

## The Effectiveness of Corporate Advertising in a Collegiate Fitness Center

Kuan-Chou Chen<sup>1</sup>, Yang Yu<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Physical Education, Hong Kong Baptist University, Hong Kong

<sup>2</sup>Graduate Student, Department of Physical Education, Hong Kong Baptist University, Hong Kong

Correspondence: Kuan-Chou Chen, Assistant Professor, Department of Physical Education, Hong Kong Baptist University, Hong Kong.

Received: June 5, 2017

Accepted: June 21, 2017

Available online: June 27, 2017

doi:10.11114/ijsss.v5i7.2458

URL: <https://doi.org/10.11114/ijsss.v5i7.2458>

### Abstract

The purpose of this research is to examine the effectiveness of the corporate advertisements in a collegiate fitness center in Hong Kong. In this study, a survey questionnaire was utilized to examine whether participants' demographic information influenced the consumers' attitude and purchase intention toward the product. A total of 112 valid samples were collected. The result showed there was a significant difference between genders in product purchase intention. And the research also found that participants' exercise time can make a significant difference on the attitude and purchase intention toward the products. Compared with non-sport product, the sport related products received higher scores of attitude and purchase intention from participants in the collegiate sport center. There existed some limitations (sample size, time, gender ratio) during the research process. The result indicated there is potential commercial value hidden in the Hong Kong collegiate fitness clubs.

**Keywords:** effectiveness, advertisement, Hong Kong, college, fitness center

### 1. Introduction

As a result of rapid economic development, individuals' material standards of living are improving, and many individuals are now able to pursue greater spiritual enjoyment and healthier lifestyles to enrich their leisure time (Li, 2011). In Hong Kong, the number of fitness centers has increased rapidly in recent years to satisfy consumers' needs in this regard. A survey conducted by the Asian Academy for Sport & Fitness Professionals (Asian Academy for Sport & Fitness Professionals [AAFP], 2011) reports that the number of fitness clubs in Hong Kong increased to 600 (2011) from 548 (2009), experiencing a growth rate of 9.5% over the 2009–2011 period. Hong Kong ranked first in terms of the number of fitness clubs during the same period among 60 cities in China (AAFP, 2009, 2010, 2011). As the fitness club industry in Hong Kong has developed, the administrators of sports-related corporations are realizing that fitness clubs have become important platforms from which they can effectively reach specific target population to market their products and services.

According to a report issued by Jamestown Sports and Fitness (2012), most patrons of fitness clubs are between 22 and 44 years of age and live or work within five miles from the club. Most patrons are white-collar workers who earn at least \$40,000 per year and who exercise at the fitness club to lose weight and to maintain a healthy lifestyle. Only a small percentage of patrons attend the gym for social contact. After analyzing the needs and background of the gym patrons, certain sportswear and sports equipment manufacturers have begun to utilize fitness clubs to reach their targeted customer segments. These companies post their advertisements in fitness clubs to market their products and services directly to consumers (Liesse & Ryan, 1991). In addition, non-sports product manufacturers also focus on these venues because a large percentage of their target customers are also patrons of fitness clubs. These manufacturers are attempting to enhance their products' associations with healthy and positive lifestyles to reach potential customers. Therefore, whether the advertised product is sports-related or not, fitness clubs have become important arenas for firms to target their consumers in advertising their products.

Fitness clubs located on college campuses have also become popular. Stotlar and Johnson (1989) has shown that 75% of the student population on campus use the college fitness club at least once during an academic year. Considering social concerns regarding adolescent health and the demand for fitness, teenagers and young adults have become major consumer groups of gyms and stadium facilities. There is potential commercial value hidden in campus fitness clubs. In North America, advertising revenues from collegiate settings are the primary source of revenue for fitness clubs,

revenue that is used to finance their operations and maintain their sports facilities (Turco, 1996). Unsurprisingly, advertising is an indispensable component of campus fitness clubs in North America.

Although posting advertisements in fitness clubs is a common marketing approach on North American campuses, advertisements are generally not posted in collegiate fitness clubs in Hong Kong. Therefore, this niche market may represent a new opportunity for universities to earn extra revenue. Accordingly, predicting the effects of advertising in a sports center is now a salient topic.

## **2. Literature Review**

Prior research regarding this topic has focused primarily on examining the effectiveness of advertisements in basketball arenas and fitness centers (Turley & Shannon, 2000). While only a few, such as Brand and Greenburg (1994), assessed the effects of commercial messages aimed at middle- and high-school students in classrooms. Other related studies regarding captive settings have focused on airport terminals and bus and metro stations. These studies aim to evaluate the effectiveness of advertising by investigating consumers' attitudes and purchase intentions toward the advertised products (Lai & Chung, 2007). However, no prior studies were identified to assess the effectiveness of corporate advertisements collegiate fitness centers in Hong Kong.

