The current study introduces a psychographic variable, the self-sport brand-me relationship, as a mediator for better understanding of spectator sport consumption on television and the internet. The self-sport brand-me relationship refers to an individuals' perceived self-identification or rejection of a relationship with a sport participation as an affective involvement as a primary expression of oneself. Using a quota and convenience sampling, 546 Taiwanese respondents from players in basketball courses, the audience in an indoor arena, and people who had experience watching basketball, completed self-administered questionnaires. The survey included three sections: age and gender, a scale measuring self-sport relationships (SSR) (8 items), and two modes (watching basketball games on television and the internet) of spectator behavior. The findings support the hypotheses that (1) self-sport brand-me relationships positively associates with watching sports on television and the internet, and (2) plays a mediating role on demographic influences on watching behavior. The variance of watching behavior in basketball is approximately explained by age and gender for 10%, whereas the model that includes the variable of self-sport brand-me relationship increases the explained variance to 34%. Nurturing such self-sport relationships serves to build sport markets by reducing the negative influence of some demographic categories on sport watching behavior. The self-sport relationships between self-images and images of desired sport participation reveal significant image congruence. This congruence recalls the prior experience of arousal in the sport participation and transfers this arousal into spectatorship, thereby increasing interests and experiencing more in watching the sport.

Key words: Basketball, brand-me, fan, spectator sport, sport participation, self-expression.

INTRODUCTION

Researchers use age and gender widely as demographic variables for market segmentation due to their relative ease of attainment. In the sports setting, an individual's age and gender frequently affect spectator sport consumption. Young to middle-aged males are more likely to attend professional men's sporting events than other demographic segments (Zhang et al., 1995). Males consume more sport media than females (Anderson et al., 2004). Although, tourism and sports researchers can access these traditional segmentation variables efficiently, an effective marketing investigation often requires diverse segmentation variables to increase the depth for a
successful marketing plan (Pitts and Stotlar, 2002). The current study introduces another psycho-graphic variable, self-sport brand-me relationship, as a mediator to better understand spectator sport consumption on television and the internet.

**Age and gender as predictors of sport consumption**

Demographic variables such as age and gender are useful in predicting spectator sport consumption. For example, a probability sample in the nationwide social survey "2007 Taiwan Social Change Survey (TSCS)" (n = 2,147) shows that people who had watched sports live and on television (n=442, the mean age =36 years old) were significantly younger (F=211.19, p<.001) than people who had not watched sports live or on television (n=710, the mean age =51 years old). Particularly, because basketball requires high strength and quick rhythm, younger versus older fans may associate more likely with playing this sport (H1) and spend more time watching basketball games (H2). Gender differences may be the product of gender role socialization (Gill, 2002). High school boys have more favorable attitudes towards physical education than girls (Koca and Demirhan, 2004). Also, numerically more men watch more sports than women (Ganz and Wenner, 1991). Males may identify more strongly with being a fan and engage in more sport fan behavior than females (Dietz-Uhler et al., 2000). Consequently, H3 is that males are more involved in playing basketball and spend more time watching basketball games than females (H4).

