

## *Original Paper*

# Subliminal Messages in Marketing and Consumers' Purchasing Intention—A Case Study of Online Shopping from Lebanese Perspective

Bassel Nouredine Maaliky<sup>1\*</sup> & Dr. Radwan N. Choughari<sup>2</sup>

<sup>1</sup> Faculty of Business Administration, Jinan University, Tripoli, Lebanon

<sup>2</sup> Associate Professor, Faculty of Business Administration, Jinan University, Tripoli, Lebanon

\* Bassel Nouredine Maaliky, Faculty of Business Administration, Jinan University, Tripoli, Lebanon

Received: November 6, 2020 Accepted: November 24, 2020 Online Published: December 14, 2020

doi:10.22158/rem.v6n1p36 URL: <http://dx.doi.org/10.22158/rem.v6n1p36>

### **Abstract**

*Understanding the major elements affecting consumers purchasing intention is important because it is directly related with the actual purchase. To attract more customers and boost their sales, online marketers use subliminal messages in advertising. The subliminal message is not perceived directly by the consumers' consciousness, but still remains in their mind in a subtle way. Hidden messages within advertising is a manipulating force to buy the product, or to increase the purchasing intention. The objective of this article is to explore and describe the influence of the perception, awareness, and knowledge of subliminal messages and subliminal persuasion on consumers' purchasing intention. The data collection used a cross-sectional descriptive approach. This study is descriptive following a causal model. The sample belongs to the population of Lebanese consumers. An online questionnaire was used during this study. A total of 510 Lebanese consumers had completed the questionnaire online. The influence of perception of subliminal messages, awareness of subliminal messages, knowledge of subliminal message and subliminal persuasion are positive which validate a positive relation among these variables. As for the future avenues of research, it would be interesting to assess the effectiveness of some consumer anticipation and the protection against manipulation with regard to subliminal messages.*

### **Keywords**

*consumers purchasing intention, subliminal message, a manipulating force, Lebanese consumers*

## 1. Introduction

In marketing, one of the most important steps in predicting consumer behavior is understanding their intention to choose a brand of product or service from among all the brands available at a given time and in a given market (Shaouf, Lü, & Li, 2016). The intention to buy is of great importance because it suggests a (very) strong relationship with the actual purchase. In the selection process, it is the last step before the actual purchase (Nguyen & Gizaw, 2014).

To attract more customers and boost their sales, online marketers use subliminal messages. The latter are found in advertising and other marketing campaigns (BĂLĂȘESCU, 2016). The subliminal message is not perceived directly by the consumers' consciousness, but still remains in their mind in a subtle way.

Advertising and promotions in the media are associated in the minds of the population as manipulators pushing them towards consumption. With these fears, Hidden messages within advertising is a manipulating force to buy this or that product, or to prefer this or that brand (Punniyamoorthy, 2017).

As part of a well-understood marketing strategy, advertisers cannot simply arouse customer desire. In order for advertising to actually lead to the purchase of goods, it still needs to create a sense of desire and need in that customer. And at the same time, if possible, marketers need to motivate and facilitate the future act of purchase and, more generally, they need to remove the brakes and resistance to this act. To achieve all of these objectives, the principle is quite simple. It is sufficient for the advertiser to initially to present the basic values (why the product is desirable) and the use values (why the product is useful) to create purchasing desire (Ruch, Züst, & Henke, 2016). However, advertisers are turning into subliminal messages in advertising to increase the purchasing desire and intention and provoke an actual act of purchase.

Subliminal messages as an advertising technique consists in inserting a message which will not be consciously perceived by the viewer, but which will be supposed to strike subconscious in the human brain. The viewer does not realize the message because it is too stealthy, but a trace will be left in his subconscious (Birnbaum, 2012). Therefore, marketers are creating a type of unconscious manipulation with the ultimate aim of modifying purchasing behavior and increasing their purchasing intentions. The subliminal message is therefore the element that will be stealthily inserted into an advertising content. These subliminal messages are likely to influence consumers' behavior to statistically significantly provoke an act of purchase (Hejase, Hamdar, Farha, & Boudiab, 2013).

The scientific controversy has therefore been present for decades and it seems that it is still far from being resolved (Hejase et al., 2013; Riener, Chalfoun, & Frasson, 2014; Karam, Haidar, Khawaja, & Al Laziki, 2017). On the other hand, the public seems to have already decided. According to a study by Riener (2017), the majority of surveyed consumers had heard of subliminal advertising and were convinced of its effectiveness. According to these authors, "subliminal advertising has become an important part of the culture, despite the lack of scientific evidence to show that it is effective or even possible."

But ultimately whether these assumptions hold true or not, they clearly have an impact on the attitude of each of us towards the advertising industry. This could also be the basis of a paradox: the more people avoided ordinary advertisements; the more advertisers would be forced to find roundabout means of persuasion (Sofi & Nika, 2013).

Hence, these facts arise the following research interrogation: what is the influence of subliminal messages in online advertising on the Lebanese consumers' purchasing intentions? What is the influence of the online perception, awareness, knowledge of subliminal messages, and the subliminal persuasion on Lebanese consumers' purchasing intention?

The objective is to explain the phenomenon of subliminal messages in advertising and its impact on consumers' online purchasing intention. This article explores the influence of the perception, awareness, and knowledge of subliminal messages on consumers' purchasing intention. It studies the influence of subliminal persuasion on consumers' purchasing intention.

## **2. Literature Review**

### *2.1 Consumers' Purchasing Intention*

Consumers' purchasing intention has a diverse definition in the literature. For example, for Birnbaum (2012) define it a "measure of commitment to future action". According to Riener (2017), it is "the motivation of a person to exert an effort to perform a behavior". According to Sabir and Mehmood, (2016), it represents "the level of willingness shown by the consumer to buy a product or a service". The intention to purchase will make it possible to estimate (implicitly) the variation of the "of risk" agreed by the buyer. In this way, the higher the intention to buy a brand, the less risk it will perceive in the purchase and therefore the more willing it will be to buy the brand in question (Atrees, 2013).

