



ORIGINAL ARTICLE

The Role of TARP Factor in Social Network Advertising in Brand Awareness and Purchase Intention of Sport Brands

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ABSTRACT

Background. Nowadays, one of the factors affecting the social network advertising is the numbers or frequencies of sending an advertisement. **Objectives.** The objective of this study was to investigate the role of the Target Audience Rating Point factor in social network advertising in brand awareness and purchase intention of sport brands. **Methods.** This quasi-experimental study was conducted on a sample of 225 sport science students at Ferdowsi University of Mashhad. The subjects completed the standard purchase intention and brand awareness questionnaires and the obtained data were analyzed through ANOVA, Tukey and Dunnett's T3 tests. **Results.** The results of one-way ANOVA showed that there was a significant difference among the mean scores of purchase intention and brand awareness in the three groups. In other words, the purchase intention and brand awareness were significantly higher in the group that viewed the advertisement at TARP standard level compared to two groups that viewed the advertisement more than or less than the standard TARP level. Also, the purchase intention and brand awareness levels were significantly higher in the group that viewed the advertisement more than the standard TARP level, compared to the group that viewed the advertisement less than the standard level. **Conclusion.** The number of advertisements sending on social networks based on the TARP phenomenon is an effective factor in brand awareness and purchase intention of sport brands. Also, increasing and decreasing the number of advertisements compared to standard TARP reduces the effect of advertising on brand awareness and purchase intention.

KEYWORDS: *Brand Awareness, Purchase Intention, Social Network, Sport Advertising, TARP.*

INTRODUCTION

Consumer behavior is one of the areas interested by marketing researchers to evaluate the variables influencing the behavior and intention to purchase products and services (1). Since various variables are involved in shaping brand awareness and consumers' purchasing intention, gaining knowledge of these variables and the values that influence consumer purchasing behavior can help marketers to create a desirable and superior competitive mechanism over their competitors (2). In this regard, one of

the new ways to influence brand awareness and purchasing behavior of the customers is to use advertising in the context of social network. Nowadays, it is very easy to access many social networks through smartphones. It has brought great success for implementing advertising campaigns in the context of social networks. Their mobile apps have become so popular. Instagram and Telegram, which are fully mobile-based social networks, are one of the most successful and popular ones. Nowadays, well-

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known brands are advertised in these social networks (3).

In fact, the advent of social networks has paved the ways for using all the features of the media as well as producing customized advertising appropriate to time and location. It has also increased timely delivery of service to users and the effectiveness of advertising messages. Advantages of mobile social network advertising include high persistence and high responsiveness (feedback) of them compared to email or television advertising. All of the above-mentioned cases indicate the high potential of advertising through mobile social networks (4). In this regard, advertising experts believe that marketers can send a good advertisement to the customer at the right time via mobile. However, it should be noted that the mobile phone is a personal communication channel and will attract immediate customer attention. Hence, in order that advertising to be valuable for a customer, advertisers must have confidence and trust in the effectiveness of their message (5).

One of the factors influencing advertising is the repetition of advertising messages. In other words, with regard to many consumer goods, people tend to purchase a particular type of good only because it has been highly advertised for the consumer by repetition (6). In fact, the longer an advertisement is exposed to the consumers, the more it will affect the subconscious mind of them when making a decision or purchasing. However, it should also be noted that if the repetition exceeds the threshold of audience tolerance, it will result in boredom. In this situation, not only the purchasing intention will not increase, but also it will not result in a reaction targeted by the advertisement (7). Brand awareness may also be positively increased by repeated observing of advertising, increased familiarity, and strong associations with purchasing experiences (8). However, as noted, this repetition should not be excessive as it can hurt the audience and have a negative result.

In general, it is important to understand the frequency and number of appropriate and standard advertisement during advertising a brand to influence the minds, brand awareness, and the customer purchasing intention. One of the ways to reach the standard number of advertisement is to use Target Audience Rating Point score (9). In simple words, TARP is the standard frequency to which an advertisement is exposed to an

audience. TARP indirectly reflects the extent to which an audience is exposed to an advertisement. The TARP score that assesses how many people in the target market are sitting in front of their receiving device during displaying an advertisement. The appropriate TARP score for advertising new brands is around 100 - 300 TARP. In this regard, 50-TARP advertising per week is considered light and 400-TARP advertising per week is considered as heavy advertising (10). Weekly TARP score is obtained by multiplying the average number of times the advertisement has been exposed to an audience by the percentage of people who have viewed the advertisement per week. For example, the entire target market may have viewed the advertisement during a week and they have viewed it 2.1 times on average or only 50% of the audiences may have viewed it but they have viewed it 4.2 times on average, then the total TARP in these two states would be equal and its figure will be 210.

