

---

## The Perceived Image of Nudity in Digital Advertisements

Lindos Daou

*Notre Dame University, Louaize – Lebanon, lidaou@ndu.edu.lb*

Lea Maksoud

*Holy Spirit University of Kaslik – Lebanon*

Follow this and additional works at: <https://journals.usek.edu.lb/aebj>



Part of the [Business Commons](#), and the [Economics Commons](#)

---

### Recommended Citation

Daou, Lindos and Maksoud, Lea (2023) "The Perceived Image of Nudity in Digital Advertisements," *Arab Economic and Business Journal*: Vol. 15 : Iss. 1 , Article 1.

Available at: <https://doi.org/10.38039/2214-4625.1025>

This Research Article is brought to you for free and open access by Holy Spirit University of Kaslik Journals. It has been accepted for inclusion in Arab Economic and Business Journal by an authorized editor of Holy Spirit University of Kaslik Journals.

## RESEARCH ARTICLE

# The Perceived Image of Nudity in Digital Advertisements

Lindos Daou <sup>a,\*</sup>, Lea Maksoud <sup>b</sup>

<sup>a</sup> Effat University, College of Business, Jeddah, KSA

<sup>b</sup> Holy Spirit University of Kaslik, Lebanon

### Abstract

The perception of nudity in ads is a very wide and critical topic and it has been commonly used in advertising campaigns in different countries. Many factors influence the perception of customers in advertisements such as gender, education level, culture and race. The purpose of this study is to determine how taboo related to sex and nudity is perceived in ads and how it effects the brand itself. Data was collected *via* an online questionnaire and was distributed to Lebanese women of different age groups, educational levels, religions, affiliations and occupations. The results showed that nudity level affects consumers' attention and interpretation of digital advertisements. Furthermore, the study concluded that the presence of nudity in ads has an effect over the purchasing intention.

*Keywords:* Taboo, Sex, Nudity, Digital advertisement, Women, Perception, Image, Lebanon

## 1. Introduction

Nowadays, taboo is considered as one of the various elements used in the communication strategy since it has been widely used in visual marketing campaigns, especially in advertising around the world. Taboo is a widely spread theme in the Middle East whereby religion plays an important role in the acceptance and tolerance of a variety of behaviors.

Taboos, like behaviors, can be noticed and tracked in all areas of social activities. They are primarily dictated by religious, racial, and social beliefs which make an individual's perception of a taboo situation unique. That being said, the concept of taboo can be further exploited by the marketing industry in advertising to attract the attention of potential consumers by testing social limits and boundaries. The fact that advertisements can reveal significant and rationalized information about the way a society functions makes them the perfect element for this study.

Furthermore, ads representing the same product can be the subject of alteration when presented in

different regions and societies as there are different forms of taboo in every culture and nation. Since each culture may view things differently, consequently the ad needs to be modified so that its primary message can be perceived as intended. This is also the case when it comes to taboos since what a certain society or region may perceive as taboo, another may not, or what is deemed socially acceptable in a certain society, may be considered frowned upon in another.

In Lebanon the national culture includes a big paradox between conservatism and tolerance (Gillespie et al., 2019). Digout and Tayeh (2015) studied the perception of consumer nudity in advertisements in Lebanon and assumed that non-Muslims have a much lower conservatism as compared to their Muslim counterparts. Rice and Al-Mossawi (2002) suggested in their study that religion in the Middle East highly impacts consumer behavior and people's response to advertising messages.

Our study will mainly focus on getting a deeper understanding of how the use of sex taboo in digital advertisements affects consumer perception. Thus, the value of this research resides in a deeper

---

Received 5 October 2022; revised 30 November 2022; accepted 7 December 2022.  
Available online 20 January 2023

\* Corresponding author.  
E-mail addresses: [ldaou@ndu.edu.lb](mailto:ldaou@ndu.edu.lb) (L. Daou), [leamaksoud@gmail.com](mailto:leamaksoud@gmail.com) (L. Maksoud).

<https://doi.org/10.38039/2214-4625.1025>

2214-4625/© 2023 Holy Spirit University of Kaslik. This is an open access article under the CC-BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

understanding of the Lebanese consumers' behavior vis-à-vis their perception concerning the exhibition of sex in ads. It would be present for marketers' insights about the contents of their ads in the Lebanese market as there is limited research conducted in this area of study.

Our research question states “to what extent does the use of sex taboo in digital ads affect consumer perception?” The later will help us get a clearer idea regarding this topic. As this subject is yet to be evoked in details for the Lebanese market, our study proves to be beneficial for the Lebanese businesses, marketing agencies, brand managers, as well as consumer research organizations.