The purchasing process begins with the "recognition of the need/problem", that is, the perception of a difference between a current state and a desired state which results in a feeling of lack, of a kind and of varying intensity (Riener & Thaller, 2014). The "recognition of the need" stimulates the individual and directs his activities towards the satisfaction of this need. The second step in the process is the "information search" and this is where consumer certainty comes in. the certainty associated with a belief (internal information) determines the consumer's tendency to use this information during his decision-making process. Certainty seems to play an important role in the search for information and in the entire decision-making process (Riener & Thaller, 2014).

### *2.2 The Theory of Consumer Behavior*

In this study, the model proposed by Engel, Blackwell and Miniard is partially used, the latter is studying the stimulus affecting consumers' purchasing intention and it is concerned with the procedures that lead to the purchase (Bashir, Bayat, Olutuase, & Abdul Latiff, 2019; Irianto, 2015; Matsumoto, Chinen, & Endo, 2018). It emphasizes the choice procedures adopted by the consumer in the purchasing behavior. The purpose of the model is to explain why consumers make the decision to buy a product or brand in the market (SivaKumar & Gunasekaran, 2017). For marketing researchers,

understanding consumer behavior comes down to analyzing the decision-making process and identifying the variables that come into play. This model have been the subject of several consecutive versions. Its uniqueness lies in its focus on the information processing process, whatever the nature of its outcome: cognitive, affective or conative. In addition, it helps explain the creation of decisions according to certain purchasing situations. The model is broken down into five phases (SivaKumar & Gunasekaran, 2017; Almousa, 2014):

- 1) Exposure to the stimulus;
- 2) The attention paid to it by the consumer;
- 3) Understanding the stimulus, for instance the possibility of relating it to existing categories of information;
- 4) Acceptance of the stimulus, for example, whether it is compatible with the consumer's frame of reference;
- 5) Retention of the stimulus in memory, from where it will possibly be recalled during the decision process.

The latter verifies that any stimulus, such as the subliminal message in advertising, have a direct influence on consumers' purchasing behavior. It has a direct influence on consumers' purchasing intention.

### *2.3 Subliminal Messages in Advertising*

A subliminal message is a message designed intentionally to be perceived in an unconscious manner. That is, an emotion, or any other form of message that will be recorded by the brain, without being aware of it (Punniyamoorthy, 2017). Subliminal messages can take a variety of forms. This can range from a simple logo whose design evokes a hidden image, to images inserted in videos which only appear briefly on the screen. For the latter, the display time is too short for you to consciously "see" it, but the brain will have registered the image well (Karam et al., 2017).

Subliminal images have been used very often in advertising. Beyond simply adding an image to a video, which has been the case with some online advertisings, there are other techniques. These techniques include implanting motifs and themes of a sexual nature into certain advertisements, to make them more marketable and to attract the attention of the potential customer without their noticing it. One of the most famous examples is the appearance of the word "sex" in a subliminal way (Sofi, Nika, Shah, & Zarger, 2018).

A subliminal advertisement is an advertisement that uses subliminal images (an image that cannot be consciously perceived by the viewer) to promote a product or a brand. In principle, subliminal advertising fits into content that is not in itself an advertisement (promotions, films). It is an advertising technique which consists in inserting a visual and/or sound message, which cannot be consciously perceived, but which is supposed (Pascual-Miguel, Agudo-Peregrina, & Chaparro-Peláez, 2015). Most of the subliminal images used in advertising are, more often than not, included in commercials, posters or even logos (Phil Tinline, 2015).

Whether visual or auditory, it is used primarily to influence or persuade the recipients of the message to comply with what is suggested therein. The reason messages have to be “subliminal” is that since the conscious mind is not aware of the message, it cannot reject, criticize or analyze it. The mind can therefore follow the suggestion quite naturally (Byford, 2014).

There are numerous subliminal messages in online commercials. Every day, hundreds of announcements blast consumers with information. While the conscious or unconscious part stores some information, others have gone through to be processed in an unconscious part of the brain. Now, this subconscious part of our mind sometimes dominates certain subliminal messages seen in online advertising and in pop-ups (Nayyar, 2017).

#### *2.4 Different Types of Subliminal Messages*

The following are major types of subliminal messages (Bashir et al., 2019; Irianto, 2015; Phil Tinline, 2015):

- 1) **Audiovisual Messages:** an advertising contains about twenty-five images per second. One technique is to place the subliminal message on the twenty-fifth image, after the traditional twenty-four. Released for too short a period of time, the image cannot be consciously perceived but is captured by the viewer’s subconscious.
- 2) **Hidden Visual Messages:** by this technique, the advertiser modifies his visual in a very discreet and harmless way, in order to arouse emotion in the consumer and to influence him in his choice strongly but totally unconsciously.
- 3) **Sound Messages:** hidden audio messages consist of introducing natural noises into audio to encourage listeners to buy a drink or to use a special product, for example. This type of persuasion refers to the emission of messages at very low sound levels.

Subliminal images can provoke a stimulus causing a feeling of hunger or thirst, reactions which are after all fairly basic, it is very difficult to direct them towards a particular brand or product.

Hence, major elements that have an influence on consumers are the perception, awareness, knowledge of subliminal messages and the subliminal persuasion. These elements are forming a unidimensional factor that can be intercorrelated (Elci & Sert, 2015).

#### *2.5 Perception of Subliminal Messages*

The subliminal message can be a message embedded in a song, inaudible to the conscious mind but understandable to the subconscious. They are also images that are diffused so briefly (lasting, say, a tenth of a second) that they pass unnoticed to consciousness while being perceived unconsciously (Riener & Thaller, 2014). Consumers may not consciously perceive the message but receive it unconsciously.