Today, the TARP phenomenon is used in social media and the Internet to regulate the number of ads sent. In this regard, we can refer to the studies of Cowling et al. (2010) and sepehrian (2019).

In this regard, some researchers have examined the role of repetition and the frequency in which advertisements are exposed to the audience and concluded that the when the audience is exposed to the advertisement, it will have a greater effect on the minds, brand awareness, attitude, and purchasing intentions (11-13).

On the other hand, Burton et al. (2019) examined the relationship between the numbers of sending an advertisement during the advertising period and purchase intentions and concluded that consumers who viewed it 10 times or more had higher purchase intention compared to those who were less exposed to advertising (14).

Kronrod and Huber (2019) also examined the role of time in reversing the negative effect of repeated advertising and finally found that brands with heavy (in terms of frequency) advertising caused boredom in an audience initially, but these repetitions made these brands relatively lasting in memory and it moved from low priority to high priority in the audience mind and brand awareness was enhanced (15).

Saputro and Prihandono (2018) also examined the effect of frequency of advertising on

customers' purchase intention and their results showed that frequency or number of advertisement during an advertising period had no significant effect on purchase intention (16).

In this regard, some researchers such as Rau et al. (2014) and Schmidt and Eisend (2015) concluded that if the target audience is exposed to heavy advertising, the effect of advertising on the purchase intention and customer awareness of the product and the brand would decrease (17, 18).

Despite all the benefits of advertising through the social network, further research is needed to help advertisers use this modern media to advertise their company's products and brands. Also, when using internet advertising, it is crucial to recognize the situation and the factors that influence its process. One of the effective factors in influencing the process of social network advertising is brand awareness and customer purchasing intentions. As stated, TARP is the numbers of sending an advertisement to the audience, but unlike the importance of TARP or the standard number of sent advertisements in the field of advertising, this phenomenon has not been investigated so far. The fact is that recognizing the factors affecting the impact of advertising on the customers' minds and intentions is important. On the other hand, there are some ambiguities in the impact of the number of advertisings on their effectiveness. Regarding these facts, the researcher finally embarked upon examining the role of the Tarp factor and different rates of advertisings in social networks obtained from different Tarps. In this way, he investigated the brand awareness and the desire to buy sports brands. According to the theoretical framework, the research hypotheses are presented as follows:

H1: Standard TARP and less than standard TARP level of sending an advertisement will make a significant difference in sport brand awareness level.

H2: Standard TARP and more than standard TARP level of sending an advertisement will make a significant difference in sport brand awareness level.

H3: More than standard TARP and less than standard TARP level of sending an advertisement will make a significant difference in sport brand awareness level.

H4: Standard TARP and less than standard TARP level of sending an advertisement will

make a significant difference in sport brand purchase intention level.

H5: Standard TARP and more than standard TARP level of sending an advertisement will make a significant difference in sport brand purchase intention level.

H6: More than standard TARP and less than standard TARP level of sending an advertisement will make a significant difference in sport brand purchase intention level.

MATERIALS AND METHODS

Participants. The present study is an applied research and it is quasi-experimental in terms of method. The statistical population of this study consisted of all students of sport science in Ferdowsi University of Mashhad who were selected by a convenience sampling method. Considering the research background and quasi-experimental nature of the research, the need to have complete control over the statistical samples, sending advertisement per one month for the statistical samples and receiving feedback from them, the sample size was determined at 225 people. The statistical samples were divided into three homogeneous groups (each group included 75 people).

Research Tools. The research tools included Zaichkowsky purchase intention (1994) and Aaker brand awareness (1996) standard questionnaires and demographic information. The demographic information questionnaire included information on age, gender, level of education, the electronic media used, and the preferred media for receiving advertising via social media of telegram, Instagram, and email. The content and face validities of the questionnaires were confirmed by sport marketing experts. The purchase intention Questionnaire was translated using a forward-backward Method and its structure was examined using factor analysis (Table 1). Aaker Brand awareness questionnaire was approved by many researchers, including (19). Also, in a pilot study to calculate the reliability of measurements, 50 questionnaires were sent electronically to samples, after collecting them, factor analysis (Table 1) through Amos23 software and Cronbach's alpha through SPSS23 software were calculated, the reliability of purchase intention questionnaire was calculated at 0.92 and reliability of brand awareness questionnaire was obtained at 0.93.