## 2. Literature review

### 2.1. The concept and evolution of taboo

The source of the word “taboo” is believed to be of Polynesian origins as stated by [Steiner \(2013\)](#) in his book entitled “Taboo”. The word was introduced in European countries in the eighteenth and nineteenth centuries, however it quickly lost its original meaning and became a part of vernacular languages as well as a synonym of “forbidden”, whereas in Polynesia it was a combination of the terms “holy” and “forbidden”. Therefore, the concept of taboo in Polynesia created a connection between sacredness and prohibition which resulted in a sense of defilement and impurity.

Nowadays, we consider many types of taboo in our societies. In the United States, taboo behaviors and their tolerance have been changing and evolving in recent years. While few actions remain taboo for much of the country, there has been an increasing shift to moral acceptance for some actions over time. In Europe, one of the most discussed taboos is homosexuality. Factors like age, sex, level of education, religion and economic development of the country play an essential role in the social tolerance of homosexuality. Moreover, results revealed that the more countries are rich, the more their habitants are likely to accept homosexuality, hence the rise of social acceptance of homosexuality in Europe over time ([Donaldson et al., 2017](#)).

In general, countries in the Middle East are not as open minded and tolerant for taboos compared to other regions since they are dominated by religious beliefs and influence, thus infidelity and homosexuality are considered as extreme taboos. Muslim countries, for example, tend to be very strict about sex rather than non-Muslim countries ([Digout & Tayeh, 2015](#); [Druckerman, 2008](#)). However, in Lebanon, a

country well known for its religious diversity, people are very sensitive about their beliefs and are usually protective of them which makes religions and sects an intriguing taboo in Lebanon. Similarly to other Middle Eastern countries, politics are also considered a taboo in Lebanon.

#### 2.1.1. Sexual taboo

Regarding sexual taboos in societies, some of these taboos are incest (sexual activity between family members or close relatives) while others are abnormal sexual relations like pedophilia and sexual brutality. Besides the taboo of direct sexual relationships, exposing certain body parts in public, especially with females, is also considered as taboo that varies widely between societies. Elsewhere, human body parts are known to be linked to taboos. For females, exposing body parts in public is suppressed by strict social rules but also varies from one society to another. Thus, when using sex taboos as a marketing strategy, companies tend to generally exploit female sexuality to increase likability and attraction towards the product.

After carefully reviewing different taboo actions and their perception by different laws and societies, we can conclude that taboo plays a quite central role in all societies.

Consequently, taboo situations can dictate a person's opinion, thinking and decision making in life. Hence, our study will unveil and attempt to understand the perception of consumers concerning advertisements containing sexual taboos.

#### 2.2. Advertisements and sex appeal

Companies are seeking to grab customers' attention in their ads mostly by promoting nudity. Nudity in ads has positive as well as negative impact, which will help in promoting the brand itself.

Studies have shown that a sexually oriented appeal will more likely improve the effectiveness of an ad rather than harm it ([Hermannsdóttir & Gunnarsdóttir, 2015](#); [Reichert et al., 2001](#)). On another note, research found that attitudes toward ads featuring irrelevant sex appeals are more positive in situations which facilitate intuitive instead of reasoned thinking ([Lanseng, 2016](#)).

Within this context, sex appeal is divided into 2 types: nudity and sexual explicitness.

Nudity refers to the amount and style of clothing worn by models in ads. They can be divided into four categories depending on the level of nakedness: demure, suggestive, partially undressed and totally nude ([Choi et al., 2022](#); [Reichert & Ramirez, 2000](#)).

While demure dressing is supposed to be an everyday dress, suggestive dressing refers to dresses that will stimulate sexual imageries, like tight blouses and miniskirts. In ads, demure dressing will expose less body parts because it has no intent of provoking sexual appeals. The definition of demure is clothing that is modest and indicates shyness. Partially undressed – or “partially clad” – suggests a stage of undress where a female's breasts are partially visible, or a woman is wearing revealing underwear like bikinis. Finally, total nudity would mean that no clothing is displayed by the woman or model in the ad.

It is important to note that in ads, the models have to be “sexy”, which means that they have to be physically and sexually attracting to stimulate arousal from consumers (Fennis & Stroebe, 2015).

Nevertheless, sexual explicitness can be referred to as the expression of sexuality. This expression can be divided into a visual aspect and a verbal aspect. In ads, the level of sexuality expressed can influence the level of arousal stimulated by the consumer. While the visual aspect of sexual explicitness focuses on the imagery (level of nudity displayed, movement and environment), the verbal aspect focuses on the dialogue and captions.