Detecting subliminal messages in advertising, literature, film or television is an achievement. This sometimes leads to spotting a word drawn with the help of clouds or a chair, or more simply, an element that emerges in the scene and totally modifies its meaning. There are typically four thresholds of perception (Riener, 2017; S. A. Sofi & Nika, 2013).

- 1) **Lowest perception threshold:** the stimulus is too weak for the individual to be aware of.
- 2) **Physiological perception threshold:** the individual reacts to the stimulus without being aware of it.
- 3) **Absolute perception threshold:** the individual reacts to the stimulus and can be aware of it.
- 4) **Threshold of conscious perception:** the individual consciously perceives the stimulus.

A subliminal message, to be qualified as such, must elicit an unconscious response from the individual without a previous perception of the subject. A subliminal perception is a perception which is located below the threshold of consciousness. A subliminal message can thus be transmitted to a person without the latter being aware of it (Martin Oliver, 2014).

In the strict sense of the term subliminal perception is limited to the stimulus too weak or too rapid to be consciously processed. In its broad view, it concerns any unconsciously perceived stimulus whose influence on behavior as well as the processes of processing information escape consciousness (Sur, 2015).

#### *2.6 Awareness of Subliminal Messages*

The whole principle of sound subliminal is based on the intensity of the received signal. We can make a signal subliminal by adjusting its intensity so that the subject hears it without being aware of it. We can then demonstrate that the brain was aware of the subliminal signal and that certain treatments were taken into account thanks to this stimulus. The advertisement is directed to “the forces of the unconscious”. To generate a purchase, the advertiser uses new effects to capture the consumer’s attention, such as the sending of hidden messages (subliminal advertising) (Pindoria, 2015).

The subliminal stimulus should be distinguished from the unconscious stimulus, in the sense that the individual can return to the conscious level at any time in the first case, unlike the second. Indeed, even if the consumer wishes it, he cannot be aware of the subliminal stimuli which he undergoes. The whole question then lies here: how can the consumer perceive the stimulus if he cannot be aware of it or become aware of it? Thus, the individual will react to the stimulus only if the exposure has taken place and has been complete. Finally, it is important to note that not all consumers perceive stimuli in the same way, some being more sensitive to them than others (Nayyar, 2017).

“Numerous studies show that awareness of a stimulus induces a particular processing of information. Conversely, today a stimulus can quite be perceived unconsciously. The hyphenation should therefore no longer be a subliminal stimulus/supraliminal stimulus but consciously perceived stimuli/non-consciously perceived stimulus.” (Punniyamoorthy, 2017).

Riener (2017) showed that advertising messages on the internet appearing in the peripheral visual field cause favorable effects on the judgments and the purchase intentions of the advertised brands, whereas the receivers do not have “Awareness” that they have entered their visual field. Subliminal messages have an impact on consumers’ unconscious part. They can have a lasting influence on behavior. The more they are repeated, the more they are imprinted on consumers’ mind (Dijksterhuis, Aarts, & Smith, 2012).

### *2.7 Knowledge of Subliminal Message*

The subliminal message whether an image, a sound or a logo is created to be an unknown factor by consumers. Researches are divided on the level of the knowledge of subliminal messages and especially their influence on consumers. At the time of the discovery of subliminal images, people did not know who to believe. When testing the knowledge of subliminal message, the majority of these people claim not to have heard or located any message in advertising (Ahmad Sofi et al., 2013).

For the study of Smith and McCulloch (2012), under a hearing test, consumers are then made to listen to an advertising in which subliminal messages are re-inserted. Consumers recognized them even though these names are barely audible. However, Riener and Thaller, (2014b) and Chiesa et al. (2015) debated that consumers are more educated and they are gaining more knowledge about new concepts in marketing especially persuasive methods such as subliminal messages. Still, consumers are tricked by these messages due to innovative elements inserted especially in online advertisings.

### *2.8 Subliminal Persuasion*

This notion designates the way in which the message is accepted by the individual, the degree of influence of the subliminal message. Pindoria (2015) described this concept as perceptual memory, that is, the memory of recognition, which is the reverse of the verbal memory of recall. Finally, he highlights two impacts relating to the repetitions of advertising messages: the delayed effect and behavioral triggering (Knez, 2014).

According to Armstrong and Dienes (2013), subliminal images cannot create new preferences in the consumer for the product on display, but it affect their initial underlying motivation for their purchasing intention. This stimulus can influence their usual purchasing behavior. In addition, subliminal images never take priority over all other types of stimulation that individuals face, and it is most often the meaning that wins. Therefore, the situations in which the consumer's purchasing behavior can be influenced by subliminal stimuli are as follows: situations of low involvement, non-verbal communication that elicits poor information processing, messages with high value of imagery that mobilizes past experiences (Sabir & Mehmood, 2016).

### *2.9 Subliminal Messages and Consumption*

Numerous studies have been carried out to observe the impact of subliminal perception on consumption behaviors. The first case of subliminal message was created by James Vicary, a market research specialist, exposing viewers to subliminal messages "Drink Coca Cola" and "Eat popcorn" which turned out to be a trick to save the bankruptcy of his advertising company, several experimental replications were carried out afterward (Huang et al., 2015). From this research, it emerged that it was difficult to change people's behaviors if Coca-Cola or popcorn were not part of their eating habits.

Ahmad Sofi et al. (2013); Smith and McCulloch (2012) conducted a literature review on subliminal advertising. Dubley concluded that there was a lack of agreement on its possible effects and, that these debates were significant. The researchers then looked at the initial hypothesis to reformulate it differently: while subliminal advertising cannot induce new consumption behaviors, it can nevertheless

act on the usual behaviors that already exist. For example, the study by Bornstein shows that it is possible to awaken the desire to smoke in a smoker, but it is impossible to induce a non-smoker to start smoking (Punniyamoorthy, 2017).