### *2.1 Sports Advertising History*

Advertising has been associated with sports at different levels for over 150 years. Transport industrial was the first firm to utilize a sports event for promotional purposes. In 1852, the New England Railroad Company provided transportation service for a boat race between Yale and Harvard. As compensation, the company was given permission to post their advertisements around the river.

Thousands of fans were involuntarily exposed to these advertisements, and the company brand was thus well promoted because it supported the event (Brooks, 1998). In the early 20<sup>th</sup> Century, many sports associations provided additional opportunities for corporations to purchase advertising copyrights. The first organizations to allow advertisements during competitions, such as the Olympics and professional baseball, cooperated well with numerous companies in sports marketing. At baseball games, outfield fences were printed as billboards (Stotlar & Johnson, 1989). Furthermore, certain corporations have become associated with the modern Olympics. As part of the 1896 Olympics, Kodak advertised in the book of official results (Kodak, 2000). Coca-Cola sponsored the Amsterdam Olympic Games by donating 1,000 cases of soft drinks and was rewarded the title of "Official Team Supplier" (Brooks, 1998). Since 2000, corporations have purchased advertisement copyrights not only for large sporting events but also for certain local sports contests. For example, the leaders of certain companies have participated in events with celebrities or toured as part of locally sponsored golf tournaments (Wilber, 1988). Currently, fitness centers are often regarded as grocery stores and retail outlets by marketers (Schlossberg, 1992) where virtually every available square foot is available for sale to sports advertisers (Turco, 1996). Recently, numerous corporations have spent millions of dollars on in-arena advertising to enhance their corporate image in local markets and to increase their visibility in the trading space (Hume, 1990). Local businesses seek to cultivate grassroots' attention by advertising in college fitness centers (Gardner & Shuman, 1988). This strategy focuses on grassroots efforts and has recently been shown to be successful. One company reported an increase in sponsorship spending from \$500 in 1994 to \$1.2 million in 1997 (Greenwald & Fernandez-Balboa, 1998). However, there are only scant data regarding the effectiveness of corporate advertising in a collegiate fitness center.

### *2.2 Measurement of Advertising Effectiveness*

Several different techniques are available to examine advertising effectiveness. The common test approach focuses on consumers' reactions to advertisements (Schultz & Schultz, 1998). Aided recall and recognition are two prominent techniques that test sports advertising effectiveness (Mullin, Hardy, & Sutton, 2014; Schultz & Schultz, 1998). Aided recall is used to determine the extent of consumers' memory of advertisements. During this process, consumers are generally asked specific questions related to a particular advertisement. Recognition is a technique that examines advertising effectiveness by asking interviewees whether they remembered a particular advertisement and the conditions surrounding its presentation, such as location, name of product and message content (Schultz & Schultz, 1998). A similar method was used for this study instead of the recall test. Participants were asked on a "yes" or "no" basis whether they had previously seen a particular advertisement. This research used a simple question instead of asking participants to select the most impressive advertisement from a total of 10 advertisements.

In addition to assessing the advertisement recall, numerous studies have tested the effectiveness of advertisements by analyzing consumers' attitudes toward the advertised products. Ajzen and Fishbein (1980) defined product attitude as "a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object". Nebenzahl and Homik (1985) studied the effectiveness of commercial billboards in sports arenas, and these authors evaluated effectiveness by recall, brand attitude and product purchase intention. Exposure to billboards may help

corporations elicit greater recall and improved attitudes from their consumers. Turco (1996) examined the effects of courtside advertising on commodity recognition and attitude changes among consumers. The results revealed that advertisement recognition by sports fans improved from pre-season to post-season. Moreover, attitudes toward marketers also improved. This study increased the attention on the importance of exposure to advertisements and the positive influence such exposure might have on a brand's attitude and purchase intention. However, it is difficult to compare billboard advertisements to printed posters in fitness clubs. In addition, attitudes studied in sports marketing research are frequently related to sports fans rather than their influence on consumers exercising at fitness centers.

Purchase intention has been defined as a consumer's desire to purchase a product or service (Spears & Singh, 2004). In this context, intentions are distinguished from attitudes; an intention is an individual's motivation and conscious plan to attempt to carry out a behavior, whereas an attitude is a summary evaluation. Morton and Friedman (2002) demonstrated that portrayals of advertisements in movies affected audiences' decisions to purchase advertised products and that negative portrayals led consumers to discontinue use of the product. However, certain studies have examined participants' purchase intentions in sports arenas. Another study has determined that purchase intentions for female shoppers tended to be more positive than for males (Davis, Lang, & San Diego, 2014). However, certain studies support this same phenomenon in college fitness clubs.