Advertisers nowadays are willing to do whatever it takes to get to the top of that pyramid. Thus, eroticism, nudity and sex are being widely used to attract the audience and separate the brand image of competitors. Studies conducted over the past 30 years coincide with the above as ads containing nudity are constantly evolving (Trivedi & Teichert, 2021). In order to create effective ads, advertisers will often use sex and eroticism as a strategy. However, this strategy often aims to deceive the consumer and manipulate them into the purchasing decision. For example, the use of sexy models in promotional messages is what appeals to countless viewers due to how models are perceived. Individuals tend to identify with the model in a way that will provoke positive feelings which may increase the likelihood of creating a connection resulting in a purchasing decision.

### 2.3. *Impact of sexual appeal in ads on consumers' attitude*

The use of taboo in advertising represents a double-edged sword. While creating attention on one hand, it could be harmful for the brand image on the other. When it comes to the impact on consumers' attitude, little research has been done in this regard. However, in a study comparing gender types to the use of sex in ads conducted by Sengupta

and Dahl (2008), results have shown that women have a tendency to be more negative than men hence form a negative attitude towards brands expressing sex in their advertisements. Moreover, the same study revealed that women possessing a positive attitude towards sex reacted favorably to the sex appeal in the ad. Women with less positive attitude towards sex had negative reactions towards the same ads (Drake, 2017).

Alternatively, applying shock tactics in ads may have a more severe impact. Studies show that the use of provoking, offensive and controversial ads attracts the attention of the majority of the target audience when applied in the commercial industry. This is because these ads tend to violate acceptable social norms while the stimulus attracts attention and consequently evokes the consumers' surprise. For the consumers to understand the message of the ad, they need to interpret it further. Thus, surprise caused by violation of socially acceptable norms attracts attention and stimulates a perception process. In the fashion industry, brand image is of radical importance. Therefore, these types of ads are created not only for commercial reasons but also to provoke discussion and create memorable images. While these shock tactics do have a good track record with target consumers, incidental consumers perceive the brand as offensive and outrageous. Moreover, reserved consumers tend to completely ignore the ad therefore the brand (Yan & Chapa, 2020). In the end, it is important to note that every consumer reacts and interprets an ad uniquely based on several subjective factors like interests, life experience, moral norms, religion and culture.

### 2.4. *Concept of perception*

In consumer behavior, the concept of perception involves more than just the physical stimuli that is the biological use of the sense organs and it also includes the stimuli related to the conditions and the surrounding field of the individual. Consequently, perception can be defined as the entire process by which an individual becomes aware of the environment and interprets it so that it will fit into his or her frame of reference (Solomon, 2020).

After an individual has been exposed to a stimulus and has devoted some attention to it, they will be in a position to perceive it. This is known as the perception process. From a biological standpoint, however, various theories revolve around perception, and they are related to the five sense organs through vision, hearing, taste, smell and touch. Marketers nowadays work hard on all the components defining the perception process in order to

properly communicate with consumers. The stages of perception are composed of the following:

#### 2.4.1. Exposure

Exposure is the first step of the perception process. It occurs when a stimulus comes within the range of one of the five primary receptive organs, namely vision, hearing, taste, smell and touch. Exposure is the minimum requirement of perception. It is safe to say that no matter how great a message is, it will not be perceived unless the individual is exposed to the stimulus (Arnould et al., 2016).

#### 2.4.2. Attention

From a marketing perspective, attention is crucial since no matter how often a consumer is exposed to a message, if no attention took place, the message is of no use. Therefore, the real challenge faced by the marketing industry is to explain which stimuli people will notice and how to enhance consumer attention. A study initiated by Trivedi and Teichert (2021) compares consumers' reactions to nudity in printed ads. This study indicated that women expressed a positive result in terms of nude and semi-nude while males showed significantly positive results as their attention to nudity ads was more significant.

The theory of Trivedi and Teichert (2021) states that the attention process and its impact on consumers' perception in ads can lead us to establish our first hypothesis which we will note H1: The nudity level positively affects consumers' attention in digital ads.

#### 2.4.3. Perceptual organization

According to Gestalt's theory in psychology, the whole is different from the sum of its parts. Based on that belief, perceptual organization is the act of assembling small blocks of objects or information and organizing them to form larger ones. This is done in a way that will make sense to the individual (Cherry, 2016).

