

ORIGINAL ARTICLE

Effects of Public Trust in Live Broadcasting of Taekwondo Matches on the Intent of Trainees' to Continue Participation and Intention to Recommend

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Abstract

The purpose of this study was to examine the effects of credible relay broadcasting on participation and recommendation intentions of Taekwondo trainees. The subjects of this research were 340 elementary school Taekwondo trainees in Seoul and the Gyeonggi-do province of Korea who watched Taekwondo matches via relay broadcasting during the 2012 London Olympic Games. The results of the analysis were as follows. First, the effects of the dynamics, expertise, and reliability factors in the credibility of Taekwondo relay broadcasting during the London Olympics on trainees' participation in Taekwondo training were significant. Second, the effects of the reliability, dynamic, and expertise factors in the credibility of Taekwondo relay broadcasting during the London Olympics on trainees' intention to recommend Taekwondo training were significant. Third, continued participation was found to have significant effects on recommendation intention. In order to popularize and revitalize Taekwondo relay broadcasting, this study found that announcers should describe the rules of Taekwondo competition during televised broadcasting. Moreover, if star players appear on television, participation would continue and recommendation intention of trainees would increase.

KEYWORDS

London Olympics, Taekwondo relay broadcasting, commentator, dynamics, expertise, reliability

Introduction

A physically active lifestyle has a number of health benefits in regards to body composition (23), bone mineral density (BMD) (1, 19, 24), and physical fitness (10) when compared to a sedentary lifestyle. These benefits can affect all stages of life, improve quality of life, and even decrease mortality (26). A number of studies have shown that regular physical activity during childhood and adolescence can have a positive effect on former athletes' health even after training volume has decreased or even ceased completely (26, 30, 31).

The general public today prefers viewing television (TV) to consuming sports through other types of media (9). Without the development of media, it would have been impossible for sports to show the progress it as seen today, and the value of marketing could not have been maximized through sports (10). TV in particular contributed greatly to both the quantitative and

qualitative growth of sports (3). Thus, TV cannot be overlooked when understanding the advancement of sports.

Sports today have a close symbiotic relationship with TV. Modern society has been characterized partially by the combination of sports and TV, thereby TV audiences have come to expect a certain level of excitement from sports programming. Since sports use TV to expose their value to a large audience and TV uses sports as a medium to attract viewers to broadcasts, the live broadcasts of sporting events serve to increase a network's viewing ratings (8, 10).

Major sporting events have the benefit of naturally attracting global attention regardless of national borders and language barriers through the development of mass media (13). In particular, for mega-sporting events, such as the Olympic Games, audience attendance and global viewers are increasing with each event. For example, the number of viewers of the Seoul Olympics in 1988 was 10.4 billion, whereas that number increased by 60% to

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Table 1. Demographic characteristics of research subjects

| Variable | Division | Frequency (person) | Ratio (%) |
|------------------------|----------------------------------|--------------------|-----------|
| Gender | Male | 267 | 78.5 |
| | Female | 73 | 21.5 |
| Grade | Grade 4 | 140 | 41.2 |
| | Grade 5 | 95 | 27.9 |
| | Grade 6 | 105 | 30.9 |
| Training period | Less than 6 months | 33 | 9.70 |
| | Less than 1 year | 42 | 12.4 |
| | Less than 2 years | 52 | 15.3 |
| | 2 years and more | 213 | 62.6 |
| Current Taekwondo rank | <i>Geup</i> level holder | 74 | 21.8 |
| | 1 st <i>poom</i> | 56 | 16.4 |
| | 2 nd <i>poom</i> | 108 | 31.8 |
| | 3 rd <i>poom</i> | 102 | 30.0 |
| Daily training hours | Less than 1 hour | 42 | 12.4 |
| | 1 hour to less than 1.5 hours | 294 | 86.4 |
| | 1.5 hours to less than 2 hours | 4 | 1.2 |
| Training purpose | Physical purpose | 222 | 65.3 |
| | Social purpose | 12 | 3.5 |
| | Mental purpose | 106 | 31.2 |
| | Own decision | 158 | 46.5 |
| Recommender | Parent's decision | 140 | 41.2 |
| | Friend recommendation | 32 | 9.4 |
| | Brother or sister recommendation | 4 | 1.2 |
| | Others | 6 | 1.7 |
| Totals: | | 340 | 100.0 |

Geup: under black belt.