### *2.3 Collegiate Sports Marketing*

Currently, college sports centers are home to a considerable amount of relative stimuli to attract patrons' attention at any given point in time. Elements associated with the college sports center environment included dance teams, cheerleaders, student players, referees, coaches and other fans of games. In certain western countries, colleges and universities also benefit from corporate support. Colleges are continually seeking new sources of revenue because they have financial problems resulting from program spending growth and internal budget constraints. In an effort to solve these financial problems, sports managers at colleges and universities have used on-site advertising sales as a major source of revenue. Now more than ever, campus-level sports programs are no longer just a game for modern sports managers – they are a business. In the US, corporations spend approximately \$70 million annually on campus level sponsorships, which includes team sponsorships, bowl games and governing bodies (Gray, 1996). For example, corporate sponsorships add approximately \$3 million annually to Colorado University's budget (Goldberg, 1997). Corporations spend billions of dollars in the collegiate sports market because they believe that the investments are lucrative. Research from Ebenkamp and Khermouch (1996) indicates that undergraduate students account for \$96 billion in annual purchasing power; moreover, this consumer segment is characterized by longer-term brand preferences and positive attitudes toward sponsorship and advertising.

### *2.4 Hypotheses*

- H1.* Significant differences exist between the product categories (sport and non-sport) in participants' attitude towards product advertisement and their purchase intention of products.
- H2.* Significant differences exist between different demographic groups, including gender, age and educational background in participants' attitude towards product advertisement and their purchase intention of products.
- H3.* Significant differences exist between the exercise frequency, exercise categories, and exercise time in participants' attitude towards product advertisement and their purchase intention of products.

## **3. Method**

The primary purpose of this study is to examine the impact and effectiveness of corporate advertisements of different product categories in a collegiate fitness center. Besides product category, other independent variables were also examined, including participants' age, gender, educational background, exercise category, amount of exercise time and exercise frequency. Dependent variables included the participants' attitudes regarding the advertising and purchase intentions toward advertised products in the fitness center.

Four poster advertisements were designed for the sole purpose of this study and were divided into sports-related and non-sports-related categories. The sports-related products included Go-X Protein (Protein powder) and Sport Ring (a digital bracelet). The non-sports-related products were Yummy Pizza (Pizza) and E-Pad (personal computer). All products were fake and did not actually exist on the market. The poster advertisements were made out of identical materials and were the same size (8.3 inches high by 11.7 inches wide). The posters' layouts were identical in style, as this study did not aim to analyze differences in advertisement signage or colors.

The four posters were numbered and randomly placed on a notice board near the fitness room. The notice board was located near the primary route in the fitness center to allow students to view the signage as they passed through. The fitness center was open from 9:00 am to 10:00 pm, Monday through Sunday. Pursuant to this study, the posters were placed on the notice board on the first Monday. The viewing period spanned a period of two weeks in which students

were exposed to these posters during open hours. After two weeks, researchers randomly invited students who exercised at the sports center to complete the survey. Finally, the data were coded into a Microsoft Excel spreadsheet and analyzed using Statistical Package for the Social Science, version 21 (SPSS, 21.0) to generate descriptive statistics and to conduct a comparative analysis of the data.

### 3.1 Subjects

The participants in this study were students who exercised at the fitness center. The selected fitness center for this study was the Wai Hang Sports Centre, which is complex sport building that offers a wide range of sports facilities for students, staff and alumni to balance work and study. It was the primary arena for students to exercise and physical education classes. A total of 204 students participated in this study, but only 112 surveys were valid (82 males and 30 females).

### 3.2 Instrument

Tsiotsou and Alexandris (2009) utilized a 30-item survey that included the following: advertisement recall (4 items), advertisement design (4 items), attitude (8 items), purchase intention (8 items), demographic information (3 items) and personal exercise information (3 items). These scales were modified for the purpose of our study, but the overall scheme remained identical. All items were measured using a 7-point Likert scale that ranged from 1 (strongly disagree) to 7 (strongly agree).

## 4. Results

A total 214 participants completed the survey at the sports center and answered questions regarding product identification, product design, product attitude and production purchase intention. Individuals who could not remember any of the posters were deleted from analysis, as a result, 112 valid subjects were retained in final dataset.

The data was statistically analyzed in four parts: 1) descriptive statistics were generated to indicate frequencies and percentages for each independent variable; 2) a correlation test was employed to analyze whether there was a relationship among the product design, product attitude and product purchase intention; 3) an independent sample t-test was conducted to analyze whether there were differences between sports-related products and non-sports-related products with regard to product design, attitude and purchase intention; and 4) a two-way ANOVA test was conducted to examine whether the product category and participants' demographic information influenced their attitudes and purchase intentions toward the advertisements at the collegiate sports center.

