ARTICLE

THE EFFECT OF MALE CELEBRITY ENDORSEMENT OF FEMININE PRODUCTS ON FEMALE PURCHASE INTENTION

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ARTICLE DETAILS

ABSTRACT

In China, the trend of more and more male celebrity's figures have appeared on products in the female field, which is contrary to our traditional impressions. The paper aimed to examine the effect of male celebrity endorsement on female products purchase intention of female customers. A model and four hypotheses were made to investigate the factors affecting female customers' purchase intention, and it was tested using a sample of 170 (females). There were four types of questionnaires related to different male/female celebrities and products, and respondents were randomly assigned in an almost even manner. Descriptive statistics and regression were run to find the results. The paper found that male celebrities increased product image and women's purchase intention when the products were feminine products. This research focused on lipstick (feminine product)/detergent (non-feminine product) purchase intention and celebrity endorsement. It was suggested that the researchers could further conduct a comparative study on any other product category with large sample size. This paper outlined ways to effectively use celebrity endorsement to increase customer purchase intention of female customers for purchasing feminine products.

KEYWORDS

Celebrity Endorsement, Purchase Intention, Feminine Product

1. INTRODUCTION

Celebrity endorsement is a channel for brand communication. A brand invites a celebrity to endorse and extend to the brand through their popularity, personality, professionalism, character, or social status [1]. Celebrity endorsements have always been used as a marketing tool to promote various products and services [2]. With the increasingly fierce market competition, different product endorsement patterns have emerged. A current prevailing trend is that more and more male celebrities figures have appeared on products in the female field, such as Yi Yang Qianxi (Jackson Yee) endorsing Armani makeup and Xiao Zhan endorsing Estee. Lauder, which contradicts our traditional impressions, namely, the female products were supposed to be endorsed by female celebrities. As the saying goes, "the same-sex repel each other and the opposite sex attracts each other", mutual attraction is a natural phenomenon. In relationships between individuals, heterosexual contact will produce a unique mutual attraction and motivation, allowing for the experience of unspeakable emotional pursuits, which usually positively impact animal activities and learning. Various kinds of dopamine and hormones secreted by the human body and even brain waves will produce resonance and extraordinary responses for the opposite sex, making people unconsciously happy and willing to be closer to the opposite sex. Therefore, it is documented that using males as endorsers will affect females customers. Given this background, it was of great interest to find the relationship between endorsers' gender and the advertising effects of the products. This study aimed to identify whether using male celebrities to advertise female products would increase females' purchase intention and whether the congruence of products types and endorsers' characteristics could play a moderator role.

2. LITERATURE REVIEW

2.1 The product gender role

The idea that some products have their own "gender" is not a new one. The gender of the products emerges from how advertisers position the product as "masculine" or "feminine" by featuring the targeted ender in an advertisement as the typical or most likely user of the products [3]. Interestingly, stereotypical images existed for some products, and few products were categorized as undifferentiated or androgynous in terms of masculinity and femininity [4]. Milner and Fondness [5] conducted a study in a Chinese context and had consistent findings, indicating that most products were believed to be masculine or feminine. For instance, beer, cars, and cigarettes were considered "male products" while bath soap, daycare products, and washers were associated with the female image.

2.2 Relationship between product gender and endorser gender

Previous literature exhibited controversies regarding whether the product gender and the gender of the endorser should be consistent with achieving better advertising outcomes. On the one hand, some researchers showed that the inconsistency of product gender and endorser gender could have more positive effects since it would bring consumers a feeling of novelty [6]. On the other hand, some researchers failed to prove that people were more inclined to ads with an attractive

member of the opposite sex [7]. Recent research suggested that when the endorser was of the opposite sex, women showed positive attitudes toward the advertisement and the product; at the same time, this effect could not be seen in men [8]. The contradictory findings and the ads receiver gender difference result further inspired the author to conduct this study.

