A Study on Speed Skating Players’ Involvement Levels and Perceptions of Benefits

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ABSTRACT

This study presents examination of the relation between involvement levels and perceptions of benefits of speed skating players in Taiwan. Participants were 245 age over 13 and older (junior, senior high school and college students and others) who engaged in the roller sport of speed skating. Findings revealed that involvement levels have a positive impact on perceptions of benefits. In addition, it was found that The Athlete Involvement Level scale showed most speed skaters had a higher level of involvement (85.33 %) then other athletes, who had a moderate level of involvement (14.78 %). Overall, results suggest an important link between involvement levels and perceptions of benefits.

Keywords: Involvement levels, perceptions of benefits, speed skating

INTRODUCTION

Physical activity not only can increase self-concept, self-esteem, and self-confidence, but also any kind of exercise can help an individual’s mental and emotional well being. It can encourage an individual to maintain a positive outlook on life as well as decreasing the depression that might be present from daily life stresses (McAuley, Blissmer, Marquez, Jerome, Kramer & Katula, 2003). Since the international media has brought much attention to the sport of ice speed skating. Ice speed skating has generated a large public interest since the 2002 Salt Lake City Winter Olympics and has quickly become popular in the United States (Loy, & Della-Giustina, 2003). This same popularity and enthusiasm for ice speed skating in the United States had also peaked an interest in speed skating in Taiwan; as seen in the 2009 World Games in Kaohsiung, Taiwan. The result of the success of ice speed skating throughout the world has also increased the interest of the roller sport of speed skating in Taiwan. The 2009 World Games success of the Taiwanese athletes brought excitement and higher interest in this sport and also the roller sport of speed skating. This success has enticed individuals to participate in the sport along with other leisure activities in Taiwan. People are increasingly taking an active role in roller sport of speed skating as a form of physical activity. Dimanche, Havitz, and Howard (1991), have suggested that it is important for individuals to become involved with various activities, especially with systematic exercise. They emphasized the significance of the medical benefits derived from exercise as well as other advantages, such as having fun, making friends, losing weight and self-esteem. This study is trying to explore why people in Taiwan participate in roller sport of speed skating and what benefit they get. This study also identifies the correlation between the athletes’ involvement levels and athletes' perceptions of benefits.

LITERATURE REVIEW

The first researchers to bring up the concept of involvement were Sherif and Cantril (1947) through a discussion of “Ego Involvement” in their social judgment theory. The researchers found values and goals as well as all major ego-attitudes were formed in or in relation to social groups. Since the 1980s, studies have provided evidence that a person’s degree of involvement in an activity plays a role in understanding recreationist motivations, preferences and evaluations of settings or management (Young, Williams & Roggenbuck, 1990).Engel and Blackwell (1982) suggested that involvement could be measured by the amount of time and energy spent in a product search the number of alternatives examined and the extent of the decision-making process. Involvement in sport can be considered active or...
passive, involving behavior in sport activities. Involvement in sport, in turn, can be based upon different kinds of consuming behaviors. Watching sport programs on TV, listening to sport news on radio and reading sport newspapers are “sport involving” behaviors. Of course, involvement in sport has been associated with other positive experiences, such as opportunities for identity exploration, problem solving and emotional development (Dimanche, Havitz & Howard, 2003).

Skating is a physical activity, and there will be, of course, many benefits to physical activity. Sechrist, Walker and Pender (1987) categorized perceived benefits of exercise as physical, psychological and social. The physical activity benefits of lifelong involvement were decreased risks of cardiovascular disease, hypertension and diabetes (Katzmarzyk, Janssen, & Ardern, 2003). Mazzeo, Rajkumar, Rolland, Blaher, Jennings and Esler(1998) argued that skating was one physical activity that can increase physical and mental health. Several researchers have reported that participation in sport produces bring psychological benefits(McAuley et al., 2003; Ference, College, Muth, 2004; Smith & Bar-Eli, 2007; Waldron, 2007). As to social benefits, Driver (1997) emphasized that such benefits can create positive changes in interpersonal relationships, fitness and the prevention of social problems.

Zamboanga, Rodriguez and Horton (2008) found that athletes who joined a sport team exhibited a high frequency of involvement in team social events. Exercise has social and educational benefits for all ages, not only among children but also among adults. For instance, Kao (1995) found that through leisure activity participation and experience, people obtain physiological, social, relaxation, educational, psychological and aesthetic benefits.

METHODS

The purpose of this study was to analyze athlete perceptions of the benefits and involvement in the roller sport of speed skating among those who competed in the 20th President's Cup Roller Sports Tournament in Taiwan in 2010.

Selection of the Subjects

The target of this study was to focus on the age over 13 and older (junior, senior high school and college students and others) who engaged in the roller sport of speed skating. The subjects were selected from a list of 555 athletes that were from the three main areas of Taiwan: Northern area, Central area, and Southern areas. After the 555 survey were mailed out, 245 were returned.