### 4.1 Descriptive Statistics

Table 1. Descriptive statistics for demographic variables

Variables	Category	N	%
Gender	Male	82	73.2
	Female	30	26.8
Age	18-21	42	36.8
	22-26	53	46.5
	Above 26	17	14.9
Education Background	Undergraduate student	67	58.8
	Master student	35	30.7
	Doctoral student	6	5.3
	Other	4	3.5
Exercise Frequency	One day per week	19	16.7
	Two days per week	20	17.5
	Three days per week	40	35.1
	Four days per week	13	11.4
	Five days per week	14	12.3
	More than five days per week	6	5.3
Sports Category	Fitness room usage	81	71.1
	Basketball	13	11.4
	Badminton	16	14
	Table tennis	1	0.9
	Volleyball	1	0.9
Exercise Time	Less than 30 minutes	2	1.8
	30 minutes to 1 hour	32	28.1
	1 hour to 2 hours	54	47.4
	Longer than 2 hours	24	21.1

Participants' demographic information is presented in Table 1. The respondents included 82 males (73.2%) and 30 females (26.8%). The participants' ages were distributed across the following categories: 36.8% were 18-21, 46.5% were 22-26 and 14.9% were older than 26. The majority of respondents is undergraduate student (58.8%), and 30.7% of them are master students. With regard to personal exercise information, approximately 31.5% of the respondents go to the sports center three days per week, and only 5.3% of respondents exercised more than five days per week. The majority of respondents (71.1%) used the fitness room for exercise, and only 2% of the respondents played table tennis and volleyball. Nearly half of the participants (47.4%) spent one to two hours in the sports center per session, 28.1% of the respondents spent 30 minutes to an hour per session and 21.1% of the respondents exercised more than two hours at a time.

#### 4.2 Correlations

Table 2. Correlations among attitude, purchase intention and design

Factor	Attitude	Purchase intentions	Design
Attitude	1	.85**	.79**
Purchase intentions	.85**	1	.70**
Design	.79**	.70**	1

\*\* Significant at the 0.01 level

Pearson correlations were conducted to examine the relationship among participants' attitude towards product advertisements, purchase intention of products and perception of product design and are provided in Table 2. A meaningful pattern of correlations was observed among all factors (attitude, purchase intention and design), which ranged from 0.70 to 0.85. A significant, positive association was found between product attitude and purchase intention ( $r=0.85$ ,  $p<0.01$ ). A significant positive correlation was also found between product attitude and design ( $r=0.79$ ,  $p<0.01$ ) and between purchase intention and design ( $r=0.70$ ,  $p<0.01$ ).

#### 4.3 T-test

Table 3. Results of independent sample T-Tests for attitude, purchase intention and design of sports- and non-sports-related products

DV	PC	M	SD	N	t
Attitude	Sports product	4.52	1.08	112	1.66
	Non-sports product	4.35	1.06	112	
Purchase Intention	Sports product	4.25	1.23	112	2.43*
	Non-sports product	3.39	1.23	112	
Design	Sports product	5	1.02	112	7.26*
	Non-sports product	4.28	1.04	112	

\* Significant at the 0.05 level

Independent-sample t-tests were conducted to compare product attitude, purchase intention and product design toward sports-related products and non-sports-related products. The results are showed in Table 3. There was a significant difference in the purchase intention toward sports-related products ( $M=4.25$ ,  $SD=1.23$ ) and non-sports-related products ( $M=3.39$ ,  $SD=1.23$ );  $t = 2.43$ ,  $p<0.05$ . Moreover, there was a significant difference in the product design toward sports-related products ( $M=5.00$ ,  $SD=1.02$ ) and non-sports-related products ( $M=4.28$ ,  $SD=1.04$ );  $t=7.26$ ,  $p<0.05$ . However, there was no significant difference in product attitude toward sports-related products ( $M=4.25$ ,  $SD=1.08$ ) and non-sports-related products ( $M=4.35$ ,  $SD=1.06$ ).

#### 4.4 Two-way ANOVA in Product Attitude

Table 4 presents the summary of results from a series of two-way ANOVA in examining effect of independent variables (between-subject variables: gender, age, educational background, exercise frequency, sports category and exercise time) and their interactions with product category (within-subject variable) on participants' attitudes toward the advertisements. The only significant difference in participants' attitude was found between exercise time when control for product category ( $F(3, 108)=4.49$ ,  $p<0.05$ ). The post-hoc analysis indicates that when participants' exercise time exceed 30 minutes (30 min-1H, 1H-2H, More than 2H), they would have more positive attitude toward the advertisements than people who exercise fewer than 30 min. Nonetheless, there were no significant differences in participants' attitude between all the other independent variables and their interactions with the product category. Therefore, in regarding the attitude toward product, Hypotheses 1 and 2 were rejected but Hypothesis 3 was partially supported by the results.