### *2.10 Ethics and Professional Conduct (Ethics of Marketing)*

From an ethical point of view, the influence of subliminal messages on a person's behavior can be considered manipulation. Indeed, this would violate consumer rights, in other words it contradicts the principle of freedom of choice and of thought. One amazing thing is that, despite the ongoing debate about the existence of subliminal advertising, it is prohibited by law in several countries such as the United States, Australia and Great Britain (Byford, 2014). In France, the decree prohibits the use of subliminal advertising techniques. Several organizations exist to control each advertising spot published. But subliminal messages, by definition, are of such short duration that one would have to analyze each spot frame by frame to detect them, which seems difficult (Riener, 2017).

In conclusion, this article gave a better understanding of the marketing theories related to the subliminal message and its influence on consumers' purchasing intention. Advertising very often uses this technique in order to reach consumers, and subconsciously convince them that they need the product in question. Indeed, the subliminal message influences him without his realizing it in his judgment and final purchase intention. This research literature review formulated the following hypotheses.

#### **H 1: Perception of Subliminal Messages**

- **H 1. 0:** The perception of subliminal messages has no statistical influence on consumers' purchasing intention.
- **H 1. a:** The perception of subliminal messages has a statistical influence on consumers' purchasing intention.

#### **H 2: Awareness of Subliminal Messages**

- **H 2. 0:** The awareness of subliminal messages has no statistical influence on consumers' purchasing intention.
- **H 2. a:** The awareness of subliminal messages has a statistical influence on consumers' purchasing intention.

#### **H 3: Knowledge of Subliminal Message**

- **H 3. 0:** The knowledge of subliminal message has no statistical influence on consumers' purchasing intention.
- **H 3. a:** The knowledge of subliminal message has a statistical influence on consumers' purchasing intention.

#### **H 4: Subliminal Persuasion**

- **H 4. 0:** Subliminal persuasion has no statistical influence on consumers' purchasing intention.
- **H 4. a:** Subliminal persuasion has a statistical influence on consumers' purchasing intention.



### 3. Research Method

According to the Saunders' onion adopted in this study, any research should start with a research philosophy (Saunders & Tosey, 2013). In this case, positivism is the most suitable since the influence of subliminal message on consumers' purchasing behavior as a reality is stable, consistent and can be identically reproducible by other researchers. This topic can be studied with an objective empirical method. Besides, this study is descriptive following a causal model, in other words, there is a cause, effect between subliminal message elements and consumers' purchasing intention. These elements are well-defined variables that are quantified with a quantitative study to test the research hypotheses with statistical analysis. The quantitative approach is used for data collection (Heale & Twycross, 2015).

The deductive approach is adopted in order to achieve the objectives of this study. This approach was chosen since the research question was formulated from a theory of general scope, built the hypotheses and will test these hypotheses statically, to confirm or apprise the initial theory.

To this end, the literature review and the theoretical framework are taken into account in the empirical part. The sample belongs to the population of Lebanese consumers using social networks to purchase commodities. The data collection used a cross-sectional descriptive approach.

#### 3.1 Online Survey

An online questionnaire was used during this study. In a study of online shopping behavior, an online questionnaire is highly suitable to capture online shoppers (Jiang, Yang, & Jun, 2013). This choice also seems adequate since Internet access is essential in order to answer the questionnaire. Furthermore, the implementation of this survey method is very fast and inexpensive. The questionnaire was filled on the Survey monkey platform. These parameters are crucial given the budget and limited time. Although the response rate is generally low for this type of survey, the possibility of quickly distributing the questionnaire should make it possible to collect a sufficiently high number of responses. Secrecy and anonymity were guaranteed for participants to feel protected. These elements were guaranteed by an anonymous online survey. A consent form was presented at the start of the questionnaire to give participants a clear idea of the purpose of the study.

A pre-test was carried out on 25 participants to detect possible problems related to the design of the questionnaire. This pre-test was completed face to face with voluntary participants. This approach has the advantage of being able to directly observe the reactions and attitudes of the participants and to be able to adjust the questionnaire appropriately (Patak et al., 2016).

#### 3.2 Measures and Scales

The objective of this study is to evaluate the influence of four independent variables, namely major elements the perception, awareness, knowledge of subliminal messages and the subliminal persuasion that have an influence on consumers' purchasing behavior as dependent variable. These variables are measured using the five points of a Likert scale. It starts with 1 as strongly disagree and 5 as strongly agree, with 3 as neutral opinion. This neutral point is important because it allows the participant to give

a neutral opinion. This measurement scale is easy to design and its use is easy to understand by participants.

The questionnaire is divided into six sections. This structured questionnaire was adopted from the study of (Nayyar, 2017; Riener, 2017). The first section is the demographics and include questions related to gender, age, marital status, education level and occupation. The other five sections are dedicated to study each variable. The second section embraces five questions related to consumers' purchasing intentions. The four remaining sections are dedicated to the independent variables namely, the perception, awareness, knowledge of subliminal messages and the subliminal persuasion respectively. These variables are evaluated with five questions each.

### 3.3 Determination of the Sample

To select participants in this study, a convenience sampling technique was used. Participants had the convenience to fill the questionnaire online voluntary. The survey was carried out online to fill the questionnaire, to collect important and quality material, and to ensure that the responses are complete and are not affected by the presence of the surveyor.