#### 2.4.4. Interpretation and distortion

As stated by Vanaja and Phil (2013), pp.69, interpretation is the process whereby people draw upon their experience, memory and expectations to interpret and attach meaning to a stimulus. Two possible reasons are behind the faulty decoding of messages from selective interpretation: mis-indexing and distorting.

In addition to that, consumers will also distort the information to be consistent with prior brand beliefs. Studies have also shown that over time,

consumers will form product beliefs that will alter their perception towards that same product (Featherman et al., 2021). After we have defined interpretation and distortion, we can establish our second hypothesis for this study which we will note H2: The nudity level positively affects consumers' interpretation of the ad.

#### 2.4.5. Retention

Retention is considered as the consumers' ability to retain information that will eventually support their product attitude and beliefs. The information collected is then stored in the memory of the individual. Therefore, the consumers' memory will play a critical part in guiding the perception process.

### 2.5. Purchase and consumption decision

These five phases of perception are followed by the decision-making phase. A consumer will either go through with the purchasing decision hence their perception phase will be considered positive, or the consumer will not go through with the purchase hence their purchasing decision will be perceived as negative. A typical consumer will pass through five stages during the buying process. This can be referred to as the five-stage model of the consumers' buying process (Solomon, 2020). It is presented in Fig. 1. Knowing this, companies try to develop activities and programs that can reach consumers during all the decision stages (Kotler & Lane, 2016).

The buying process starts when the consumer recognizes a need. This will inspire thoughts of making a purchase. After the problem is recognized, consumers will start to search for information. The sources of information can include public ones like social media, commercial ones such as advertisements or even personal sources such as family or friends. Before a buying decision is made, consumers will evaluate the products based on their beliefs, or "past experiences", as well as their attitude, or "liking the product". Depending on these factors and other one like price range, consumers will either buy the product or start evaluating other similar products from different brands. After the buying decision has been made, all the information collected during the process will be stored in the consumers' memory. The consumers will then recall their product knowledge when they are motivated and have the ability and opportunity to go through with a similar purchasing decision. This is referred to as the post-purchase behavior (Kotler & Lane, 2016). Based on a study initiated by Wirtz et al. (2018) to study the effect of exposure to sexual



Fig. 1. The five-stage model of the consumer's buying process. Source: Solomon, 2020.

appeals in ads on memory, attitude and purchase intention, sexual appeals have a negligent effect on the purchasing intention of the participants.

After we have presented the theory of Wirtz et al. about intention and consumption decision, we can establish the third hypothesis for the empirical study. This hypothesis will be noted H3: The nudity level has a positive effect on the purchase intention.

### 3. Research methodology

#### 3.1. Research design

The research was based on a conclusive descriptive research design where the quantitative method for data collection was applied. The research strategy implemented depended on the survey research. The researcher's intervention is considered to be minimal and the study took place in a natural and non-contrived setting. The unit of analysis was individuals and the data were gathered once as cross sectional.

The data was collected using an online survey, a structured research instrument that was disseminated through “Qualtrics program”. Then the results were based on a large sample size that is representative of the population. We analyzed a sample size of more than 200 responses. The quantitative method is ideal to test the different hypotheses set since it can determine the relationship between independent and dependent variables for a given population. In our case, the quantitative approach is descriptive since it measures the test subjects once for each variable and aims to establish the association between variables. In our study, we will use a more or less “demure” ad, followed by a “partially nude” ad and finally a “nude” ad which is a shock ad. Playing on these elements will help give clearer answers to our research questions and illustrate all the dimensions of our study for the Lebanese population. The variables were adopted from a study conducted by Wirtz et al. (2018) on the effect of sexual appeal on attitude, memory and purchasing intention.

For our research, we decided to launch an online survey that can reach a wide range of individuals. We wanted to collect data from female individuals from different age groups and cultural backgrounds in order to compare their perceptions of different variables for three types of digital advertisements of

the same brand. We chose to study only female respondents because females perceive ads differently than men.

For this purpose, we constructed a survey including a variety of questions that are representative of the individual's background as well as questions discussing the digital ads that are of relevance to the variables and hypotheses. We included two filter questions in our survey related to age and gender. These two questions will ensure that only data obtained from women who are 18 years and above were included in our study.

#### 3.2. Sampling

We chose the Lebanese population since little is known about consumers' behavior and more precisely consumers' perception to sex appeal in digital ads in this country. The general population in Lebanon is estimated to be around 5.296 million as of November 2022 (CIA., 2022), out of which 2.7 million are females. However, around 1 million of them are in the age groups of 0–18. Therefore, the total population size is estimated to be around 1.7 million since we are addressing females that are above 18, as nudity in ads are not appropriate to the younger category according to cultural considerations. Thus, we chose to send our questionnaire to a sample of 250 women and the sample size is deemed adequate as per Taherdoost (2017).