Table 4. Summary of Two-way ANOVA results on attitude towards advertisements

Independent Variables	Type Sum Squares	III of Wilks' $\Lambda$	F	p	df	Error df	Post-Hoc
Gender	6.201	-	3.74	<b>.056</b>	1	110	
Product category	.164	.997	0.29	.592	1	110	
G*P	2.115	.967	3.73	<b>.056</b>	1	110	
Age	2.504	-	0.73	.482	2	109	
Product category	.697	.989	1.19	.278	1	109	
A*P	.475	.993	0.4	.669	1	109	
Education	.754	-	0.15	.933	3	108	
Product category	1.039	.984	1.78	.185	1	108	
E*P	1.472	.977	0.84	.475	3	108	
Frequency	17.469	-	2.17	.063	5	106	
Product category	1.040	.984	1.77	.186	1	106	
F*P	2.664	.965	0.77	.573	5	106	
Sports category	6.925	-	1.02	.400	4	107	
Product category	.941	.985	1.63	.205	1	107	
S*P	2.766	.957	1.2	.316	4	107	
Exercise Time	20.903	-	4.49*	.005	3	108	30 min-1H, More than 2H, 1H-2H > fewer than 30 min
Product category	.245	.996	0.41	.522	1	108	
ET*P	.313	.995	0.18	.913	3	108	

\* Significant at the 0.05 level

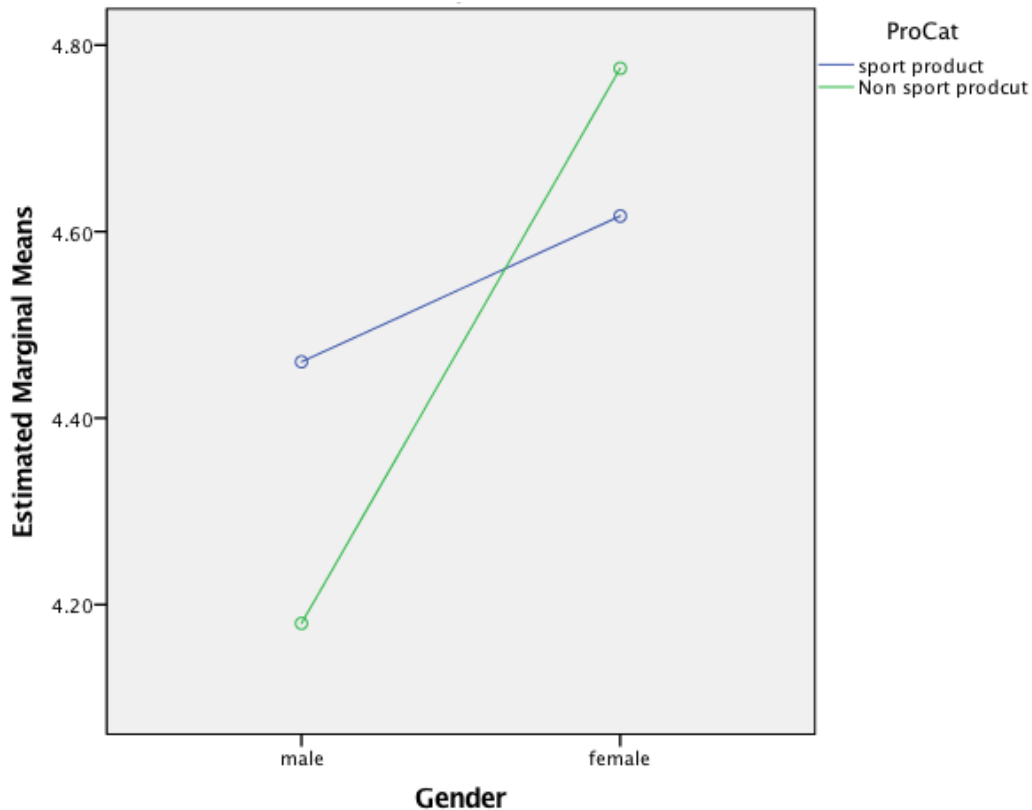


Figure 1. The interaction effect between gender and product category in product attitude

However, a noticeable pattern was found in the interaction between gender and the product category. Shown in Figure 1, although the interaction effect was not statistically significant ( $F(1,110)=3.73$ ;  $p=.056$ ), it was very closed to significant level and the pattern of interaction in Figure 1 is not difficult to be identified. The male students preferred sports-related products, whereas the female students preferred non-sports-related products.