A total of 650 Lebanese consumers had completed the questionnaire online. Of these responses, 140 questionnaires had to be discarded because these questionnaires were incomplete. Therefore, 510 valid questionnaires were retained and constituted a sufficient basis for further analysis. The description of the sample according to socio-demographic criteria is given in the following table:

**Table 1. Sample Description**

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Valid Gender</b>	Male	159	31.2	31.2	31.2
	Female	351	68.8	68.8	100.0
	Total	510	100.0	100.0	
<b>Valid Age</b>	18-24	69	13.5	13.5	13.5
	25-34	190	37.3	37.3	50.8
	35-44	123	24.1	24.1	74.9
	45-54	55	10.8	10.8	85.7
	55-64	49	9.6	9.6	95.3
	above 65	24	4.7	4.7	100.0
	Total	510	100.0	100.0	
<b>Valid Marital status</b>	Single	198	38.8	38.8	38.8
	Married	228	44.7	44.7	83.5
	Divorced	74	14.5	14.5	98.0
	Widowed	10	2.0	2.0	100.0
	Total	510	100.0	100.0	

<b>Valid</b>	Primary education	48	9.4	9.4	9.4
<b>Educational level</b>	Higher education	63	12.4	12.4	21.8
	Technical school BT, TS	61	12.0	12.0	33.7
	Bachelor	227	44.5	44.5	78.2
	Master	88	17.3	17.3	95.5
	PHD	23	4.5	4.5	100.0
	Total	510	100.0	100.0	
<b>Valid</b>	Unemployed	66	12.9	12.9	12.9
<b>Occupation</b>	Student	98	19.2	19.2	32.2
	Employee	144	28.2	28.2	60.4
	own business (entrepreneur)	75	14.7	14.7	75.1
	Retired	127	24.9	24.9	100.0
	Total	510	100.0	100.0	

The population in this study embraces Lebanese consumers (n = 510). Since this research follows the convenience sampling procedure, the research has no control over the socio-demographic profile. For the gender, 31.2% of 510 were males and 68.8 % out of 510 participants were females. These percentages show that females have higher interest in filling the questionnaire online. The age of participants varies between 18 and 65 years old. 37.3% have an age that varies between 25-34 years old, 24.1% have an age that varies between 35-44 years old. This data indicates that most of the respondents are young. Regarding education, 44.5% of participants hold at least a bachelor's degree. Regarding the occupation, 19.2% were student, 28.2% were employee, and 14.7% owned their business (entrepreneur).

#### 4. Empirical Results and Interpretations

Results were exported from the survey monkey platform to SPSS version 25. This section focuses on the validity and reliability statistics for the variables scales and the multiple linear regression for hypotheses validation. It presents an interpretation for the results and compare it with previous studies.

##### 4.1 Validity and Reliability Statistics

**Table 2. Validity and Reliability Statistics**

	Cronbach's Alpha	KMO	N of Items
Consumers purchasing intention	.733	.891	5
Perception of Subliminal Messages	.727	.791	5
Awareness of Subliminal Messages	.709	.800	5
Knowledge of Subliminal Message	.754	.889	5
Subliminal Persuasion	.789	.781	5

The reliability of the scales is tested using Cronbach's alpha. Results varying between 0.709 and 0.789 conclude that the measurement scales used are reliable. Indeed, all the Cronbach alphas obtained are greater than the minimum required threshold equal to 0.6.

A value of the KMO closer to 1 is preferred. Moreover, a value greater than 0.6 is recommended. In this above table, the KMO value are above 0.6 and varies between 0.781 and 0.891. The KMO indicates that the variables selected form a coherent whole and adequately measure a concept.

#### 4.2 Multiple Linear Regression

**Table 3. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.441 <sup>a</sup>	.494	.388	.63180

a. Predictors: (Constant), Perception of Subliminal Messages, Awareness of Subliminal Messages, Knowledge of Subliminal Message, Subliminal Persuasion

The value of  $R^2$  represents the percentage variation of the response explained by the model. The higher the  $R^2$  value, the better the model fits the data. In these results, the elements of subliminal messages explain 49% of the variation in consumers' purchasing intention. The value of  $R^2$  indicates that the model fits the data well.

**Table 4. ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.551	4	12.138	30.407	.000 <sup>b</sup>
	Residual	201.580	505	.399		
	Total	250.130	509			

a. Dependent Variable: Consumers purchasing intention

b. Predictors: (Constant), Perception of Subliminal Messages, Awareness of Subliminal Messages, Knowledge of Subliminal Message, Subliminal Persuasion

The result of the F value (30.407) and a difference df of 4, is significant with a P value less than 0.05. Besides, the P value of 0.000 is less than 0.01 which support a highly significant value. Therefore, the p-value conclude that there is a statistically significant association between the variables.

**Table 5. Coefficients**

Model		Unstandardized		Standardized		t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta				Tolerance	VIF
1	(Constant)	2.946	.342			8.625	.000		
	Perception of Subliminal Messages	.209	.037	.229		5.642	.000	.966	1.036
	Awareness of Subliminal Messages	.168	.034	.205		4.939	.000	.930	1.075
	Knowledge of Subliminal Message	.173	.029	.242		5.876	.000	.942	1.062
	Subliminal Persuasion	.135	.055	.299		2.443	.000	.978	1.023

a. Dependent Variable: Consumers purchasing intention

The correlation table highlighted that there is no collinearity between the different variables. In the last column of the collinearity statistics, the tolerance values are less than 1 and varies between 0.930 and 0.978. Besides, the VIF values are ranging between 1.023 and 1.075 which is below the international threshold of 3 verified by Miles (2014).

Also, the influence of perception of subliminal messages, awareness of subliminal messages, knowledge of subliminal message and subliminal persuasion are positive which validate a positive relation among these variables. The results of a comparison of means test (t test) confirm that this difference is significant ( $p < 0.001$ ) and therefore subliminal messages have a significant statistical influence on consumers' purchasing intention. Precisely, the following data validate this predicted direction of relations of these variables.