**Self-sport brand-me relationships**

An individual considers products not only for what they can do but also for what they mean (Hirschman and Holbrook, 1982; Levy, 1959) to extend, expand and strengthen the sense of the person’s self (Ahuvia, 2005; Belk, 1988). A person engages a leisure activity not only for fun and relaxation but also for experiencing symbolic nature of the activity in terms of how much this participation defines “who I am” (Belk et al., 1982; Fournier, 1998; Holbrook and Hirschman, 1982; Mick, 1986). An individual might implicitly define self by symbols and express one’s personality by engaged activities consciously or unconsciously (Mick, 1986; Sirgy, 1982). The individual infuses an activity with signs which portray confirmatory facts (Goffman, 1959), for example, indicating to self that, “I am a sports person who likes to participate in some sport.” When the image of a sport is perceived congruent with a person’s self-concept, the person is motivated to participate in the sport (Oyserman, 2009). This identity-congruent sport participation is an identity-based leisure choice, resulting in a harmonious connection between the self and the sport—high congruence is the “self-sport brand-me relationship”. The self-sport brand-me relationship would send desired identity signals to others with the communication of the identity through a leisure preference (Berger and Heath, 2008). With a self-sport relationship to self-express oneself, the person would seem to live in a sport and more likely to watch the sport on television and on the internet because the watching behavior becomes part of oneself. The meaningful relationship can reinforce one’s concept of self through the identity activity in which the relationship is grounded (Fournier, 1998). The relationship with sport may help express a significant aspect of self through mechanisms of self-worth and self-esteem in the sport participation and spectatorship. The self-sport brand-me relationship refers to an individuals’ perceived self-identification or rejection of a relationship with a sport as an affective involvement as a primary expression of oneself (Little, 1976; McIntyre and Pigram, 1992). “I am a basketball person” or “I am not a basketball person” is an everyday example of a trope, implying brand-me relationships with the basketball. The use of “brand-me” here extends to a sport in general and not only a specific sports team. The affective involvement with a sport is demonstrable in multiple dimensions including a manifestation of the sport importance, enjoyment in the sport participation and self-expression through the sport (McIntyre and Pigram, 1992). The engagements in a sport provide clues about, “Who I am,” by the activity symbol. The activity symbolism refers to communicate nonverbally oneself and to achieve the satisfaction of self-expression through the choice of this leisure activity (Belk et al., 1982). The relationship between self and the desired sport participation reveals the congruence of self-images and images of the sport. The experience of arousal (Kerr, 1985) in participation of a sport associates closely within sport spectatorship, thereby increasing preference to watching the sport (McDonald et al., 2002). Consequently, H5 is that the self-sport brand-me relationship has a positive association with watching the sport on television and the internet. Stemming from the fact that psychological variables are usually mediating variables in the relationship between demographic variables and behavior (Cooper and Schindler, 2008), the self-sport brand-me relationship is likely to play a mediating role in the effects of age and gender on watching behavior (Figure 1). This model informs a more complex view of spectator sports consumption than considering demographic antecedents alone.

**METHODOLOGY**

According to 2007 TSCS conducted by the Institute of Sociology in Academia Sinica and sponsored by the Ministry of Science and Technology, basketball is the most frequently played and watched sport in Taiwan. For this reason, basketball was chosen as a specific target sport in the current study. Based on this sport, a questionnaire was designed to collect data. Ethical approval was granted for this study by an appropriate university ethics panel. The
Table 1. Demographic and descriptive information of the sample.

<table>
<thead>
<tr>
<th>Age</th>
<th>Gender</th>
<th>frequency</th>
<th>Watching Behavior</th>
<th>frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; =19</td>
<td>Male</td>
<td>178 Watch</td>
<td>0</td>
<td>153 Watch</td>
</tr>
<tr>
<td>20-24</td>
<td>Male</td>
<td>259 Sports</td>
<td>&lt;15mins</td>
<td>86 Sports</td>
</tr>
<tr>
<td>25-29</td>
<td>Male</td>
<td>42 on TV</td>
<td>15-30mins</td>
<td>67 on the</td>
</tr>
<tr>
<td>30-34</td>
<td>Male</td>
<td>15 in an</td>
<td>30-60mins</td>
<td>69 internet</td>
</tr>
<tr>
<td>35-39</td>
<td>Male</td>
<td>17 Average</td>
<td>1-2 hrs</td>
<td>74 in an</td>
</tr>
<tr>
<td>40-44</td>
<td>Male</td>
<td>13 Week</td>
<td>2-4 hrs</td>
<td>46 Average</td>
</tr>
<tr>
<td>45-49</td>
<td>Male</td>
<td>11 &gt;4 hrs</td>
<td>48 Week</td>
<td>48 &gt;4 hrs</td>
</tr>
<tr>
<td>50-54</td>
<td>Male</td>
<td>5 Male</td>
<td>297 Self-Sport Brand-me Relationship</td>
<td>Mean = 3.38 (5 points)</td>
</tr>
<tr>
<td>&lt; = 55</td>
<td>Female</td>
<td>3 Gender</td>
<td>245 Female</td>
<td>245</td>
</tr>
</tbody>
</table>

A questionnaire was developed, including three sections: age and gender, a scale measuring self-sport relationships (SSR) and two modes (watching basketball games on television and the internet) of spectator behavior (Table 1). The SSR scale has eight items: one item for the perceived level of knowledge about basketball and seven items for the affective involvement with basketball participation in terms of importance, enjoyment and self-expression (Little, 1976; McIntyre and Pigram, 1992) using 5-point Likert scale between 1 strongly disagree and 5 strongly agree. Three items of importance include playing basketball is important, meaningful and valuable activity for me. Two items of enjoyment were: playing basketball is an activity that makes me feel happy; I enjoy the activity of playing basketball. Two items of self-expression include, “When I play basketball, I can express myself; when I play basketball, I am pleased that others will see my performance.” The Chinese version of the 8 items of the SSR scale was available in some of Chinese unpublished theses with reliable validity. Researchers adjusted the Chinese items. For example, original Chinese items were for cycling or artificial rock climbing, and this study changed the targets into playing basketball. A pilot study with participants of 30 college students and 121 people waiting at a train station was also conducted to insure the questions were clear for respondents to understand and answer.