#### 4.5 Two-way ANOVA in Product Purchase Intention

Table 5. Summary of Two-way ANOVA results on purchase Intention of products

Independent Variable	Type Sum Squares	III of Wilks' $\Lambda$	F	$p$	$df$	Error $df$	Post-Hoc
Gender	8.545	-	4.15*	.044	1	110	Female > Male
Product category	3.114	.970	3.35	.070	1	110	
G*P	.436	.996	0.47	.495	1	110	
Age	3.990	-	0.94	.393	2	109	
Product category	8.600	.920	9.50*	.003	1	109	Sports-related > Non-sports-related
A*P	4.107	.960	2.27	.108	2	109	
Education	6.391	-	1.00	.393	3	108	
Product category	3.335	.967	3.66	<b>.058</b>	1	108	
E*P	4.300	.958	1.57	.200	3	108	
Exercise Frequency	15.291	-	1.48	.065	5	106	
Product category	2.562	.973	2.92	.090	1	106	
F*P	9.750	.905	2.22	.057	5	106	
Sports category	5.548	-	0.65	.630	4	107	
Product category	1.100	.989	1.15	.286	1	107	
S*P	.539	.995	0.14	.967	4	107	
Exercise Time	30.429	-	5.36*	.002	3	108	30 min-1H > 1H-2H, fewer than 30 min
Product category	.560	.995	0.59	.443	1	108	
ET*P	.804	.992	0.28	.837	3	108	

\* Significant at the 0.05 level

Table 5 presents the summary of results from a series of two-way ANOVA in examining effect of independent variables (between-subject variables: gender, age, educational background, exercise frequency, sports category and exercise time) and their interactions with product category (within-subject variable) on participants' purchase intentions of advertised products. There was a statistically significant difference in product purchase intention between genders when controlling for product category ( $F(1, 110)=4.15, p<0.05$ ). Female participants showed a significantly higher purchase intention than male participants. Similarly, a significant effect of exercise time on purchase intention was found when controlling for product category,  $F(3,108) = 5.36, p<0.05$ . Participants whose exercise time last between 30 minutes to one hour showed the highest purchase intention of products among the four groups. Another significant difference was found between sports-related products and non-sports-related products when controlling for participants' education level ( $F(1,109) = 9.5, p<0.05$ ). Comparing with others within the same education level, participants showed higher purchase intention towards sport-related products. However, there were no other significant effects on purchase intention from the rest of independent variables and their interactions. Therefore, in regarding to the purchase intention of products, Hypotheses 1, 2 and 3 were partially supported by the results.

## 5. Discussion

This study is one of the first to explore the effectiveness of corporate advertisements in collegiate fitness center in Hong Kong. In this study, the impact of the advertisements was examined by analyzing participants' attitudes and purchase intentions toward the advertised products. As expected, positive relationship between attitude towards product and the purchase intention of products was illustrated by the result. Regarding to the attitude towards products, only Hypotheses 3 was partially supported by the result as a significant effect of exercise time was found. Conversely, regarding to the purchase intention of products, all the three hypotheses were partially supported by the result as significant effects were found on gender, exercise time as well as product category.

### 5.1 Gender and Advertisement Effectiveness

There was a significant difference regarding purchase intentions between male and female participants, which aligns with previous relevant studies that suggest that females' purchase intentions exceeded those of males. Although on the attitude, such a gender effect did not reach the significant level, it was very close ( $p = .056$ ). Considering the relatively small sample size of this study, it is reasonable to expect that a significant gender effect could be found if the sample size could be enlarged. Based on an analysis of prior studies, women have different preferences regarding the shape, color and images of product advertisements (Mahzari & Ahmadzadeh, 2013). In addition, when analyzing the impact of gender differences on product attitude using two-way ANOVA, the interaction effect between the participants' gender and the product category of the advertisement on attitude was very close to significant level ( $p = .056$ ). Male participants were more interested in sports products whereas female participants were more interested in non-sports products. Such an interesting interaction effect could be easily identified in subsequent research if the sample size could be increased.

Nonetheless, although it is reasonable to attribute the gender difference on purchase intention was due to the difference on their attitude toward product, an alternative factor could not be excluded from the finding of this study. As indicated in Table 3, participants preferred the design of sports-related products better than that of non-sports-related products. As Sundar and Noseworthy (2014) suggested, the advertisement with the greater visual appeal had a superior effect of stimulating purchase intention among consumers. The effect of advertisement design on purchase intention could not be excluded. Future studies to further clarify this effect should try to eliminate or minimize the difference in the design of advertisements. Although we have tried our best to standardize to color, size, design of the four advertisements, it was apparently not good enough.