- **Perception of subliminal messages:** ( $B = 0.209$ ,  $Beta = 0.229$ ,  $P = 0.000 < 0.05$ ), therefore, an increase in consumers' purchasing intention by 22% is caused by a 20% increase in the perception of subliminal messages.
- **Awareness of subliminal messages:** ( $B = 0.168$ ,  $Beta = 0.205$ ,  $P = 0.000 < 0.05$ ), therefore, an increase in consumers' purchasing intention by 20% is caused by an 17% increase in the awareness of subliminal messages.
- **Knowledge of subliminal message:** ( $B = 0.173$ ,  $Beta = 0.242$ ,  $P = 0.000 < 0.05$ ), therefore, an increase in consumers' purchasing intention by 24% is caused by an 17% increase in the knowledge of subliminal messages.
- **Subliminal persuasion:** ( $B = 0.135$ ,  $Beta = 0.299$ ,  $P = 0.000 < 0.05$ ), therefore, an increase in consumers' purchasing intention by 29% is caused by an 13% increase in the subliminal persuasion.

The multiple linear regression shows that the influence of the elements of subliminal message in online advertising on consumers' purchasing intention is significant. In fact, consumers' intention to buy is positively influenced by a positive perception of subliminal messages, awareness of subliminal messages, knowledge of subliminal message and subliminal persuasion ( $p < 0.05$ ).

Therefore, the above data conclude the following research formula:  $2.946 + (\text{perception of subliminal messages} \times .209) + (\text{awareness of subliminal messages} \times .168) + (\text{knowledge of subliminal message} \times .173) + (\text{subliminal persuasion} \times .135)$ . It allows the validation of the research alternative hypotheses H 1.a, H.2 a, H 3. a and H 4. a.

**Table 6. Hypotheses Summary**

	<b>Hypotheses</b>	<b>Supported/ rejected</b>	<b>Nature of the relationship</b>
<b>H Perception of Subliminal Messages</b>	<b>1:</b> H 1. 0: The perception of subliminal messages has no statistical influence on consumers' purchasing intention. H 1. a: The perception of subliminal messages has a statistical influence on consumers' purchasing intention.	Rejected	Unsignificant
<b>H Awareness of Subliminal Messages</b>	<b>2:</b> H 2. 0: The awareness of subliminal messages has no statistical influence on consumers' purchasing intention. H 2. a: The awareness of subliminal messages has a statistical influence on consumers' purchasing intention.	Rejected	Unsignificant
<b>H Knowledge of Subliminal Message</b>	<b>3:</b> H 3. 0: The knowledge of subliminal message has no statistical influence on consumers' purchasing intention. H 3. a: The knowledge of subliminal message has a statistical influence on consumers' purchasing intention.	Rejected	Unsignificant
<b>H Subliminal Persuasion</b>	<b>4:</b> H 4. 0: Subliminal persuasion has no statistical influence on consumers' purchasing intention. H 4. a: Subliminal persuasion has a statistical influence on consumers' purchasing intention.	Rejected	Unsignificant
		Supported	Significant and positive

### 4.3 Interpretation

As a matter of fact, subliminal messages exist in online advertising. The propagation of formats and technologies available to advertisers have transformed social networks into a real field of innovation and creativity. Elements of subliminal messages in online advertising, explicitly, perception of subliminal messages, awareness of subliminal messages, knowledge of subliminal message and subliminal persuasion have a statistical influence on consumers' purchasing intention.

Several studies have been carried out on this subject to test the behavioral effects and to know whether subliminal messages modify consumption and purchasing behavior. The study of (Riener, Chalfoun, & Frasson, 2014); (Riener, 2017); (Phil Tinline, 2015), deduced that a subliminal image increases consumers' purchasing intention and their actual consumption. These results support the findings found in this article. However, subliminal messages cannot create a need in consumers but activate an already existing need in them, on two conditions:

- If the product that is subliminally "offered" is already part of their consumption habits
- Whether the same product is available immediately after activation of the requirement.

Sutil-Martín and Rienda-Gómez (2020) and Deshan Ilangakoon and Abeywardena (2018) observed in their study that when consumers are informed and aware about the presence of subliminal messages and their influence, the effects of these messages disappeared. In their studies, perception and knowledge, and awareness of subliminal messages decreases consumers' purchasing intention to a zero limit and can even diminish it. These results show a pure contradiction with obtained in this study.

A subliminal message is a stimulus (any element presented in advertising with the capability of causing a change in behavior in the observed subject) which is not consciously perceived by the person who receives it; it is "outside" the level of consciousness, but it excites the senses well (Calin, 2018).

In advertisements, hidden subliminal messages are used to arouse, excite, trigger and appeal to the unconscious parts of the brain. It can even change consumers' purchasing and consuming habits. Subliminal messages are stored in consumers' subconscious mind for future reference. Whenever something related to this information comes to consumers' eyes again, the latter remember that particular product or item.

The technique of subliminal advertising claimed to manipulate the consumer unconsciously, and without the latter even knowing that the product had been presented to him. A subliminal message is an audio or video signal incorporated into a sound or visual medium, designed so that its perception is located just below a threshold which is that of consciousness.

The whole principle of sound subliminal is based on the intensity of the received signal. The creator of subliminal messages can make a signal subliminal by adjusting its intensity so that the subject hears it without being aware of it. It is demonstrated that the brain was aware of the subliminal signal and that certain treatments were taken into account thanks to this stimulus.

## 5. Conclusion and Recommendations

Subliminal advertising is a fascinating topic presenting many controversies and divergent opinions. It is considered one of the latest scientific research based on conspiracy theories and mass manipulation. This study explained the major elements of the concept of subliminal messages in advertising, its theories, and its influence on Lebanese consumers' buying intention and reached its objectives. Subliminal means "under the consciousness". Subliminal images are images that can influence human behavior by acting directly on the brain. They may or may not be visible depending on the nature of the image. The first of these images is imperceptible to the naked eye, but nevertheless recorded by our brain without our knowledge. The second is practically imperceptible, but it is visible. We will see, for example, that this practice can accelerate the reaction speed of the thinking time. The third and most visible is a fixed image hidden in a setting.