Poom: black belt ranks for Taekwondo students under the age of 15.

16.6 billion for the 1992 Barcelona Olympics (19). The Olympics have become the world's biggest media event, and the ratings of the 2012 London Olympics in Korea were 38.3% out of all TV viewers during the Olympics (19). The sum of the ratings of all four Korean channels (KBS1, KBS2, MBC, and SBS) was 23.1%, which was an increase from two weeks before the Olympics (19). Considering that there was an 8-hour time difference between Korea and London necessitating the major events were broadcasted in the middle of the night in Korea, it could be seen that the national interest during the London Olympics was quite high. Taekwondo, Korea's national sport, was at the center of the country's attention.

Taekwondo was selected as a demonstration sport in the 1988 Seoul Olympics and has since been an official sport from the 2000 Sydney to the 2012 London Olympics. Taekwondo is ranked fourth in terms of the

total number of gold medals among the sports contested at the Summer Olympic Games (19). However, viewers who have watched Taekwondo matches have severely criticized the sport (2). In particular, they have complained that huge opinion gaps about scoring and judging exist and the scoring systems were ambiguous (18).

To overcome the unpopularity of the sport, constant efforts have been made in the world of Olympic Taekwondo. With one bad call made after another in swimming, Judo, and fencing at the 2012 London Olympics, the major media of the world, the International Olympic Committee (IOC), and viewers have focused on Taekwondo more conscientiously (19). The response of viewers toward the live broadcasting of Taekwondo was clearly different from the past. Issues such as a lack of fun, liveliness, and media exposure were resolved by changing the rules and methods to include an expanded

Table 2. Factor analysis on public trust in live broadcasting of Taekwondo

| Item | Content | Factor 1: Expertise | Factor 2: Dynamics | Factor 3: Reliability |
|------|---|------------------------|-----------------------|--------------------------|
| 2 | I can understand how a Taekwondo match is run. | 0.827 | 0.148 | 0.210 |
| 3 | I can learn the rules of competition. | 0.818 | 0.103 | 0.221 |
| 1 | I can obtain expert knowledge about Taekwondo competition. | 0.805 | 0.321 | 0.170 |
| 7 | I can complement an athlete's performance. | 0.257 | 0.758 | 0.071 |
| 10 | I want to watch the match in person. | 0.160 | 0.736 | 0.052 |
| 8 | Taekwondo matches are fun and interesting. | 0.081 | 0.722 | 0.303 |
| 9 | I feel desire to train in Taekwondo. | 0.115 | 0.582 | 0.443 |
| 5 | I feel assured that Taekwondo is part of my life. | 0.161 | 0.071 | 0.784 |
| 6 | Taekwondo helps develop a law-abiding spirit and sense of public order. | 0.172 | 0.185 | 0.748 |
| 4 | Watching Taekwondo helps me improve my Taekwondo skills. | 0.354 | 0.283 | 0.647 |
| | Eigen-value | 2.294 | 2.233 | 2.011 |
| | Variance (%) | 22.945 | 22.331 | 20.112 |
| | Accumulation (%) | 22.945 | 45.275 | 65.387 |

application of the differential scoring system (17). Furthermore, Taekwondo experts were recruited as commentators to increase public trust in live broadcasting of the sport (19). Public trust is defined herein as recipients' expertise, trust, and image or attitude toward a communicator (16).

Sports and broadcasting have a complementary relationship, which affects both of their popularities and commercial successes. Without broadcasting, countless spectator sports would fail to arouse interest or be limited strictly in terms of their dramatic depictions and entertainment elements (22). There is still insufficient research on public trust in live sports broadcasting. Accordingly, the objective of this study is to show that live broadcasting of Taekwondo has a significant effect on Taekwondo students in terms of their continuous training.

