0.001, which is below 5 % level of significance. This is sufficient evidence to reject the null hypothesis at 5% level of significance, and proving that pharmacist recommendation of an OTC product will lead consumers in pharmacies to a purchase decision.

Hypothesis four H_6: the benefits of the OTC product will influence the consumer emotional attachment to it and its buying decision.

Null hypothesis H_0: the benefits of the OTC product will not influence the consumer emotional attachment to it and its buying decision.

Let the dependent variable be "**Emotional attachment**", "The consumer will Let the independent variable be here "**OTC Perceived benefits**", "the consumer usually buys an OTC medication because of knowledge".

As per Table 4, the following causation is shown:

Emotional attachment = - 0.164 (OTC benefits), this means that an increase in one standard deviation in OTC benefits, will lead to a decrease of 16.4 % standard deviation of OTC benefits , with a level of significance equal to 0.018, which is below 5 % level of significance. This is sufficient evidence to reject the null hypothesis at 5% level of significance, and proving that the benefits of the OTC product will influence the consumer emotional attachment to it and its buying decision.

Hypothesis H_7: Consumer's OTC purchases due to Word Of Mouth (WOM) promotion will affect their emotional attachment to the product.

Null hypothesis H_0: Consumer's OTC purchases due to WOM promotion will not affect their emotional attachment to the product.

Let the independent variable be "**Word of mouth**", "Consumers influenced by word of mouth promotion of OTC medication". The dependent variable is "**Emotional attachment**".

As per Table 4, the following causation is shown:

Emotional attachment = 0.481 (Word of Mouth), this means that an increase in one standard deviation in word of mouth promotion, will lead to an increase of 48.1 % standard deviation of emotional attachment , with a level of significance equal to zero, which is below 5 % level of significance. This is sufficient evidence to reject the null hypothesis at 5% level of significance, and

proving that Consumer's OTC purchases due to WOM promotion will affect their emotional attachment to the product.

9.5: Reliability Testing

Reliability refers to the consistency and/or repeatability of the measurement; meaning that consistency can relate to the questionnaires being clear and properly defined in order not to confuse the respondents. Also repeatability means that if researchers have specific findings from a group, they should be able to repeat the survey and get exactly the same results (Payne and Sekuler,2014).

The authors will use internal reliability to test the consistency of the scale questions in the questionnaire, and to see to what degree the measurement results are consistent over time (Williams, 2015).

Cronbach's Alpha, (α) is a measure of reliability that is equivalent to the average of the split-half correlations obtained from all possible splits into halved of data collected (Hamdar, 2017,Wonnacott and Wonnacott 1986).

Table 9:   Reliability Statistics

Cronbach's Alpha	N of Items
.699	12

Table 9, shows the internal reliability test for the 12 scale questions in the questionnaire, these questions were assessed using the Cronbach's Alpha method. Cronbach's Alpha here is equal to 0.699 which shows a strong association between the items tested, so the results of this study are reliable.

Table 10:   Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Consumers consideration of an OTC product as a TOM choice for a future need	39.2521	26.953	.361	.676
Consumers will buy a popular OTC product after seeing its promotion inside the pharmacy	39.4380	25.799	.508	.655
Consumers will inquire about an OTC product, after seeing its poster inside or at the entrance of the pharmacy	39.0702	26.771	.447	.666
Consumers will buy OTC products having a stand or shelf design	39.6405	26.107	.446	.663
Consumers preference for OTC product accessibility	39.4174	26.808	.361	.676
Consumers popular OTC product impulse buying	39.6777	25.862	.494	.657
Consumers' perception gets influenced by poster in pharmacy	39.3802	26.801	.415	.669
Consumers always purchase the recommended OTC product by the pharmacist	39.2645	29.473	.100	.713
Consumers buy a popular OTC product without the pharmacist consultation	39.3926	28.198	.178	.706
Consumers change their buying decision of on OTC brand based on the pharmacist opinion	39.2975	29.820	.078	.715
Consumers influenced by word of mouth promotion of OTC medication	39.5000	24.757	.445	.661
Consumers buying decision is influenced by emotional attachment to OTC medication	38.8058	28.622	.222	.695

Table 10 shows that the 12 scale items are all contributing to a positive Cronbach Alpha reliability. Three questions in the scale will increase Cronbach Alpha reliability if they were deleted, and this is shown by their very weak Corrected-item correlation in the table (0.1, 0.178, and 0.078). So deleting these three questions from the scale will increase the study's overall reliability.