The augmented reality system also reproduces the subliminal messages present in online advertisements. The best solution is to censure excessive advertising and manipulation. The subliminal image is an image which is undetectable to the naked eye but which the brain processes anyway. Current legislation prohibits this type of image in advertising.

Advertisers should limit the use of subliminal messages in online advertising and should invent new strategies to adapt to the emergence of new communication channels. Advertisers should excel at seizing all the opportunities to create real consumers' needs and desires to increase their purchasing intentions and their actual consumption behaviors. Marketing campaigns should reach preferred targets more effectively at a lower cost to create a base of loyal consumers. The latter is a long-lasting effective marketing strategy that marketing managers should rely on to increase their sales and the company' profit.

If today subliminal techniques, causing the unconscious to act should be stopped, advertisers should start focusing on the usage of suggestion marketing strategy. The latter reflects the action of suggesting; to give birth to an idea, a feeling, without exposing it openly. This method is seen as less sneaky than the subliminal because the viewer is aware of what he is seeing and is therefore tolerated by law.

### 5.1 Study Limitations and Future Research

The first limit of this research is a theoretical limit which manifests itself in the scarcity of research and works interested in the concepts of subliminal messages in messages and consumers' purchasing intention, however, it presented a theoretical contribution to knowledge.

A second limitation of this work is related to the small sample size of consumers. Even if the researcher collected 510 valid questionnaires, this response rate remains unrepresentative to the Lebanese population and therefore limits the generalization of the collected results.

As for the future avenues of research, it would be interesting to assess the effectiveness of some consumer anticipation and the protection against manipulation with regard to subliminal messages. These facts formulate the following question as a subject of future research: "Would a warning allow



consumers to avoid falling into the ‘trap’ of this marketing strategy, which is increasingly used these days”?

## References

- Ahmad Sofi, S., Ahmad Nika, F., & Professor, A. (2013). Impact Of Subliminal Messages In TV Advertisements on Customer Behaviour (A Case Study of Youth in Kashmir Province of J&K). *Journal of Business Management & Social Sciences Research*, 2(12), 2319-5614.
- Almoussa, M. (2014). The Influence of Risk Perception in Online Purchasing Behavior: Examination of an Early-Stage Online Market. *International Review of Management and Business Research*.
- Armstrong, A. M., & Dienes, Z. (2013). Subliminal understanding of negation: Unconscious control by subliminal processing of word pairs. *Consciousness and Cognition*, 22(3), 1022-1040. <https://doi.org/10.1016/j.concog.2013.06.010>
- Atrees, F. F. (2013). The concept of subliminal messages in Brand design. *The International Design Journal*.
- BĂLĂȘESCU, S. (2016). Subliminal influence on purchasing behavior in the retail market. *Bulletin of the Transilvania University of Brasov. Series V: Economic Sciences*.
- Bashir, A. M., Bayat, A., Olutuase, S. O., & Abdul Latiff, Z. A. (2019). Factors affecting consumers' intention towards purchasing halal food in South Africa: A structural equation modelling. *Journal of Food Products Marketing*. <https://doi.org/10.1080/10454446.2018.1452813>
- Birnbaum, D. (2012). Subliminal messages. *Artforum International*. <https://doi.org/10.1002/9781444327960.ch32>
- Byford, J. (2014). Swift Viewing: The Popular Life of Subliminal Influence. *European Journal of Communication*. <https://doi.org/10.1177/0267323113511899a>
- Calin, M. F. (2018). The influence of subliminal messages on decision-making capacity. In *Proceedings of DIALOGO-CONF 2018 ORI*. <https://doi.org/10.18638/dialogo.2018.4.2.5>
- Chiesa, P. A., Liuzza, M. T., Acciarino, A., & Aglioti, S. M. (2015). Subliminal perception of others' physical pain and pleasure. *Experimental Brain Research*, 233(8), 2373-2382. <https://doi.org/10.1007/s00221-015-4307-8>
- Deshan Ilangakoon, S., & Abeywardena, K. Y. (2018). The use of subliminal and supraliminal messages in phishing and spear phishing based social engineering attacks; Feasibility study. In *13th International Conference on Computer Science and Education, ICCSE 2018*. <https://doi.org/10.1109/ICCSE.2018.8468681>
- Dijksterhuis, A., Aarts, H., & Smith, P. K. (2012). The Power of the Subliminal: On Subliminal Persuasion and Other Potential Applications. In *The New Unconscious*. <https://doi.org/10.1093/acprof:oso/9780195307696.003.0005>