Methods

This study analyzed how public trust in live broadcasting of the Taekwondo events in the 2012 London Olympics affected the intent of Taekwondo elementary school students to continue participating in Taekwondo and their intention to recommend Taekwondo training.

Subjects

The subjects of this study were Taekwondo trainees in elementary school grades 4, 5, and 6 who watched at least one match of Taekwondo broadcasted live in

Korean during the 2012 London Olympics. All subjects were selected by convenience sampling. A total 350 questionnaires were sent to 7 Taekwondo schools in Seoul and Gyeonggi-do province (50 copies each). Subjects were informed of the research objectives after training at their respective Taekwondo schools. They were then given a questionnaire to complete. The results of this study were compiled from the 340 questionnaires collected from the research group; ten questionnaires were either non-responses or deemed unreliable.

Table 1 shows the research subjects' demographics. The subjects consisted of 267 males (78.5%) and 73 females (21.5%). There were 140 elementary school subjects in grade 4 (41.2%), 95 in grade 5 (27.9%), and 105 in grade 6 (30.9%). The ratio of subjects in elementary school grade 4 was highest, followed by grade 6 and grade 5. In terms of training time, 33 subjects trained in Taekwondo for less than 6 months (9.7%), 42 for less than a year (12.4%), 52 for less than 2 years (15.3%), and 213 for 2 years or longer (62.6%).

Poom ranks are awarded to Taekwondo students under the age of 15 and are equivalent to *dan* (black belt) ranks. Students can earn either 1st, 2nd, or 3rd *poom*. Regardless of age, students under the rank of 1st *dan* or *poom* possess *geup* (under black belt) ranks that are identified with different colored belts. As for the subjects of this study, 108 were 2nd *poom* (31.8%), 102 were 3rd *poom* (30%), 74 were *geup*-level holders (21.8%), and 56 were 1st *poom* (16.4%).

For daily training hours, 294 subjects trained for 1 to 1.5 hours (86.4%), 42 for less than 1 hour (12.4%), and 4 for 1.5 to less than 2 hours (1.2%). Subjects trained Tae-

Table 3. Factor analysis on intent to continue participation and intention to recommend Taekwondo training

| Item | Content | Intent to continue participation | Intention to recommend |
|------|---|----------------------------------|------------------------|
| 2 | I will continue to learn Taekwondo as long as the current program is sustained. | 0.856 | 0.148 |
| 5 | I will continue to learn Taekwondo even if the training costs increase. | 0.829 | 0.097 |
| 1 | I will make an effort to continue learning Taekwondo. | 0.770 | 0.184 |
| 4 | I feel that I should train harder in Taekwondo. | 0.735 | 0.127 |
| 3 | I feel the need for Taekwondo training. | 0.657 | 0.081 |
| 7 | I think I should introduce Taekwondo to others. | 0.099 | 0.849 |
| 6 | I will recommend my Taekwondo program to others. | 0.104 | 0.849 |
| 8 | I will talk about my Taekwondo instructor's advantages to others. | 0.217 | 0.825 |
| | Eigen-value | 3.053 | 2.211 |
| | Variance (%) | 38.162 | 27.633 |
| | Accumulation (%) | 38.162 | 65.795 |

kwondo for various reasons: 222 (65.3%) for physical purposes, 106 subjects (31.2%) for mental purposes, and 12 subjects (3.5%) for social purposes. As for who recommended the subjects to train Taekwondo, 158 subjects (46.5%) responded "Own decision," 140 subjects (41.2%) responded "Parent's decision," 32 subjects (9.4%) responded "Friend's recommendation," 4 subjects (1.2%) responded "Brother's or sister's recommendation," and 6 subjects (1.7%) responded "Others."

Research tools

The questionnaire used in this study was based on items developed by Carveth and Alexander (1), the questionnaire used by Rubin (20), and questionnaires designed by Kim (8) and Han (5). Moreover, to address issues concerning continuous participation, items applied by Lee, Jeong, and Song (11) were also adapted to determine subjects' intention to recommend Taekwondo training. The suitability and applicability of the contents were reviewed by the preliminary survey, after which the items were revised and improved for use.