Data collection

Because this study primarily examined the relationship between basketball participation (that is, self-sport brand-me relationships in playing basketball) and watching behavior, the sample included three parts: the basketball participants, the basketball audience in the indoor arena, and people who had any experiences in watching basketball games. Using a quota and convenience sampling, questionnaires were distributed in basketball courses to the players, in the live games of Taiwan’s Super Basketball League (SBL) to the audience, and in other places to people who had any experiences in watching basketball. Participants in basketball courses were supposed to have comparatively high self-sport brand-me relationships in playing basketball and the audience in the live games was supposed to have comparatively high watching behavior, whereas respondents recruited from other places were supposed to have comparatively low self-sport brand-me relationships in playing basketball and watching behavior. Such data composite would provide enough variance of variables to test their relationships in the model. Using paper-and-pencil, respondents were asked to complete the self-administered questionnaire and returned it to the researchers. In basketball courses, 100 players answered the questionnaire when they took a break. In the basketball indoor arena, 165 people attending SBL games returned the questionnaires before the games or during the half-time interval. For other places, questionnaires were distributed in university classes to 58...
findings

As testing a single model was insufficient by itself because in every case there were many other possible similar models that might explain relationships in the data (Meehl and Waller, 2002), the current study compares regression models to examine the extent of mediating effects. Prior to presenting the results of three regression models and mediating effects, using a correlation matrix that includes all variables in a table provides descriptive information and examines whether the problem of collinearity exists among independent variables of regression models.

The correlation matrix

Because the ordinal scale of age had the same distance for every five years, it was treated as interval to calculate age’s correlations with other variables. Results of the correlation matrix among variables showed that male respondents were slightly younger than female respondents (Table 2). The younger the respondents were, the higher the self-sport brand-me relationships and watching behavior were (Table 2). This result was similar to that from the nationwide probability sample in “2007 Taiwan Social Change Survey (TSCS)”. Male respondents had higher self-sport brand-me relationships and watching behavior than female respondents (Table 2). This finding was similar to the finding from TSCS. The correlation between self-sport brand-me relationships and watching behavior was high (0.57) (Table 2). The absolute correlation values among independent variables were not high (between 0.11 and 0.43) (Table 2), indicating the problem of collinearity in regression models does not occur.

Three regression models

Linear regression analyses were conducted with all independent terms entered into the alternative models in the investigation. Variables were included in three regression equations. The first regression model used the self-sport relationship as the dependent variable and age and gender as independent variables. The tolerances of collinearity statistics were 0.99 for both age and gender much higher than 0.10, indicating no collinearity among independent variables (Hair et al., 2009). The results (adjusted $R^2 = 0.20$) of the first regression analysis showed that the standardized regression coefficients were all statistically significant for age (standardized beta = -0.12, $p = 0.003$) and for gender (standardized beta = 0.42, male=1, female=0, $p<0.001$) (Figure 1 and Table 3). These results support H1 that the younger respondents associate more probably with playing basketball than the older and support H3 that males are more involved with playing basketball than females. The second regression model used the watching behavior as the dependent variable, and age, gender, and the self-sport relationship (SSR) as independent variables. The tolerances were 0.97 for age, 0.81 for gender, and 0.82 for SSR much higher than 0.10, indicating no collinearity among independent variables (Hair et al., 2009). The results (adjusted $R^2 = 0.34$) of the second regression analysis showed that standardized coefficients were statistically significant for gender (standardized beta = 0.09, male=1, female=0, $p=0.03$) (supporting H4) and for self-sport relationships (standardized beta = 0.54, $p<0.001$) (supporting H5), but not significant for age (Figure 1 and Table 3). H4 is that males spend more time watching basketball games than females; H4 receives support. H5 is that the self-sport relationship has a positive association with watching basketball and also receives support. The third regression model includes age and gender (without the self-sport relationship) as independent variables and the watching behavior as the dependent

<table>
<thead>
<tr>
<th>Table 2. The correlation matrix among variables.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Gender (male=1, female=0)</td>
</tr>
<tr>
<td>Self-Sport Brand-me Relationships</td>
</tr>
<tr>
<td>Watching Behavior</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01
Table 3. Results of regression analyses.