2.3 Purchase intention

Purchasing intention is an indicator to illustrate the possibility for a customer to pay for a product. The higher purchasing intention means the higher probability of making a purchase [9]. This concept is so essential to the entire market since it directly relates to the profitability of the company. Nevertheless, it is a complex process where consumers are affected by various motives, including both internal and external [10]. Factors tested to correlate with purchase intention include brand name, product quality, and advertising impact [11]. This study would show whether using male celebrities to endorse female products could produce a satisfying advertising impact.

3. RESEARCH METHODOLOGY

This research was quantitative in nature and SPSS software was used to apply regression results to variables. The purpose of conducting this study was to find the congruence effect of a celebrity's gender and product image on the purchase intention of female customers. The sample of 170 respondents was chosen for this study and endorser gender and product type were selected as the independent variables, product image was selected as the mediator, and the purchase intention was selected as the dependent variable. The research was conducted only in China and data was collected by convenient sampling from the students of different universities.

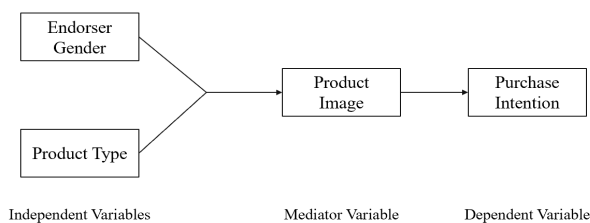Conceptual framework and hypothesis (Figure 1):

Figure 1: Conceptual Framework

On the basis of these variables, the following 4 hypotheses were made:

H1. For female customers, the interaction of endorser gender and product type is related to purchase intention.

H2. For female customers, the interaction of endorser gender and product type is related to product image.

H3. The higher the product image, the higher the purchase intention.

H4. The product image mediates the relationship between the interaction of endorser gender and product type and female's purchase intention on female products.

4. RESEARCH DESIGN

4.1 Method

Field experiment: Responders were randomly assigned to experimental or control groups to test the causal relationship and the experimental data were collected by electronic questionnaires.

Causal study: Causal study methods were used in this research to study the female's purchase intention on female products towards different gender endorsers. After manipulating and controlling irrelevant variables, a cause-and-effect relationship was established: could male celebrities endorsing female products increase females' purchase intentions.

Cross-sectional study: Responders were divided into 4 groups and compared at the same time for data collection without influencing variables.

4.2 Sample

Population: All young females aged 17 to 24 were selected since they have a keen interest and awareness of the celebrities and were more sensitive to the image of male appearing in the products.

Sample frame: 17 to 24 years old young females were collected within China.

Sampling design: This study used simple random sampling to select data. Each individual was chosen randomly and completely by chance and had the same probability of being selected at any stage of the sampling process.

Sample size: Total 170 questionnaire replies of 17-24.

4.3 Data collection procedure

Questionnaires were sent through social media like Facebook, WeChat, QQ, etc. At the beginning of the questionnaire, the gender of respondents was asked and male participants were directed to the end of the questionnaire.

4.4 Research procedures

Pretest: To prepare for the formal research and exclude irrelevant factors, pretesting was required to ensure that male and female celebrities' attractiveness could be matched. 6 male and 6 female celebrities were selected from the Baidu Star Popularity List. In the pre-test questionnaire, a total of 12 photographs of these celebrities were presented in random order to 50 young females aged 17-24 (not participating in the formal experiment) (Appendix 1). Finally, male and female endorsers with similar final average scores could be considered matches and selected for formal research (Appendix 2).

Formal experiment: This study used the simple random sampling method to select data, all young women aged between 17 and 24 were considered suitable for the survey. The e-questionnaire was sent out through WeChat, QQ, Instagram and other social media. At the beginning of the questionnaire, the age and gender of the respondents were asked to ensure that the participants fit our study requirement, and the male participants were directly led to the end of the questionnaire (Appendix 3).