### *5.2 Exercise Time and Advertisement Effectiveness*

Exercise time in the gym was another factor that significantly affected participants' attitudes and purchase intentions toward products in this study. Participants whose exercise time range from 30 minutes to one hour showed significantly higher purchase intention and positive attitude toward products. Different from expected, this result indicates that longer exercise times do not necessarily enhance people's attitude toward advertisement and the desire to purchase the advertised product. A possible explanation could be the location of the advertisements. In this study, the product advertisements were placed on a notice board along the main entrance route of the fitness center, but not in the gym room or classrooms. No matter how long participants stay in the fitness center, they would only pass by the advertisement twice when they enter and leave the fitness center. Thus, longer exercise times do not necessarily enhance the effect of the advertisement. Conversely, participants who do not exercise too long would have stronger impression of the advertisement as they pass by the notice board twice in a relatively shorter period. For those who exercise shorter than 30 minutes, they might not have time to stop by and read the advertisement on the notice board.

### *5.3 Age, Education Background and Advertisement Effectiveness*

In this experiment, age and educational background were independent variables used to assess advertising effects. However, there was no significant difference in product attitude and product purchase intention along with the change in these independent variables. This result may have ensued because most patrons of campus gyms were undergraduate or postgraduate students aged 18 to 26. Therefore, the participants' similar backgrounds may have resulted in similar product attitudes and product purchase intentions.

### *5.4 Implication*

As opposed to other types of fitness centers, collegiate fitness centers serve only students and staff, which implies that campus fitness centers might have potential commercial value because of the market concentration of their consumer base. Although not mature or developed, it is a platform that has full potential for advertisers aiming at young people.

Male participants paid more attention to the sports products advertised in the gym. Thus, manufacturers of products such as dumbbells and protein powder producers that target male consumers could negotiate with universities to advertise in their fitness clubs. In addition, to attract the attention of female patrons, sports manufacturers could add feminine elements to posters or adjust their color and shape (Mahzari & Ahmadzadeh, 2013; Moss et al., 2006). Female gym patrons generally pay more attention to non-sports product advertisements, which imply that fitness clubs are beneficial arenas for non-sports-related firms whose target market consists of young women.

This research has illustrated the effectiveness of the corporate advertisement in collegiate fitness center in Hong Kong. Fitness centers on campus in Hong Kong have their potential to attract young consumers. It is hoped that the presented findings in this research could provide the valuable information and reference for sport administrators, school officials and sport marketers. It is also hoped this research could serve as a basis for the future analysis of the related studies.

### *5.5 Limitations*

The experiment was conducted at the beginning of May when the students were beginning final examinations. The students' limited time resulted in the small numbers of participants enrolled and might have influenced the accuracy rate of the questionnaire.

The design of the four posters used in this study did not use an identical style. The posters' color and size may have affected the results.

Male participants greatly outnumbered female participants. The gender ratio imbalance may have caused errors.

Participants were from Mainland China, Hong Kong and overseas. Different cultural backgrounds may have led to different understandings of the same posters and may have also led to different attitudes and purchase intentions.

Another limitation was the time difference in issuing the questionnaire. For example, at mealtimes, candidates paid more attention to pizza ads but in the evenings, candidates were more interested in the sports bracelet because they preferred the overall fitness effect.



Another limitation was the short period of time the study was conducted. The advertisements were only posted in the gym for two weeks, which was too short of a period of time to attract additional participants.