#### 3.3. Data collection

The survey was electronically distributed targeting females with the use of the “Qualtrics” program. The questionnaire contained numerous questions regarding personal background (age group, religion) as well as the “test ads” (three digital ads with different scale of nudity for the same brand) as explained above. Each ad contains the same questions that are relative to the perception and the attitude towards both the ad and the brand. The questions in the survey were semi-open and closed questions. The rating was divided into five levels varying from strongly disagree to neutral and strongly agree based on the Likert Scale. Finally, the data was collected anonymously which helped us keep a high level of discretion and confidentiality both for the study and for the participants.

Table 1. Extraction of latent factors, variability, and factor loadings.

| Factor                     | Mean | Standard deviation | Mean rank | Median score | $\chi^2$ (df) for Friedman's test | p value for Friedman's test |
|----------------------------|------|--------------------|-----------|--------------|-----------------------------------|-----------------------------|
| Attention 1                | 3.43 | 0.71               | 1.74      | 3.67         | 87.119 (2)                        | 0.0001                      |
| Attention 2                | 3.40 | 0.69               | 1.67      | 3.5          |                                   |                             |
| Attention 3                | 3.99 | 0.81               | 2.59      | 4            |                                   |                             |
| Interpretation of the ad 1 | 2.34 | 0.82               | 1.17      | 2.33         | 108.078 (2)                       | 0.0001                      |
| Interpretation of the ad 2 | 2.26 | 0.71               | 1.64      | 2.33         |                                   |                             |
| Interpretation of the ad 3 | 3.16 | 1.03               | 2.64      | 3            |                                   |                             |
| Purchasing intention 1     | 2.37 | 0.72               | 1.88      | 2.4          | 19.835 (2)                        | 0.0001                      |
| Purchasing intention 2     | 2.68 | 0.75               | 2.27      | 2.8          |                                   |                             |
| Purchasing intention 3     | 2.43 | 0.89               | 1.86      | 2.4          |                                   |                             |

Table 2. Nudity levels.

| Level of Nudity | KMO   | $\chi^2$ (df) for Bartlett's test | p value for Bartlett's test |
|-----------------|-------|-----------------------------------|-----------------------------|
| Level 1         | 0.829 | 663.117 (55)                      | 0.0001                      |
| Level 2         | 0.858 | 830.869 (66)                      | 0.0001                      |
| Level 3         | 0.840 | 1101.328 (66)                     | 0.0001                      |

#### 4. Research findings

The results showed that most of the data collected was mainly from two age groups: 18–24 (44.14%) and 25–30 (51.72%). The remaining responses originated from the 40–59 age group (4.14%). No responses from the 60 and above age group were collected. We will base our analysis on the three age groups that responded to the survey. It is important to note that these results were somewhat logical since only an online survey was used to collect data and younger generations tend to be more open to online surfing. Most of the individuals who answered the survey were Christians (85.52%); 13.10% of participants were Muslims, while only 1.38% of participants belonged to other religions. The survey was distributed online however, it was mainly spread to contacts and individuals inhabiting areas dominated by the Christian religion due to convenience.

As for the hypothesis testing, the mean of the items clustering on the same factor were computed separately for each of the three nudity levels. Thus, latent factor “Attention” has three means, namely “Attention 1” for nudity level 1, “Attention 2” for nudity level 2, and, “Attention 3” for nudity level 3. These were repeated measures for the same latent factors. In order to study whether there are significant differences between the three levels or not, Friedman's ANOVA is chosen. Table 1 report below represents Friedman's ANOVA and Wilcoxon signed rank tests (see Table 2).