To test the hypotheses, a total of 140 participants was randomly divided into 4 groups (35 participants each):

G1. Male celebrities endorsing Lipstick

G2. Female celebrities endorsing Lipstick

G3. Male celebrities endorsing Detergent

G4. Female celebrities endorsing Detergent

(Appendix 4)

5. RESULTS AND FINDINGS

Descriptive statistics: The key variables in this study include the congruence of endorsers and products characteristics, product image, and purchase intention. The means were 4, 3.88, and 3.54, respectively and the standard deviations were 1.697, 1.367, and 1.599, respectively (Appendix 5). Used Pearson correlation to produce a sample correlation coefficient. The result showed that the three key variables have a statistically significant linear relationship ($P<0.001$). The directions of the relationships were all positive, which means that each of the two key variables tended to increase together (Appendix 6).

Results for hypothesis testing: To test four hypotheses, two-way ANOVA was conducted to test the effect of endorser gender (male vs. female) and product type (lipstick vs. detergent) on purchase intention (dependent

variable). A significant interaction was found between the effects of endorser gender and product type on purchase intention (F=9.511, P<0.01), supporting H1 (Figure 2.).

Tests of Between-Subjects Effects

Dependent Variable: purchase intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	24.610a	3	8.203	3.343	.021
Intercept	2137.972	1	2137.972	871.337	.000
endgender	1.271	1	1.271	.518	.473
product	.307	1	.307	.125	.724
endgender * product	23.336	1	23.336	9.511	.002
Error	407.309	166	2.454		
Total	2567.250	170			
Corrected Total	431.919	169			

a. R Squared = .057 (Adjusted R Squared = .040)

Figure 2: Two-way ANOVA - Endorser Gender and Product Type on Purchase Intention (DV)

A two-way ANOVA was also conducted to examine the effect of endorser gender and product type on product image (mediator). The results showed that there was a statistically significant interaction between the effects of gender and product type on product image (F=12.456, P<0.01), which proved the H2 (Figure 3).

Tests of Between-Subjects Effects

Dependent Variable: product image

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25.141a	3	8.380	4.789	.003
Intercept	2561.485	1	2561.485	1463.703	.000
endgender	1.400	1	1.400	.800	.372
product	2.182	1	2.182	1.247	.266
endgender * product	21.799	1	21.799	12.456	.001
Error	290.501	166	1.750		
Total	2871.528	170			
Corrected Total	315.641	169			

a. R Squared = .080 (Adjusted R Squared = .063)

Figure 3: Two-way ANOVA - Endorser Gender and Product Type on Product Image (DV)

The "product image" was added to test its mediating effect as a covariate. The results showed that product image had a significant impact on purchase intention (F=600.254, P<0.01), while the effect of the interaction term became insignificant (F=0.008, P=0.931>0.05), supporting the mediating role of the product image in our model, and thus, both H3 and H4 were supported (Figure 4.).

Tests of Between-Subjects Effects

Dependent Variable: purchase intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	344.097a	4	86.024	161.623	.000
Intercept	4.763	1	4.763	8.948	.003
image	319.487	1	319.487	600.254	.000
endgender	.013	1	.013	.024	.877
product	.983	1	.983	1.847	.176
endgender * product	.004	1	.004	.008	.931
Error	87.822	165	.532		
Total	2567.250	170			
Corrected Total	431.919	169			

a. R Squared = .797 (Adjusted R Squared = .792)

Figure 4: Two-way ANOVA - Product Image on Purchase Intention (DV)

6. SUPPLEMENTARY ANALYSIS

6.1 Additional ANOVA test

Another two-way ANOVA examined the effect of endorser gender (male vs. female) and product type (lipstick vs. detergent) on the congruence of characteristics of endorsers and products. In other words, how well the two independent variables matched. Only marginal significant interaction was found between the product type and endorser gender on the congruence of characteristics of endorsers and products (F=3.671, P=0.057>0.05) (Figure 5). Regarding the two-way ANOVA for gender product and product image, with congruence added as a covariate, the effect of the interaction term (F=9.719, P=0.002<0.01) and the mediator (F=211.041, P<0.01) (Figure 6) were both significant which imply that

the "match-up" hypothesis may not provide a solid explanation for the different results of product images in four groups.