## References

- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Asian Academy for Sports & Fitness Professionals. (2009). *2009 AASFP China fitness club industry report*. Hong Kong: Asian Academy for Sports & Fitness Professionals.
- Asian Academy for Sports & Fitness Professionals. (2010). *2010 AASFP China fitness club industry report*. Hong Kong: Asian Academy for Sports & Fitness Professionals.
- Asian Academy for Sports & Fitness Professionals. (2011). *2011 AASFP China fitness club industry report*. Hong Kong: Asian Academy for Sports & Fitness Professionals.
- Brand, J. E., & Greenburg, B. S. (1994). Commercials in the class: The impact of channel one advertising. *Journal of Advertising Research*, 34, 18-27.
- Brooks, C. (1998). Sport/exercise identity theory and participation marketing: Theory formation and theoretical justification. *Sport Marketing Quarterly*, 7, 38-47.
- Davis, R., Lang, B., & San Diego, J. (2014). How gender affects the relationship between hedonic shopping motivation and purchase intentions? *Journal of Consumer Behaviour*, 13, 18-30. <https://doi.org/10.1002/cb.1450>
- Ebenkamp, B., & Khermouch, G. (1996). *Big brands on campus*. New York: e5 Global Media, LLC.
- Gardner, M. P., & Shuman, P. (1988). Sponsorship and small businesses. *Journal of Small Business Management*, 26, 44-52.
- Goldberg, B. (1997). Big bear awakens. *Colorado Business Magazine*.
- Gray, D. P. (1996). Sponsorship on campus. *Sport Marketing Quarterly*, 5, 29-34.
- Greenwald, L., & Fernandez-Balboa, J. (1998). Trends in the sport marketing industry and in the demographics of the United States: Their effect on the strategic role of grassroots sports sponsorship in corporate America. *Sport Marketing Quarterly*, 7, 35-47.
- Hume, S. (1990). Miller gets on base: Softball club opens pizza hut doors. *Advertising Age*, 3, 59.
- Jamestown Sports and Fitness. (2012). Sports and fitness club marketing plan. *Mplans*. Retrieved from [http://www.mplans.com/sports\\_and\\_fitness\\_club\\_marketing\\_plan/ideal\\_customer\\_fc.php](http://www.mplans.com/sports_and_fitness_club_marketing_plan/ideal_customer_fc.php)
- Lai Ying, H., & Chung, C. M. (2007). The effects of single-message single-source mixed word-of-mouth on product attitude and purchase intention. *Asia Pacific Journal of Marketing and Logistics*, 19(1), 75-86. <https://doi.org/10.1108/13555850710720911>
- Li, Y. M. (2011). The study on fitness club development in large and medium-size cities. In *International Conference on Future Computer Science and Education (ICFCSE)* (pp. 404-407). Piscataway, NY: IEEE.
- Liesse, J., & Ryan, M. (1991). Marketers take the field by storm. *Advertising Age*, 62, 26-27.
- Mahzari, A., & Ahmadzadeh, M. (2013). Finding gender preferences in e-commerce website design by an experimental approach. *International Journal of Applied Information Systems*, 5, 35-40.
- Morton, C. R., & Friedman, M. (2002). "I saw it in the movies": Exploring the link between product placement beliefs and reported usage behavior. *Journal of Current Issues & Research in Advertising*, 24, 33-40. <https://doi.org/10.1080/10641734.2002.10505133>
- Mullin, B. J., Hardy, S., & Sutton, W. A. (2014). *Sport marketing* (4th ed.). Champaign, IL: Human Kinetics.
- Nebenzahl, I., & Homik, J. (1985). An experimental study of the effectiveness of commercial billboards in televised sports arena. *International Journal of Advertising*, 4, 27-36. <https://doi.org/10.1080/02650487.1985.11105041>
- Schlossberg, H. (1992). Sports Marketing. *Journal of Promotion Management*, 1, 119-122. [https://doi.org/10.1300/J057v01n01\\_10](https://doi.org/10.1300/J057v01n01_10)
- Schultz, D. P., & Schultz, S. E. (1998). *Psychology and work today: An introduction to industrial and organizational psychology*. Upper Saddle River, NJ: Prentice Hall.
- Spears, N., & Singh, S. N. (2004). Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues and Research in Advertising*, 26, 53-66. <https://doi.org/10.1080/10641734.2004.10505164>

- Stotlar, D. K., & Johnson, D. A. (1989). Assessing the impact and effectiveness of stadium advertising on sport spectators at Division I institutions. *Journal of Sport Management*, 3, 90-102. <https://doi.org/10.1123/jsm.3.2.90>
- Sundar, A., & Noseworthy, T. J. (2014). Place the logo high or low? Using conceptual metaphors of power in packaging design. *Journal of Marketing*, 78, 138-151. <https://doi.org/10.1509/jm.13.0253>
- Tsiotsou, R., & Alexandris, K. (2009). Delineating the outcomes of sponsorship: Sponsor image, word of mouth, and purchase intentions. *International Journal of Retail and Distribution Management*, 37, 358-369. <https://doi.org/10.1108/09590550910948583>
- Turco, D. (1996). The effects of courtside advertising on product recognition and attitude change. *Sport Marketing Quarterly*, 5, 11-15.
- Turley, L. W., & Shannon, J. R. (2000). The impact and effectiveness of advertisements in a sports arena. *Journal of Services Marketing*, 14, 323-336. <https://doi.org/10.1108/08876040010334547>
- Wilber, D. (1988). Linking sports and sponsors. *Journal of Business Strategy*, 9, 8-10. <https://doi.org/10.1108/eb039234>

### Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the [Creative Commons Attribution license](#) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.