Friedman's ANOVA showed significant differences between the three levels of nudity for Factor “Attention”,  $\chi^2(2) = 87.119$ , and  $p < 0.05$ . Wilcoxon's signed rank test will evaluate the pairwise

differences. It reports the mean negative and mean positive ranks. For instance, the mean negative ranks for pair “Attention 2 – Attention 1” is related to the participants which have higher ranks on “Attention 1”, *i.e.*, that tend toward higher agreement on the statements of items clustering on “Attention 1” with respect to “Attention2”. The mean positive ranks for the same pair point to the *vice versa* process, *i.e.*, participants have a higher agreement on the statements of items clustering on “Attention2” with respect to “Attention 1”. Wilcoxon's signed rank test found significant differences between the mean ranks of pairs “Attention 3 – Attention1”, and “Attention 3 – Attention 2”,  $Z_{31} = -7.015$ ,  $Z_{32} = -7.080$ , and  $p < 0.05$  for both pairs. Median scores show that “Attention 3” ( $Me = 4$ ) has increased with respect to “Attention 1” ( $Me = 3.67$ ) and “Attention 2” ( $Me = 3.5$ ). There is no clear evidence of difference between “Attention 1” and “Attention 2”,  $Z_{12} = -1.690$ , and  $p > 0.05$ . This finding supports H1 in which it was stated that nudity level has an effect over “Attention”; that is, the higher the nudity level, the more “Attention” the ad will get.

Friedman's ANOVA showed significant differences between the three levels of nudity for Factor “Interpretation of the ad”,  $\chi^2(2) = 108.078$ , and  $p < 0.05$ . Wilcoxon's signed rank test found significant differences between the mean ranks of pairs “Interpretation of the ad 3 – Interpretation of the ad1”, and “Interpretation of the ad 3 – Interpretation of the ad 2”,  $Z_{31} = -7.722$ ,  $Z_{32} = -8.780$ , and  $p < 0.05$  for both pairs. Median scores show that “Interpretation of the ad 3” ( $Me = 3$ ) has increased with respect to “Interpretation of the ad1” ( $Me = 2.33$ ) and “Interpretation of the ad 2”

( $Me = 2.33$ ). There is no clear evidence of difference between “Interpretation of the ad 1” and “Interpretation of the ad 2”,  $Z_{12} = 1.297$ , and  $p > 0.05$ . This finding supports H2 which states that nudity level has an effect over “Interpretation of the ad”; that is, the higher the nudity level, the more interpretation the ad will undergo.

Friedman's ANOVA also shows significant differences between the three levels of nudity for Factor “Purchasing intention”,  $\chi^2(2) = 19.835$ , and  $p < 0.05$ . Wilcoxon's signed rank test found a significant difference between the mean ranks of pairs “Purchasing intention 2 – Purchasing intention 1”, and “Purchasing intention 3 – Purchasing intention 2”,  $Z_{21} = 5.049$ ,  $Z_{32} = -3.749$ , and  $p < 0.05$  for both pairs. Median scores show that “Purchasing intention 2” ( $Me = 2.8$ ) has increased with respect to “Purchasing intention 1” ( $Me = 2.4$ ) and “Purchasing intention 3” ( $Me = 2.4$ ). There is no clear evidence of difference between “Purchasing intention 1” and “Purchasing intention 3”,  $Z_{13} = -0.596$ , and  $p > 0.05$ . This finding partially supports H3 which states that nudity level has an effect over “Purchasing intention”, that is, a higher nudity level somehow increases the intention to purchase. Further investigations are needed to clarify this issue. These are discussed within the next section where the effect of nudity levels is controlled by “Religion”, “Education level”, “Age”, and “Salary range”.

Friedman's ANOVA was applied for the three nudity levels while taking into account the different categories of age, religion, region of residence, education and salary.

The adequacy of the sample was measured by the Kaiser-Meyer-Olkin statistic KMO. The latter is judged acceptable starting from  $KMO = 0.5$ . Sphericity is a measurement of the correlation between items. The latter should be between 0.3 and 0.8 in absolute value.

Sphericity is assessed *via* Bartlett's test of sphericity. The table below reports from KMO, and Bartlett's test. It is clear that KMO values for all levels of nudity are well above the acceptable threshold of 0.5. Then the sample size is adequate for EFA. Bartlett's test of sphericity is statistically significant for all levels of nudity with  $p$  values less than 0.05. The latter indicated that the inter-items correlation matrix is not an identity matrix.

The extraction of latent factors is based on Kaiser's criterion where all factors with eigenvalues less than 1 were discarded. For each of the three nudity levels, three factors were extracted. These factors combined explained 56.79% of the variability for nudity level 1, 59.94% of the variability for nudity level 2, and 64.64% of the variability for nudity level 3. From

the questions clustering on each factor, “Attention”, “Interpretation of the ad” and “Purchasing intention” were identified. Factor loadings which can be sought as the correlation between factors and items are reported in the table below. All loadings less than 0.3 in absolute value are omitted. It was clear that only three items are kept for “Attention”, three items for “Interpretation of the ad”, and five items for “Purchasing intention” for nudity level 1. As for nudity levels 2 and 3, four items are kept for “Attention”, three items for “Interpretation of the ad”, and five items for “Purchasing intention”.