Tests of Between-Subjects Effects

Dependent Variable: match

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	33.615a	3	11.205	4.105	.008
Intercept	2730.132	1	2730.132	1000.151	.000
endgender	15.681	1	15.681	5.744	.018
product	6.579	1	6.579	2.410	.122
endgender * product	10.020	1	10.020	3.671	.057
Error	453.134	166	2.730		
Total	3202.750	170			
Corrected Total	486.749	169			

a. R Squared = .069 (Adjusted R Squared = .052)

Figure 5: Additional Two-way ANOVA - Matching1

Tests of Between-Subjects Effects

Dependent Variable: product image

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	188.175a	4	47.044	60.896	.000
Intercept	52.857	1	52.857	68.422	.000
match	163.034	1	163.034	211.041	.000
product	.004	1	.004	.005	.945
endgender	12.240	1	12.240	15.845	.000
product * endgender	7.508	1	7.508	9.719	.002
Error	127.466	165	.773		
Total	2871.528	170			
Corrected Total	315.641	169			

a. R Squared = .596 (Adjusted R Squared = .586)

Figure 6: Additional Two-way ANOVA - Matching 2

6.2 Regression test

Except for a two-way ANOVA, regression analyses were also conducted to test 4 hypotheses simultaneously.

6.2.1 Regression of Lipstick dataset

Purchase intention was regressed on endorser gender (1: male, 0: female). Results showed that purchase intention was positively and significantly related to endorser gender (b=.915, P=0.010<.05) (Appendix 7). The mediator (product image) was regressed on endorser gender, and it could be observed that their relationship was significant and positive (b=.898, P=0.003<.05) (Appendix 8). Endorser gender and product image entered the equation with purchasing intention as dependent variable simulations. Results showed that the effect of product image was significant (b=1.009, P=0.000<.05), but the impact of endorser gender became insignificant (b=.008, P=0.967>.10) (Appendix 9). The results indicated that male celebrities endorsing lipstick would generate a higher purchase intention. Meanwhile, the mediation effect of product image was supported. The mediation effect of the product image was significant in the lipstick dataset, while its mediation effect in the divergent dataset was not supported.

6.2.2 Regression of detergent dataset

The purchase intention was regressed on the endorser gender. No significant evidence showed that the purchase intention was related to endorser gender (b=-.568, P=.092>.05) (Appendix 10). The mediator (product image) was regressed on endorser gender and the result was also insignificant (or marginally significant), with b=-.535, P=.059>.05 (Appendix 11). Therefore, the conclusion was when the product becomes a detergent, the gender of the endorser had an indifferent effect on both the mediator (product image) and dependent variable (purchase intention). The regression analyses supported the results of ANOVA analysis.

7. CONCLUSION

Due to the booming trend of using male endorsers to promote women products. This study was to figure out whether male endorsers would genuinely increase the effectiveness of ads and boost the purchase intention of females. The study conducted an experiment that followed 2 (endorser gender: male vs. female) X2 (product: lipstick vs. detergent) between-subject designed and hypothesized that male endorsers were able to increase the product image and thus increase female's purchase intention of female products when the characteristics of endorsers

and products were perceived to be "matched-up". More specifically, it was expected that when male celebrities endorsed lipsticks, the effect was better than that of female celebrities, and when the endorsement product was replaced with detergent, this positive effect disappeared because the detergent did not match the attractive image of the male celebrity.

After conducting two-way ANOVA and regression analysis, the prediction could be confirmed that male celebrities increased product image and women's purchase intention when the products were lipstick but not detergent. However, the "match-up" hypothesis could not perfectly explain this phenomenon, as the significant marginal effect was shown in our supplementary analysis.