Table 1. The Purchase Intention Questionnaire Factor Analysis

	P-Value	Df	CMIN	CMIN/ Df	RMSEA	NFI	CFI
Purchase intention	0.001	29	30.36	1.04	0.03	0.909	0.995

Research Method. After selecting the advertising media from the available options by statistical sampling, the audiences were divided into three homogeneous groups and were assigned into separate advertising channels. Then, for the first group, the fake brand advertisement at the level of less than standard TARP was sent, for the second group, the fake brand advertisement at level of more than standard TARP was sent, and for the third group, the fake brand advertisement was sent at the level of standard TARP. To avoid the impact of simultaneous advertising of other media, the same fake brand was selected for all three groups. The standard TARP for new brands is around 100-300 TARP, Hence, in the present study, 200 TARP was considered that is standard and desirable. Accordingly, the standard number of the advertisement was estimated at 16 advertisements per month. Also, according to the lowest and highest levels of TARP (50 and 400, respectively) which are on the two sides of the advertisement continuum, in the present study, the under the standard number of sending advertisement was calculated at 4 and the over the standard number of sending advertisement was calculated at 32. It should be noted that the advertisements were sent to the three groups during one month. The reason for selecting one month was to repeat the advertisement in different forms (photo, clip, text) and give the audience an opportunity to view the ads and think well about the product and brand and his or her intention to purchase. Moreover, this period would help researcher to measure wellbrand awareness, as measuring these variables cannot be done at the moment and it requires some passing time. On the other hand, with increasing the advertising period to more than one month, it might cause boredom in an audience. Considering this aspect of the study, the present study is more accurate than previous studies.

Data Analysis. In order to analyze the data, mean, standard deviation, tables were used at the level of descriptive statistics. Also, at the level of inferential statistics, Kolmogorov-Smirnov test was used to assess the normality of the data distribution, Cronbach's alpha was used to

evaluate the reliability of the questionnaires and finally ANOVA and Tukey and Dunnett's T3 test were used to compare the mean of purchase intention and sport brand awareness in three groups.

RESULTS

The results showed that the mean age of the samples was 23.72 years and 60% of them were female and 40% were male. The highest number of statistical samples was respectively in the education of BSc students (66%), MSc students (26%) and PhD students (8%) in sports sciences. Also, investigating the status of the samples in terms of interested media to receive advertisement showed that the telegram was found to be the highly-interested advertising media (74%). The results of examining the normality of the research data by using Kolmogorov-Smirnov test for purchase intention in three groups of advertisements (less than standard TARP, equal to standard TARP, and more than standard TARP, respectively) was obtained at 0.065, 0.097, and 0.192, respectively, and the sport brand awareness was obtained at $\alpha = 0.093, 0.093, 0/091$, respectively, in three groups. The parametric tests were used for data analysis.

To investigate the role of the TARP factor in social media advertising in the brand awareness and purchase intention variables, the scores of purchase intention and brand awareness after one month of advertising were first obtained through purchase intention and brand awareness questionnaires in all three study groups. One-way ANOVA was used to compare the mean scores of purchase intention and brand awareness of three sport brands. In this regard, the results of homogeneity of variances test for the variable of sport brand purchase intention indicated heterogeneity of variances ($P < 0.05$) and the variances for sport brand awareness were homogeneous ($P > 0.05$). One-way ANOVA results showed that there was a significant difference between the mean scores of purchase intention ($F = 86.88, P < 0.001$) and brand awareness ($F = 224.42, P < 0.001$) in all three groups (Table 2).

Table 2. One-Way ANOVA Analysis of Purchase Intention and Brand Awareness Scores

Advertising Group (Based on the Number of Sent Advertisements)	Mean	SD	F	P
Brand purchase intention				
Less than standard TARP	34/09	10/19	86/88	P < 0/001
More than standard TARP	46/32	6/18	86/88	P < 0/001
Standard TARP	50/50	6/79	86/88	P < 0/001
Brand awareness				
Less than standard TARP	9/04	2/04	224/42	P < 0/001
More than standard TARP	13/96	2/04	224/42	P < 0/001
Standard TARP	16/00	2/11	224/42	P < 0/001

To determine the significant difference among three groups in terms of purchase intention, due to the heterogeneity of variances in this variable, Dunnett’s T3 test was used. The results showed that there was a significant difference among three groups. In other words, the purchase intention in the third group (received advertisement at standard TARP level) was significantly higher than the first and second groups who viewed the advertisement less and more than standard TARP level, respectively.