The questionnaire used in the current study consisted of a total of 25 items. It contained 10 items regarding public trust factors of the live broadcasting of Taekwondo (3 in expertise, 4 in dynamics, and 3 in reliability) as well as items to elicit information on continued participation (5 questions), intention to recommend Taekwondo training (3 questions), and demographic characteristics (7 questions). All items except demographic questions were rated on a five-point Likert scale from "Strongly disagree" (1 point) to "Strongly agree" (5 points).

Validity and reliability analysis of the survey tool

We conducted an exploratory factor analysis to verify the validity of the survey data and a principal component analysis for factor extraction modeling. Varimax, an orthogonal rotation, was used for the analysis, and the evaluation standards were set as 1.0 or higher for factor loading and 0.5 or higher for explanatory power of factors.

As a result of our exploratory factor analysis on the public trust factors of the live broadcasting of Taekwondo in the Olympics, three factors were extracted from a total

Table 4. Reliability analysis

| Variable | Factor | No. of items | Cronbach's α |
|---|----------------------------------|--------------|---------------------|
| Independent variables (Public trust in live broadcasting of Taekwondo) | Expertise | 3 | 0.832 |
| | Dynamics | 4 | 0.742 |
| | Reliability | 3 | 0.711 |
| Dependent variables | Intent to continue participation | 5 | 0.838 |
| | Intention to recommend | 3 | 0.812 |

Table 5. Results of difference analysis on public trust in the live broadcasting of Taekwondo during the London Olympics, intent to continue participation, and intention to recommend Taekwondo training according to subjects' rank

| Factor | Current Taekwondo rank | N | M | SD | SS | df | MS | F | Post-hoc |
|----------------------------------|-----------------------------|-----|------|-------|---------|-----|-------|--------|-----------------|
| Expertise | <i>Geup</i> holder | 74 | 2.97 | 0.819 | 8.288 | 3 | 2.763 | 3.318* | II, III, IV > I |
| | 1 st <i>poom</i> | 56 | 3.44 | 0.848 | 279.740 | 336 | 0.833 | | |
| | 2 nd <i>poom</i> | 108 | 3.32 | 1.062 | 288.027 | 339 | | | |
| | 3 rd <i>poom</i> | 102 | 3.26 | 0.833 | | | | | |
| Dynamics | <i>Geup</i> holder | 74 | 3.45 | 0.926 | 1.858 | 3 | 0.619 | 0.840 | |
| | 1 st <i>poom</i> | 56 | 3.58 | 0.856 | 247.745 | 336 | 0.737 | | |
| | 2 nd <i>poom</i> | 108 | 3.62 | 0.970 | 249.603 | 339 | | | |
| | 3 rd <i>poom</i> | 102 | 3.64 | 0.660 | | | | | |
| Reliability | <i>Geup</i> holder | 74 | 3.27 | 0.779 | 0.673 | 3 | 0.224 | 0.307 | |
| | 1 st <i>poom</i> | 56 | 3.39 | 0.885 | 245.419 | 336 | 0.730 | | |
| | 2 nd <i>poom</i> | 108 | 3.37 | 0.874 | 246.092 | 339 | | | |
| | 3 rd <i>poom</i> | 102 | 3.36 | 0.868 | | | | | |
| Intent to continue participation | <i>Geup</i> holder | 74 | 2.52 | 0.829 | 5.236 | 3 | 1.745 | 2.004* | III > IV |
| | 1 st <i>poom</i> | 56 | 2.57 | 1.022 | 292.563 | 336 | 0.871 | | |
| | 2 nd <i>poom</i> | 108 | 2.53 | 0.990 | 297.798 | 339 | | | |
| | 3 rd <i>poom</i> | 102 | 2.27 | 0.889 | | | | | |
| Intention to recommend | <i>Geup</i> holder | 74 | 3.67 | 0.820 | 0.448 | 3 | 0.149 | 0.169 | 0 |
| | 1 st <i>poom</i> | 56 | 3.65 | 0.957 | 296.838 | 336 | 0.883 | | |
| | 2 nd <i>poom</i> | 108 | 3.60 | 1.065 | 297.286 | 339 | | | |
| | 3 rd <i>poom</i> | 102 | 3.69 | 0.867 | | | | | |

* p < 0.05.