- Elci, M., & Sert, A. (2015). Subliminal advertising and its ethical dimensions in the social media age. In *Handbook of Research on Effective Advertising Strategies in the Social Media Age*. <https://doi.org/10.4018/978-1-4666-8125-5.ch020>
- Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-Based Nursing*. <https://doi.org/10.1136/eb-2015-102129>
- Hejase, H., Hamdar, B., Farha, G., & Boudiab, R. (2013). SUBLIMINAL MARKETING: AN EXPLORATORY RESEARCH IN LEBANON. *Journal of Business & Management*, 1(3). Retrieved from <http://centreforexcellence.net/J/JBM/JBM>
- Huang, T. H., Yeh, S. L., Yang, Y. H., Liao, H. I., Tsai, Y. Y., Chang, P. J., & Chen, H. H. (2015). Method and experiments of subliminal cueing for real-world images. *Multimedia Tools and Applications*, 74(22), 10111-10135. <https://doi.org/10.1007/s11042-015-2804-1>
- Irianto, H. (2015). Consumers' attitude and intention towards organic food purchase: An extension of theory of planned behavior in gender perspective. *International Journal of Management, Economics and Social Sciences (IJMESS)*.
- Jiang, L. (Alice), Yang, Z., & Jun, M. (2013). Measuring consumer perceptions of online shopping convenience. *Journal of Service Management*. <https://doi.org/10.1108/09564231311323962>
- Karam, R., Haidar, M. A., Khawaja, A., & Al Laziki, G. (2017). Effectiveness of Subliminal Messages and Their Influence on People's Choices. *European Scientific Journal, ESJ*. <https://doi.org/10.19044/esj.2017.v13n17p262>
- Knez, I. (2014). Affective and cognitive reactions to subliminal flicker from fluorescent lighting. *Consciousness and Cognition*, 26(1), 97-104. <https://doi.org/10.1016/j.concog.2014.02.006>
- Martin Oliver. (2014). Subliminal messages in advertising. *LivingNow Magazine Australia*.
- Matsumoto, M., Chinen, K., & Endo, H. (2018). Remanufactured auto parts market in Japan: Historical review and factors affecting green purchasing behavior. *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2017.10.266>
- Miles, J. (2014). Tolerance and Variance Inflation Factor. In *Wiley StatsRef: Statistics Reference Online*. <https://doi.org/10.1002/9781118445112.stat06593>
- Nayyar, M. S. R. (2017). Psychology of Brand Creation and Management: Subliminal Advertising. *International Journal of Science and Research (IJSR)*.
- Nguyen, Gizaw, A. (2014). Factors that influence consumer purchasing decisions of Private Label Food Products A case study of ICA Basic. *Factors That Influence Consumer Purchasing Decisions of Private Label Food Products*.
- Pascual-Miguel, F. J., Agudo-Peregrina, Á. F., & Chaparro-Peláez, J. (2015). Influences of gender and product type on online purchasing. *Journal of Business Research*, 68(7), 1550-1556. <https://doi.org/10.1016/j.jbusres.2015.01.050>

- Patak, A. A., Naim, H. A., Ma'ruf, A., & Abdul Ghafar, M. N. (2016). Design and validation of online learning environment questionnaire. *International Journal on Advanced Science, Engineering and Information Technology*. <https://doi.org/10.18517/ijaseit.6.3.732>
- Phil Tinline. (2015). Does subliminal advertising actually work? *BBC News*.
- Pindoria, M. (2015). *Subliminal messages in video—Do they really work? —BBC R&D*.
- Punniyamoorthy, R. (2017). Subliminal Advertisement and Its Impact in Online Shopping. *International Journal of Emerging Research in Management and Technology*. <https://doi.org/10.23956/ijermt/sv6n4/112>
- Riener, A. (2017). Subliminal Perception or “Can We Perceive and Be Influenced by Stimuli That Do Not Reach Us on a Conscious Level?” In *Emotions and Affect in Human Factors and Human-Computer Interaction*. <https://doi.org/10.1016/B978-0-12-801851-4.00019-7>
- Riener, A., Chalfoun, P., & Frasson, C. (2014). The potential of subliminal information displays to change driver behavior. *Presence: Teleoperators and Virtual Environments*. [https://doi.org/10.1162/PRES\\_a\\_00170](https://doi.org/10.1162/PRES_a_00170)
- Riener, A., & Thaller, H. (2014a). Subliminal visual information to enhance driver awareness and induce behavior change. In *AutomotiveUI 2014-6th International Conference on Automotive User Interfaces and Interactive Vehicular Applications, in Cooperation with ACM SIGCHI-Proceedings*. <https://doi.org/10.1145/2667317.2667328>
- Riener, A., & Thaller, H. (2014b). Subliminal Visual Information to Enhance Driver Awareness and Induce Behavior Change. *Proceedings of the 6th International Conference on Automotive User Interfaces and Interactive Vehicular Applications—AutomotiveUI '14, (SEPTEMBER 2014) (pp. 1-9)*. <https://doi.org/10.1145/2667317.2667328>
- Ruch, S., Züst, M. A., & Henke, K. (2016). Subliminal messages exert long-term effects on decision-making. *Neuroscience of Consciousness*, 2016(1), niw013. <https://doi.org/10.1093/nc/niw013>
- Sabir, R. I., & Mehmood, H. (2016). The Impact of Subliminal Messages through Music on Consumers' Behavior towards Hyper Stores in Punjab, Pakistan. *Asian Business Research*. <https://doi.org/10.20849/abr.v1i1.10>
- Saunders, M., & Tosey, P. (2013). The Layers of Research Design. *Rapport*.
- Shaouf, A., Lü, K., & Li, X. (2016). The effect of web advertising visual design on online purchase intention: An examination across gender. *Computers in Human Behavior*. <https://doi.org/10.1016/j.chb.2016.02.090>
- SivaKumar, A. K., & Gunasekaran, A. (2017). An Empirical Study on the Factors Affecting Online Shopping Behavior of Millennial Consumers. *Journal of Internet Commerce*. <https://doi.org/10.1080/15332861.2017.1317150>
- Smith, P. K., & McCulloch, K. (2012). *Subliminal perception*. *Encyclopedia of Human Behavior*. <https://doi.org/10.1016/B978-0-12-375000-6.00350-5>

- Sofi, S. A., & Nika, F. A. (2013). Impact Of Subliminal Messages In TV Advertisements on Customer Behaviour (A Case Study of Youth in Kashmir Province of J&K). *Journal of Business Management & Social Sciences Research*.
- Sofi, S. A., Nika, F. A., Shah, M. S., & Zarger, A. S. (2018). Impact of subliminal advertising on consumer buying behaviour: An empirical study on young Indian consumers. *Global Business Review*. <https://doi.org/10.1177/0972150918791378>
- Sur, R. (2015). Impact of subliminal messages on consumer behavior: A fresh look into the future. *Journal of Interdisciplinary and Multidisciplinary Research*.
- Sutil-Martín, D. L., & Rienda-Gómez, J. J. (2020). The Influence of Unconscious Perceptual Processing on Decision-Making: A New Perspective From Cognitive Neuroscience Applied to Generation Z. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2020.01728>