<table>
<thead>
<tr>
<th></th>
<th>Regression model 1</th>
<th>Regression model 2</th>
<th>Regression model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td>Self-sport brand-Me relationships</td>
<td>Watching behavior</td>
<td>Watching behavior</td>
</tr>
<tr>
<td>Independent Variables (Standardized Betas)</td>
<td>Age (-0.12) Gender (0.42)</td>
<td>Age (n.s.) Gender (0.09)</td>
<td>Age (-0.09) Gender (0.30)</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.20</td>
<td>0.34</td>
<td>0.10</td>
</tr>
<tr>
<td>F and p values</td>
<td>65.80, p &lt; 0.001</td>
<td>89.37, p &lt; 0.001</td>
<td>30.81, p &lt; 0.001</td>
</tr>
</tbody>
</table>

Note: n.s. = not significant

Assessment of mediation

The study includes four steps to assess the mediating effects (Baron and Kenny, 1986; Gau et al., 2007) of SSR through a series of regression analyses. The first step examined whether the independent variables affected the mediator. The analyses of the first regression model showed that age and gender significantly affected SSR (Table 3). The second step examined whether the mediator (SSR) affected the dependent variable that was, watching behavior in this study. The analysis of the second regression model showed that SSR positively influenced watching behavior (Table 3). The third step examined whether or not independent variables affected the dependent variable when excluding the mediator. The analysis of the third regression model showed that age and gender significantly affected watching behavior (Table 3). The fourth step examined whether the coefficients of independent variables became non-significant (that is, full mediation) or reduced (that is, partial mediation) when the mediator was included in the model. Compared to the regression coefficient in the third model that excluded the mediator SSR, the regression coefficient of gender in the second model that included SSR reduced from 0.30 to 0.09 whereas the absolute values of regression coefficients for age decreased from -0.09 in the third model to non-significant in the second model (Table 3). These findings indicated the mediating effects of self-sport relationships on the demographic influences on watching sports in television and the internet. SSR partially mediated the relationship between gender and watching behavior, and fully mediated the relationship between age and watching behavior. Therefore, H2 indicates that the younger respondents spend more time watching basketball games than the older receives partial support because the influence of age on watching behavior was only indirect through the mediator SSR. Watching sports requires less physical challenge than playing sports and this perspective might explain why age does not directly influence watching behavior.

DISCUSSION AND CONCLUSION

The results confirm prior studies demonstrating age and gender differences in self-sport brand-me relationships (Dietz-Uhler et al., 2000; Ganz and Wenner, 1991; Koca and Demirhan, 2004). Using the specific sport basketball as a target, the current study supports the hypothesis that the self-sport brand-me relationship has a positive connection with the watching behavior. Shamir and Ruskin’s (1984) failure to show strong relationships between involvement in physical activity and the level of spectatorship may be due to their research design not including the use of a specific sport as a target. The self-sport relationships between self-images and images of desired sport participation revealed significant image congruence (Belk et al., 1982; Oyserman, 2009). This congruence may recall the prior experience of arousal in participation and transfer this arousal into spectatorship, thereby increasing interest in watching the sport (McDonald et al., 2002). The self-sport brand-me relationship plays the mediating role in the demographic effects on watching sports behavior. Particularly, the self-sport relationship fully mediates the relationship between age and viewing behavior. Thus, nurturing such self-sport relationships can serve to build markets for sports by reducing the negative influence of some demographic categories on
sport watching behavior. Because numerous new forms of sport media consumption have appeared in the market place over the last decade, the prediction of customers' sport media consumption continues to be important in sport marketing. Future research needs to examine the effects of self-sport brand-me relationships in a different sport and for a different type of sport spectatorship. Because age and gender information is easy to access, they are practical to be segmentation variables. However, the variance of watching behavior in basketball explained by age and gender was approximately 10%. When the model added a psychographic variable, self-sport brand-me relationship in this study, the variance explained increased to 34%. This study contributes to introduce the concept of self-sport brand-me relationship, develop a better model of predicting watching behavior, and provide an effective segmentation variable along with age and gender in the spectator sport market. The concept of mediation by a self-perceived variable by which the consumer defines themselves through a particular sport receives empirical support. This theory with empirical support increases understanding of the motivation for and nature of enjoyment derived from sport viewing, and in this way the study here contributes to knowledge of how and why fans attend to particular sports. Further studies may be required to clarify constructs such as self-sport brand-me relationship, sport identification, and involvement with a sport and to examine their possible relationships.

Conflict of Interests

The author(s) have not declared any conflict of interests.

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