Also, the purchase intention in the group receiving the advertisement more than the standard TARP level was higher than the first group who received the advertisement less than the standard TARP level and this difference was statistically significant (Table 3). Therefore, the first, second, and third hypotheses were accepted and the different frequencies of sending advertisement made a significant difference in the purchase intention variable.

Table 3. The Results of Dunnett’s T3 Test Analysis for the Brand Purchase Intention

Advertising Group (Based on the Number of Sent Advertisements)	Mean difference	p
Standard TARP		
Less than standard TARP	16/41	p < 0/001
More than standard TARP	4/18	p < 0/001
More than standard TARP		
Less than standard TARP	12/22	p < 0/001

Scheffe post hoc test was used to determine the significant difference among the three groups in terms of brand awareness variable, considering homogeneity of variances. The results confirmed significant differences among the three groups. In other words, brand awareness was significantly higher in the third group that viewed advertisement at the standard TARP level, compared to the first and second groups that viewed the advertisement lower and higher than

standard TARP level, respectively. Also, brand awareness was significantly higher in the group that viewed advertisement more than the standard TARP level, compared to the first group that viewed the advertisement less than the standard TARP level (Table 4). Therefore, the fourth, fifth, and sixth hypotheses were also confirmed and the different numbers of sending the advertisement resulted in a significant difference in the brand awareness variable.

Table 4. Scheffe Post Hoc Test Results for the Brand Awareness

Advertising Group (Based on the Number of Sent Advertisements)	Mean difference	p
Standard TARP		
Less than standard TARP	6/96	p < 0/001
More than standard TARP	2/04	p < 0/001
More than standard TARP		
Less than standard TARP	4/92	p < 0/001

DISCUSSION

Nowadays, social media has high capacity to attract people compared to traditional media, such as radio, television, and magazines. Also, Internet users

are turning away from traditional media and are increasingly using social media to search for information (20). In this regard, although the Internet has provided an efficient media for advertising,

individuals are seeking to maximize their investment in this area (21). Given the importance of advertising, assessing its effectiveness is one of the most fundamental marketing issues that can be evaluated in a variety of ways (22).

In this regard, one of the factors affecting the effectiveness of social network advertising is the frequency of sending advertisements. In fact, the volume and frequency of appropriate and standardized advertisements sent by sports manufacturing and service companies to their audiences in the advertising period is crucial for influencing the mentality, brand awareness and purchase intention of customers. In this regard, one of the ways to achieve the standard number of advertisements is to use an ad TARP score or a standard limit that will maximize the effectiveness of the advertisements. As a part of the results of the present study suggests, sending different numbers of advertisements creates different levels of brand awareness. In other words, in the standard number of sending advertisement due to the TARP phenomenon, brand awareness is significantly more than the purchase intention in sending advertisement more and less than the standard TARP level.

In this regard, since brand awareness decreased in the present study by sending advertisement more than the standard TARP level, it can be concluded that this result is in line with the results of the studies conducted by Saputro and Prihandono (2018), Schmidt and Eisend (2015) and Rau et al. (2014) who found that heavy or too much advertising reduces the effect of advertising on brand awareness significantly (16-18). On the other hand, what makes the present research different from the abovementioned studies is that in sending more ads compared to sending less than the standard, the brand awareness variable is significantly higher. We can consider this result consistent with the study of Cronrude and Huber (2019); they showed that sending more ads compared to sending fewer ads initially has a negative effect on brand awareness but subsequently leads to an increase in this variable (15).

Also, the present study showed that different number of sent advertisements leads to different levels of purchase intention. In other words, purchase intention is significantly higher in standard number of sending advertisement based on the TARP phenomenon than purchase intention in sending advertisement less or more

than the standard level. In this regard, studies conducted by Saputro and Prihandono (2018), Schmidt and Eisend (2015) and Rau et al. (2014) concluded that sending too much advertisement significantly reduced its impact on purchase intention. Their results are in line with those of the present study in this regard, since as the frequency of sending advertisement exceeded the standard level, purchase intentions decreased (14, 16-18). However, what distinguishes the present research from abovementioned studies is that with a larger number of ads sent than the standard (Tarp), we observed a tendency to buy more than in the case where the audience was exposed to ads less than the standard (Tarp). We can consider this result of our research consistent with the study of Barton et al. (2019); they showed that the customers' intention to buy is significantly higher when they are exposed to the ads more than the standard compared to when the audience is exposed to it less than the standard. Of course, we should note that sending too much advertising more than standard creates still a lower tendency to buy (14).