10. Conclusion

Consumer behavior towards OTC products at pharmacies in Lebanon is subject to many internal and external factors. Due to restrictions by the Lebanese ministry of health on direct to consumer promotion for OTC nonprescription medications, the source of information for the consumer about OTC products is limited. As such the consumers' awareness vis-a-vis these products, their benefits and disadvantages will also be limited and incomplete.

When faced with a minor health condition, the consumer can either home-medicate, with available products according to his beliefs and conceptions, or he/she can search for information at the pharmacy, where he/she will assess and choose between many alternatives based on in-pharmacy promotion and the pharmacist's referral. The pharmacist's role and influence is a key factor in directing the consumer towards the proper product and towards recommending what is best to enhance the patient's health situation. As the pharmacist can recommend to his/her consumer many brands within a product category, the consumer can also initiate the demand for a brand between many brands according to in-pharmacy promotions, word of mouth promotion, and consumer emotional attachment to a certain brand, consumer conceptions, beliefs and expectations from a certain brand. It is important to mention that it was proven during this study, that a promotion of an OTC product along with the pharmacist recommendation of the product creates a synergy to influence consumers' buying decision.

The authors were able also to prove that consumers at Lebanese pharmacies have an impulse buying behavior towards specific brands, after being subjected to their marketing campaigns. Noting that in-pharmacy displays such as; product counter tops, floor stands, and shelf designs which intend to create a certain disturbance in the pharmacy due to cluttering of products grab the attention of the consumer, and contribute positively to his/her buying decision. In addition, the word of mouth promotion stimulates and influence consumers' buying decision for a promoted OTC product.

In accordance, posters at the pharmacy, whether they were inside or at the entrance of the pharmacy play the biggest role in grabbing consumer attention, stirring his/her curiosity to make him/her ask about the product, influencing his/her perception about the product, and contributing to the product purchase, noting that it was found that specific OTC products are bought for a future consumption and future need, not a direct use.

The consumer emotional attachment to a certain OTC product is affected by word of mouth promotion, that marketers considered it as important if not more important than in-pharmacy promotion. Also the emotional attachment to certain OTC products is influenced by the perceived benefits for these products.

In conclusion, OTC purchases in pharmacies are affected by an impulse buying behavior, pharmacy displays, a future use for the OTC product, word of mouth promotion, and the pharmacist role. Moreover, the emotional attachment, to an OTC brand is affected by the perceived benefits of the brand, along with the word of mouth promotion.

References

[1] Bhatia, D. (2012, September 19). *Over The Counter (OTC) Healthcare - Changing Marketing Strategies*. Retrieved February 22, 2015, from http://www.mbaskool.com/business-articles/marketing/4934-over-the-counter-otc-healthcare-changing-marketing-strategies.html

[2] Bond, C. (2008). The over-the-counter pharmaceutical market-policy and practice. *Eurohealth, 14*(3), 19-24. Retrieved May 17, 2015, from http://www.lse.ac.uk/LSEHealthAndSocialCare/pdf/eurohealth/Vol14No3/Bond.pdf

[3]   Consumer Healthcare Products Association. (2013). Over-the-Counter Medication Behaviors of Older Adults. *The Gerontological Society of America*. Retrieved February 20, 2015, from http://www.chpa.org/2013medbehaviorolderadults.aspx

[4]   Fahey, M. (1996). Guide to consumer's pharmaceutical purchasing behavior. *Feature, 2*(5), 489-499. Retrieved February 27, 2015, from http://www.amcp.org/data/jmcp/feature_I5_489-499.pdf

[5]   Hamdar, Bassam**,** Khaled Hamdan, and Hala Kinawi (2017). "The Economic Implications of Enforcing the Common Agricultural Policy (CAP) in the Arab Region" International Journal of Economics, Commerce and Management ((IJECM), vol 5, No.7, July 15.