Internal consistency for the items was evaluated *via* Cronbach's alpha where all values near or above 0.7 is an indicator of good to strong internal consistency. The results reported Cronbach's alpha measurements for the three factors under the three levels of nudity. All Cronbach's alpha values were found above 0.7, hence the strong internal consistency of the clustering items.

## 5. Discussion

Data was screened by removing all participants with missing answers. Then all participants whose standard deviations of responses is less than 0.5 were screened out to ensure a good variability for the model. The sample size after the screening process reached 145 respondents. Exploratory Factor Analysis (EFA) was applied for the 15 Likert Scale items to extract the latent factors manifested with the 15 items. EFA was used repeatedly, *i.e.*, the analysis was run three times, each corresponding to a level of nudity. We observed that the majority of respondents had already obtained a Bachelor degree at least.

### 5.1. Testing H1: the nudity level positively affects consumers' attention in digital ad

Relying on the encountered results by Friedman's ANOVA and Wilcoxon signed rank tests along with the Cronbach's alpha measure of above 0.7, it was revealed that the finding supported H1 which states that nudity level has an effect over “Attention”. In other words, the higher the nudity level is, the more “Attention” the ad will get. Having Lebanon as an example for a well-diverse country of different cultures and religions, people were attracted to ads with nudity to satisfy either their purchasing desire or a certain psychological desire. For example, in lingerie products, especially ads for K-Lynn lingerie, their focus is on the women's breast. Through their ads, they tackle the suggestively sexual part in every woman whereby a large number of consumers are attracted to buy their products for better appearance.



### 5.2. Testing H2: the nudity level positively affects consumers' interpretation of the ad

Results by Friedman's ANOVA and Wilcoxon signed rank tests have also supported the second hypothesis that nudity level has an effect over "Interpretation of the ad", which means the higher the nudity level is, the more interpretation the ad will undergo. In the presence of social media, especially in the Lebanese society, interpretations escalate rapidly when it comes to nudity. Taking for example talk shows on TV broadcasting stations, whereby any nudity attempt of Lebanese celebrities becomes a debatable issue, since it could instantly be correlated to religion and psychology by considering that attempt as a sin or a psychological disorder.

### 5.3. Testing H3: nudity level has a positive effect over "purchasing intention"

Upon testing the third hypothesis, it also revealed a positive result upon testing it through Friedman's ANOVA and Wilcoxon signed rank, yet with a positive Cronbach Alpha result above 0.7. Perfumes are always promoted through ads showing nudity, in relation to the intimacy of choosing a personal odor. For instance, Tom Ford revealed sexy men and women in their ads being nude, showing that by using their perfume, both men and women would reach certain confidence. Therefore, they get interested in purchasing their product aiming to satisfy a self-actualization need based on a purely hedonic need.

It is crucial to take into consideration the use of nudity and sexual appealers in ads, in order to push actual or potential buyers to buy a certain product or try any service related to it in order to live a unique experience trying to feel hot or sexy like the models in the ad. Thus, new brands seeking to launch their product offering in the region frequently focus their marketing strategy on using taboo tactics and clear-cut shock values (in advertisements). The latter has the capacity to alter the buyers' attention, interpretation of the advertisement as well as their intention to purchase.

## 6. Conclusions

To sum up, the perceived image of taboo in digital ads is seen differently among women depending on their educational level, religion, age and income. Showing nudity in ads will sometimes push customers to buy these brands, however it can also have a negative impact towards the brand itself in terms of brand image.

This study will help companies to be aware of their ads and promotions before publishing them. It will also help them recognize their target audience and the way they should communicate and promote their message to the them.

On another note, marketers and advertisers need to be aware of their strategies prior to any marketing implementation. In addition to that, they need to take into consideration the Lebanese culture, diversity, religion and other mentioned-above factors. This will have a positive impact on their exposure, their sales and most importantly their profits. The results of the study could prove useful in terms of branding and orienting promotional methods to better market and communicating a product towards consumers, since a prior comprehensive understanding of consumer perceptions of the product in question can better direct the advertising campaign strategies.

One of the limitations of the study were the rules and policies banning fully nude advertising. For instance, the analogous to legislation in Lebanon forbids public displays of full-frontal nudity within an advertising campaign. Another limitation was that the numbers of Christian and Muslim participants were not proportionate since more Christians answered the survey than their counterparts in other religions. Finally, we recommend that future studies include cultural aspects from different countries and complement the study with a comparative analysis taking into consideration different variables.