Advertising a dummy sports brand in this study provided useful findings for manufacturing and service organizations in applying their advertising tactics with regard to sending different number of advertisements to their audiences to influence consumers' purchase intention and brand awareness. In other words, by examining and comparing the results of the present study with those of previous studies, it was found that adjusting the number of sent advertisements according to the TARP factor plays a major role in increasing the advertising influence on brand awareness and intention of customers to purchase sports brands. Also, sending advertisements more than the standard TARP level compared to sending advertisements less than the TARP standard can be a more appropriate solution, but is less influential compared to the situation when advertisements are sent based on standard TARP level.

CONCLUSION

In general, due to the significant impact of different number of sent advertisements, based on the TARP phenomenon, in creating brand awareness and purchase intention and since a great number of studies have supported this result, the TARP phenomenon in advertising can be considered as key factor in increasing the effectiveness of advertising on enhancing the

brand awareness in audiences and consequently increasing their purchase intention. In this regard, advertising experts are recommended to pay attention to the frequency of advertisement repetition in their advertising programs, since increasing or decreasing repetition from the standard TARP level seems to reduce the effectiveness of advertising and consequently reduces their economic productivity. Of course, the sample of the study is a rather convenient one and its results should be further examined in other populations as well. In fact, the present research sample is not one of the "real customers" of a sports brand, and therefore the need for such research in the future in other populations seems necessary.

In other words, due to high cost of designing and sending any advertisement, sports trading companies do not need to send too much advertising, and thus, increase the cost of promotional programs to increase brand awareness and purchase intention of target customers. Also, lower number of advertisements will cause that the companies do not achieve maximum advertising effectiveness, because the maximum potential of the advertising and promotional program is achieved at the standard tarp level. Therefore, considering that the standard limit of Tarp for advertising brands is about 100-300 scores, the owners of sports brands and marketers can calculate the standard number of advertisements by dividing the "Tarp score" by "the percentage of people who observe advertisements in every time of sending them".

On the other hand, the present study suffers some limitations. First, the product advertised in the present study was a fake brand. In other words, it was on the introduction stage based on the product life cycle. Hence, it is recommended such research be carried out at other stages of the product life cycle to obtain more generalizable results.

Second, telegram was used as the advertising media in the present study, so it is recommended for future studies to use other Internet communication media and other advertising tools such as radio, television, and magazines. The researchers are also recommended to investigate different advertising media simultaneously to compare the differences between the different numbers of sending an advertisement in different media.

The third limitation of the research can be the statistical samples of the research, because they were selected only from the student population; of

course, due to the artificiality of the brand, we cannot consider them as real customers. In this regard, we recommend researchers to conduct such research in other statistical populations as well as among real customers of products with their specific brands in the market.

APPLICABLE REMARKS

- From an executive and practical point of view, the results of this study can provide useful information for sports marketers, manufacturers and sellers of sports and non-sports goods, sport clubs, sports industry policy-makers and advertising experts on increasing the effectiveness of advertising programs with regard to the frequency of sending advertisements based on the TARP phenomenon. In other words, our research has shown that it is better for advertising designers of sports manufacturing and services companies to adjust the number of advertisements based on the TARP phenomenon, since sending advertisement more or less than the standard tarp level reduces the influence of advertising on brand awareness and purchase intention of the customers.
- Additionally, due to the high cost of designing and sending each advertisement and since the results showed that sending advertisement more than the standard TARP level is less influential compared to sending advertisement at the standard TARP level, it is recommended for advertising companies that there is no need to spend costs more than the standard to get the maximum effectiveness of advertising and by saving the costs in this area they can use other advertising strategy such as celebrity endorsers and sponsoring sports events.
- Also, according to the results of this study, most of the statistical samples used at least one social media, so it is recommended to the activists and policymakers in the field of marketing and advertising to move away from traditional advertising space such as advertising billboards, television and so on and make more use of the Internet as a channel to communicate with their customers. In this regard, as it was found in the present study, in today's Iranian society, telegram is considered as one of the most popular social media, so it is recommended for authorities in the area of communication to provide appropriate conditions to remove the filter of this application and provide the conditions for making the optimum use of it. Of

course, we had some limitations of research such as the mere use of Telegram among the masses of social media, brand artificiality and statistical sample that is limited to the student and educated

population. Before applying the results of this research, it is necessary to pay attention to the differences between the conditions of this study and those of new environment.

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