8. LIMITATION AND IMPLICATIONS

There were certain limitations in this study. The advertisements presented to the participants were in picture form. However, in reality, many advertisements placed in videos were more vivid and compelling, which may affect the result of our study to a certain extent. Moreover, though the samples were randomly selected, it was very likely that a considerable portion of respondents were the researchers' friends, making the samples not representative enough. Despite these limitations, the research result may imply that it was indeed valuable for advertisers to choose male celebrities as endorsers for cosmetics. However, many attractive male celebrities trigger counterproductive resulted in boosting women's purchase intention of detergents. Therefore, further research could work on the reason that affects females' perception of different kinds of female products advertised by the male. Another finding was that some female celebrities were also starting to endorse masculine products like automobiles, therefore, future research could also discuss the effectiveness of various kinds of opposite-gender endorsement. These studies may shed light on the marketing context regarding endorsers to prevent companies from blindly following existing trends, possibly leading to undesirable results.

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APPENDIX

Appendix 1: Pretest questionnaire

Questions include: (Participants will be asked to rate through a 7-point scale)

01. How much do you know about this celebrity? ("1": very little; "7": very much)

02. To what extent do you think he/she is popular? ("1": very unpopular; "7": very popular).

03. To what extent do you think his/her image is positive/negative? ("1": very negative; "7": very positive).

How attractive do you think he/she is? ("1": very unattractive; "7": very attractive).

Appendix 2: Pretest result

Celebrities & Attractiveness Testing							
Celebrity	Yi Yang Qianxi	Xiao Zhan	Wang Yibo	Zhang Yixing	Yang Chaoyue	Zhao Liying	Song Qian	Yang Zi
Attractiveness Mean Score	5.08	3.49	3.94	4.77	3.99	5.16	4.23	4.69

APPENDIX 3: FORMAL EXPERIMENT QUESTIONNAIRE

Questions include:

Section 1 Product Image

Rate the degree you believe the following descriptions fit the ad you saw from 1 to 7.

("1": Strongly disagree; "7": strongly agree).

Favorability

I like this product.

I have a good impression of it.

Attractiveness

I want to know more information about it.

I think the product is attractive.

Functionality

I think this advertisement is credible.

I think the products would be useful.

Section 2 Purchase Intention

I would like to own this product.

I will consider this product as my first choice to buy next time.

Section 3 matching

I think the endorser fits this product.

I think the characteristics of the endorsers are consistent with the characteristics of the products.

Appendix 4: Formal experiment - the demographic characteristic of the participants

Sex	Female		
Total N	170		

Group	Female N	Male N	Total N
Lipstick	41	41	82
Detergent	43	45	88
Total N	84	86	170

	Range	17-24
Age	Mean	20.3176
	Std. Deviation	1.3342

Appendix 5: Descriptive statistics results

	The congruence of characteristics of endorsers and products	Product image	Purchase intention
Mean	4	3.88	3.54
Standard deviation	1.697	1.367	1.599

Appendix 6: Key variables correlations

Correlations

		purchase intention	product image	match
purchase intention	Pearson Correlation	1	.891**	.675**
	Sig. (2-tailed)		.000	.000
	N	170	170	170
product image	Pearson Correlation	.891**	1	.731**
	Sig. (2-tailed)	.000		.000
	N	170	170	170
match	Pearson Correlation	.675**	.731**	1
	Sig. (2-tailed)	.000	.000	
	N	170	170	170

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 7: Lipstick - purchase intention regressed on endorser gender

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.134	.245		12.791	.000
Endorser gender	.915	.347	.283	2.640	.010

Appendix 8: Lipstick - purchase Image Regressed on Endorser Gender

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.549	.209		17.020	.000
Endorser gender	.898	.295	.322	3.047	.003

Appendix 9: Lipstick - purchase intention regressed on endorser gender and purchase image

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.448	.271	.002	-1.649	.103
Endorser gender	.008	.189		.042	.967
Image	1.009	.068	.870	14.905	.000

Appendix 10: Detergent - purchase Intention Regressed on Endorser Gender

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.791	.239	-.181	15.892	.000
Endorser gender	-.568	.334		-1.704	.092

a. Dependent variable: purchase intention

Appendix 11: Detergent - purchase image regressed on endorser gender

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.039	.200	-.202	20.195	.000
Endorser gender	-.535	.280		-1.913	.059

a. Dependent variable: product image