[6]   Hejase, A. J., &Hejase, H. J. (2013). *Research Methods A Practical Approach for Business Students (Second edition).* Philadelphia: Masadir Inc.

[7]   Karam (2005). Survey report – prices of medicines in Lebanon. *World Health Organization*. Retrieved February 24, 2015, from http://www.haiweb.org/medicineprices/surveys/200402LB/survey_report.pdf

[8]   Kohli, E., & Buller, A. (2013). Factors Influencing Consumer Purchasing Patterns of Generic versus Brand Name Over-the-Counter Drugs. *Southern Medical Journal, 106*(2), 155-160. Retrieved March 18, 2015, from http://sma.org/wp-content/uploads/2013/02/Kholi_final.pdf

[9]   Mobach, M. (2007). Consumer behavior in the waiting area. *Pharmacy World & Science*, 29(1), 3–6. Doi: 10.1007/s11096-005-3797-z

[10]   Payne,L.,and Sekuler,R.(2014) . The Importance of ignoring: Alpha oscillations protect selectivity Curr Dir Psychol Sci. 2014 Jun; 23(3): 171–177.

[11]   Parikh, D., Sattigeri, B., Kumar, A., & Brahmbhatt, S. (2013). A survey study on use of over the counter (OTC) drugs among medical students, nursing and clerical staff of a tertiary care teaching rural hospital. *International Journal of Research in Medical Sciences, 1*(2), 83-86. Retrieved February 22, 2015, from http://imsear.li.mahidol.ac.th/bitstream/123456789/150449/1/ijrms2013v1n2p83.pdf

[12]   Perner, L. (n.d.). *Introduction to Marketing*. Retrieved March 21, 2015, from http://www.consumerpsychologist.com/marketing_introduction.html

[13]   Rishi, A. (2013, November 28). *Understanding behaviors is crucial for pharmaceutical marketers*. Retrieved May 17, 2015, from http://www.pharmaphorum.com/articles/understanding-behaviours-is-crucial-for-pharmaceutical-marketers

[14]   Sapienza Paola, Toldra Anna, and Zingales Luigi (2007). "Understanding Trust." Working paper, University of Chicago.

[15]   Slideshare. (2013, March 20). *Global and Asia-Pacific Trends in OTC*. Retrieved May 17, 2015, from http://www.slideshare.net/IMSHealth_APAC/ibc-asia-final-uploaded-mar-20

[16]   Sykes, Alan O. (1993). "An Introduction to Regression Analysis" (Coase-Sandor Institute for Law & Economics Working Paper No. 20, 1993).

[17]   Tisman, A. (2013). *The Rising Tide of OTC in Europe*. Retrieved May 17, 2015, from The Pharmaceutical Industry in Norway Website: http://www.lmi.no/media/3025409/andy_tisman_how_is_the_otc_market_developing.pdf

[18]   UNDP (2000). Promoting pharmaceutical exports based on a regional market study. *United Nations Development Program*. Retrieved February 24, 2015, from http://www.drugavoid.com/ps1.html

[19]   Williams, Y. (2015). Internal Consistency Reliability: Example, *Definition & Quiz*. Retrieved June 1, 2015, from http://study.com/academy/lesson/internal-consistency-reliability-example-definition-quiz.html

[20]   Wonnacott,T. ,and Wonnacott,R.(1986)."Regression: A second course in statistics",Krieger pub.co.,FL,USA.