Instrumentation

This study used a survey questionnaire. The survey questionnaire consisted of three sections. The first section consisted of personal demographics and participation behaviors, such as the age levels of participants, gender, regional areas of Taiwan, how many years they participate, how many days a week they participate, how many hours a day they participate, do you participate all year around. The second section is the utilization of the Athletes’ Involvement Level Scale. There are 10 questions in the second section. The researcher adapted the questionnaire was developed by Lin (2004). A 7-point Bipolar Adjective Scale was used in the sections and 4 is the neutral point on the 1-7 scale. The third section was the utilization of the Athletes’ Perceptions of Benefits Scale. There were 24 questions in the third section. The researcher adapted the questionnaire by the third part which was developed by Wu (2009). Cronbach's alpha=.95. A 5-point Likert-type Scale was used in the sections, which score 1, 2, 3, 4, or 5 in accordance with “ extremely disagree,” “disagree,” “neutral,” ”agree,” to “extremely agree” was used, for all questions, except those related to athletes demographic information. The survey questionnaire was reviewed by a panel of experts. There are four experts in the list. The first three experts were utilized based upon their experiences in this sport and expertise in the sport. The first expert was a roller skating rink owner from the United States. The second expert was a speed skating coach from Taiwan, and the third expert was a research scholar from Taiwan. The fourth and final expert was utilized based upon her being a Chinese language instructor at the University of South Alabama in U.S.A.

Statistical Data Analysis

Data collected from the questionnaire were analyzed using the Statistical Package of Social Science (SPSS)
Windows version 16.0 for database construction and data analysis. Regarding statistical significance for the research in this study, an alpha level of 0.05 was set for the research criteria.

RESULTS

Variables of the Respondents’ Demographic Characteristics

(1) Region
There were 36 respondents (15.7%) located in the northern area, 101 respondents (43.9%) in the central area, and 94 in the southern area (40.4%).

(2) Age
As it related to the age of the respondents, 100 of the respondents were from 13 to 15 (43.5%), 69 respondents were from 16 to 18 (30%), 29 of the respondents were from 19 to 22 (12.6%), and 32 were over 22 (13.9%).

(3) Gender
As it related to gender, there were 150 male subjects (65.2%) and 80 female subjects (34.8%).

Variables of the Respondents’ Participation Behaviors

(1) Length of participation
As it related to how long the respondents had been the roller sport of speed skating, 43 (18.7%) had done so for 1 to 3 years, 76 (33%) had done so 4 to 6 years, 65 (28.3%) had done so for 7 to 9 years, and 46 (20%) had done so for more than 10 years.

(2) Weekly participation
As it related to how many days per week the respondents engaged in the roller sport of speed skating, 9 (3.9%) spent less than 1 day skating, 26 (11.3%) spent 1 to 2 days skating, 47 (20.4%) spent 3 to 4 days skating, 67 (29.1%) spent 5 to 6 days skating, and 81 (35.2%) skated 7 days a week.

(3) Hours per day
As it related to how many hours per day the respondents engaged in the roller sport of speed skating, 12 (5.2%) spent less than 1 hour, 28 (12.2%) spent less than 2 hours, 100 (43.5%) spent less than 3 hours, 48 (20.9%) spent less than 4 hours, and 42 (18.3%) spent more than 4 hours.

(4) Year around participation
In sum, 220 (95.7%) of the respondents answered in the affirmative when asked if they participated year round. Ten of the respondents answered in the negative (4.3%).

The Correlation between the Athletes’ Involvement Levels and Athletes’ Perceptions of Benefits.
In order to understand the relationship between athlete involvement levels and perceptions, a Person Correlation Analysis was utilized to examine the correlations influencing the athletes engaged in the roller sport of speed skating. A correlation coefficient is a number between -1 and 1 which measures the degree. In this study, the researcher defined low level correlation as $r < 0.3$, mid-level correlation as between $0.3~0.8$, and high level correlation as $r > 0.8$.

The results were tested by a Pearson Correlation Analysis. The results of this study found that the overall coefficient between the involvement levels and perceptions of benefits was $r = .443$ ($p <.05$). The coefficient was positive. Thus, there was a positive, mid-level correlation between the involvement levels and perceptions of benefits. When the involvement levels increased, athletes’ perceptions of benefits also increased. On the other hand, when the involvement levels decreased, athletes’ perceptions of benefits also decreased.

Speed Skaters Involvement Levels are Indicated from the Factors of the Athletes’ Perception of Benefits.
A Multiple Regression Analysis (Stepwise Regression procedure) was used to indicate the relationship between athletes’ perceptions of derived benefits and their involvement levels. Two variables were used in this analysis: the criterion, which was the athlete involvement level and the predictors, which were three factors from the athletes’ perception of benefits: physical benefits, psychological benefits, and social benefits. Table 1 showed a significant
difference in the total regression pattern (F= 31.603, p < .001). Thus, there was a significant relationship between the independent variable and the dependent variable. The results from the regression analysis are as follow:

(1) According to the results, the factors of physical benefits and social benefits had a significant indicated function to the factor of perceived benefits. The coefficient of determination (R^2) = .218 and F =31.603*** were significant. The factors of physical benefits and social benefits totaled 21.8% of the total variances of the involvement levels can be explained.