### Conflicts of interest

We have no conflicts of interest to disclose. All authors declare that they have no conflicts of interest.

### References

- Arnould, E., George, Z., & Price, L. (2016). Perception: Worlds of sensation. <http://highereducation.com/>. (Accessed 5 April 2016).
- Cherry, K. (2016). Gestalt laws of perceptual organization. <http://psychology.about.com/>. (Accessed 22 March 2016).
- Choi, H., Yoo, K., Reichert, T., & Northup, T. (2022). Sexual ad appeals in social media: Effects and influences of cultural difference and sexual self-schema, Effects and influences of cultural difference and sexual self-schema. *International Journal of Advertising*, 41(5), 910–929.
- CIA. (2022). *The world factbook*. <https://www.cia.gov/>. (Accessed 22 November 2022).
- Digout, J., & Tayeh, M. (2015). Consumer's perception of female nudity in advertisements. *EuroMed Journal of Management*, 1(1), 40–56.
- Donaldson, C. D., Handren, L. M., & Lac, A. (2017). Applying multi-level modeling to understand individual and cross-cultural variations in attitudes toward homosexual people across 28 European countries. *Journal of Cross-Cultural Psychology*, 48(1), 93–112.
- Drake, V. E. (2017). The impact of female empowerment in advertising (femvertising). *Journal of Research in Marketing*, 7(3), 593–599.

- Druckerman, P. (2008). Lust in Translation: Which country has the highest rates of infidelity?. <http://www.alternet.org>. (Accessed 18 March 2016).
- Featherman, M., Jia, S. J., Califf, C. B., & Hajli, N. (2021). The impact of new technologies on consumers beliefs: Reducing the perceived risks of electric vehicle adoption. *Technological Forecasting and Social Change*, 169, 120847.
- Fennis, B. M., & Stroebe, W. (2015). *The psychology of advertising*. Psychology Press.
- Gillespie-Lynch, K., Daou, N., Sanchez-Ruiz, M. J., Kapp, S. K., Obeid, R., Brooks, P. J., & Abi-Habib, R. (2019). Factors underlying cross-cultural differences in stigma toward autism among college students in Lebanon and the United States. *Autism*, 23(8), 1993–2006.
- Hermannsdóttir, A., & Gunnarsdóttir, S. (2015). Sexual appeals in advertisements. *Institute of Business Research*, 1–23.
- Kotler, P., & Lane, K. (2016). *Marketing management 15th edition: Pearson education limited*.
- Lanseng, E. J. (2016). Relevant sex appeals in advertising: Gender and commitment context differences. *Frontiers in Psychology*, 7, 1456.
- Reichert, T., Heckler, S. E., & Jackson, S. (2001). The effects of sexual social marketing appeals on cognitive processing and persuasion. *Journal of Advertising*, 30(1), 13–27.
- Reichert, T., & Ramirez, A. (2000). Defining sexually oriented appeals in advertising: A grounded theory investigation. *Advances in Consumer Research*, 27(No.1).
- Rice, G., & Al-Mossawi, M. (2002). The implications of Islam for advertising messages: The Middle Eastern context. *Journal of Euromarketing*, 11(3), 71–96.
- Sengupta, J., & Dahl, D. W. (2008). Gender-related reactions to gratuitous sex appeals in advertising. *Journal of Consumer Psychology*, 18(1), 62–78.
- Solomon, M. (2020). *Consumer Behavior: Buying, having, and being* (13th ed.) Global edition.
- Steiner, F. (2013). *Taboo* (Vol. 15). Routledge.
- Taherdoost, H. (2017). Determining sample size; How to calculate survey sample size. *International Journal of Economics and Management Systems*, 2.
- Trivedi, R. H., & Teichert, T. (2021). Consumer reactions to nudity in print advertising: Comparing same gender and opposite gender effects. *Psychology and Marketing*, 38(5), 819–833.
- Vanaja, V. C., & Phil, M. (2013). A study on customer perception towards HDFC limited. *International Journal of Management Sciences and Business Research*, 2(No.4).
- Wirtz, J. G., Sparks, J. V., & Zimbres, T. M. (2018). The effect of exposure to sexual appeals in advertisements on memory, attitude, and purchase intention: A meta-analytic review. *International Journal of Advertising*, 37(2), 168–198.
- Yan, S., & Chapa, S. (2020). Exploring the use of shock advertising by for-profit and nonprofit organizations in China. *Journal of Cultural Marketing Strategy*, 5(1), 11–21.