(2) According to the predictor, t= 5.319***, which was significant. The Bata was a positive number. This means it had a positive predicting. It present that if there have a higher athletes’ perception benefits, the involvement levels will also become higher.

(3) According to the results, the factors of physical benefits and social benefits can be united to indicate a total of 21.8% for the factor of involvement levels. It also could present that the main factors that affect speed skaters involvement levels are physical benefits and social benefits. The factor of physical benefits had the highest variance, as t = 5.319, p< .001; the factor of social benefits had the second highest variance, as t = 2.12, p< .05

### Table 1: A Model Summary of the Multiple Regression of the Athletes’ Involvement Levels and Perception of Benefits

<table>
<thead>
<tr>
<th>Ordinal Variable</th>
<th>(R)</th>
<th>(R^2)</th>
<th>(△R^2)</th>
<th>F</th>
<th>(Beta)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Benefits</td>
<td>.450</td>
<td>.202</td>
<td>.199</td>
<td>57.796</td>
<td>.370</td>
<td>5.319</td>
</tr>
<tr>
<td>Social Benefits</td>
<td>.467</td>
<td>.218</td>
<td>.211</td>
<td>31.603</td>
<td>.148</td>
<td>2.12</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01; ***p < .0001

### CONCLUSIONS

(1) Final Respondent Demographic Information

The results showed 43.9 % of the respondents in this study were from the central area, 40.4 % were from the southern area, and 15.7 % were from the north area of Taiwan. The results also showed most of the respondents (43.5%) were from 13 to 15.

Finally, most of the respondents (65.2%) were male.

(2) Respondent Participation Behaviors

The majority of the respondents (33.0%) had participated in the sport for 4 to 6 years. The majority of the respondents had participated in this sport for 7 days (35.2%) per week. The majority of the respondents (43.5%) spent less than 3 hours per day exercising, but most (95.7%) participated all year.

(3) The Results of the Correlation between Athletes’ Involvement Levels and Athletes’ Perceptions of Benefits

There was a positive, middle level correlation between the respondents’ involvement level and perceptions of benefits.

(4) The Results of the Multiple Regression Analysis (Stepwise Regression Procedure) in Determining the State of the Factors of Athlete Perceptions of Benefits on Involvement Levels

The factors of physical benefits and social benefits had a significant indicated to the factor of athlete perception of benefits as it related to involvement levels among the respondents.

### DISCUSSIONS AND RECOMMENDATIONS

**Discussions**

The purpose of this study is to analyze athlete perceptions of the benefits and involvement in the roller sport of speed skating among those who competed in the 20th President's Cup Roller Sports Tournament in Taiwan in 2010. The Athlete Involvement Level scale showed most speed skaters had a higher level of involvement (85.33 %) then other athletes, who had a moderate level of involvement (14.78 %). The findings were very similar to Josiam’s study (1999), which noted 82.2% of the participants had a high level of involvement while 17% had a moderate level. In Chen and
Shao’s study (2006) 77.9% of the international marathon participants had a high level of involvement and 20.7% had a moderate level.

The results showed athletes who had higher involvement levels had higher perceptions of benefits, physical benefits, psychological benefits, and social benefits than participants with moderate involvement levels. These results were consistent with Lu’s study (2003) which found when involvement levels were higher, benefits also increased.

According to studies by Lu (2003), Shen, Chao, Chaung, and Tseng (2007) and Chen (2008), there was a positive correlation between involvement levels and perceptions of benefits. This was also consistent with studies by Lee (2009), Hsieh (2008) and Chang (2007), which found a positive, moderate level correlation between involvement levels and physical and psychological health benefits among tennis players because, when athlete involvement levels increased, motivation also increased (Lee, 2009). When participant involvement levels increased, the perception benefits also increased.

For the factors of athlete perception of benefits, the regression equation: Involvement levels = 3.085 + 0.495 × 「Physical benefits」+ 0.203 × 「Social benefits」, the physical benefits and the social benefits had a significant indicated function to the athlete perceptions of benefits. The physical benefits factor was the main factor related to the involvement levels. This was consistent with findings in Lai’s study (2008), which indicated the physical factor had the highest relationship with the involvement levels. It could be that the athletes, through high level training, perceive and or derive strong physical benefits that motivate their involvement levels.

RECOMMENDATIONS

1. This research only focuses on speed skaters involvement levels and perceptions of benefits. Future researchers could compare other factors related to speed skaters.
2. This research is quantitative; future researcher can utilize qualitative research to get more detailed information from athletes.
3. Recommendations for the government are as follow:
   (1). Set relevant policies and reward incentives to increase participant motivation and satisfaction.
   (2). Establish the value of sports through education. Potential athletes can learn of the benefits through this sport through education, thus they can be encouraged to join in this sport.
   (3) To step up more public holiday sport activities. After the successful 2009 World Game in Taiwan, more people were familiar with the roller sport of speed skating; through public holiday sport activities, people will have more opportunities to be participants.

REFERENCES