Geup: under black belt.

Poom: black belt ranks for Taekwondo students under the age of 15.

I: *Geup* level holder, II: 1st *poom*, III: 2nd *poom*, IV: 3rd *poom*.

of 10 items. Table 2 shows the results of the factor analysis. Factor 1 was named the expertise factor and contained 3 items. It had an Eigen-value of 2.294 and an explanatory power 22.945%, showing the highest explanatory power among the public trust factors in live broadcasting of Taekwondo during the Olympics. Factor 2 was named the dynamics factor and contained 4 items. It had an Eigen-value of 2.233 and an explanatory power of 22.331%. Factor 3 was named the reliability factor and had 3 items. It had an Eigen-value of 2.011 and an explanatory power of 20.112%. Factor loading of each item for all sub-factors of live broadcasting of Taekwondo in the Olympics exceeded 0.50, and the accumulation rate was 65.387%, indicating that the contents of the survey items were relatively valid.

Table 3 shows the results of the factor analysis on the

8 extracted items regarding the intent to continue participation and intention to recommend Taekwondo training for Taekwondo students who watched live televised Olympic Taekwondo matches. Factor 1 was the intent to continue participation and had 5 items. It had an Eigen-value of 3.053 and an explanatory power of 38.162%. Factor 2 was the intention recommend and had 3 items. It had an Eigen-value of 2.211 and an explanatory power of 27.633%. Items of Factors 1 and 2 all exceeded 0.5, and the accumulation rate was 65.795%, indicating that the contents of the survey items were relatively valid explanatory power of 27.633%. Items of Factors 1 and 2 all exceeded 0.5, and the accumulation rate was 65.795%, indicating that the contents of the survey items were relatively valid.

To evaluate the reliability of the measurements used

Table 6. Results of difference analysis on public trust in live broadcasting of Taekwondo during the London Olympics, intent to continue participation, and intention to recommend Taekwondo training according to subjects' training purposes

| Factor | Training | N | M | SD | SS | df | MS | F | post-hoc |
|----------------------------------|----------|-----|------|-------|---------|-----|-------|--------|----------|
| Expertise | Physical | 220 | 3.32 | 0.851 | 5.876 | 2 | 2.938 | 3.509* | I > III |
| | Social | 14 | 3.52 | 0.609 | 282.152 | 337 | 0.837 | | |
| | Mental | 106 | 3.06 | 1.063 | 288.027 | 339 | | | |
| Dynamics | Physical | 220 | 3.62 | 0.870 | 1.501 | 2 | 0.750 | 1.019 | |
| | Social | 14 | 3.67 | 0.828 | 248.102 | 337 | 0.736 | | |
| | Mental | 106 | 3.49 | 0.835 | 249.603 | 339 | | | |
| Reliability | Physical | 220 | 3.40 | 0.876 | 1.967 | 2 | .984 | 1.358 | |
| | Social | 14 | 3.23 | 0.576 | 244.124 | 337 | 0.724 | | |
| | Mental | 106 | 3.25 | 0.825 | 246.092 | 339 | | | |
| Intent to continue participation | Physical | 220 | 2.49 | 0.920 | 2.015 | 2 | 1.007 | 1.148 | |
| | Social | 14 | 2.68 | 0.843 | 295.783 | 337 | 0.878 | | |
| | Mental | 106 | 2.36 | 0.979 | 297.798 | 339 | | | |
| Intention to recommend | Physical | 220 | 3.63 | 0.960 | 2.267 | 2 | 1.133 | 1.295 | |
| | Social | 14 | 4.04 | 0.536 | 295.019 | 337 | 0.875 | | |
| | Mental | 106 | 3.64 | 0.921 | 297.286 | 339 | | | |

* $p < 0.05$.

I: physical purpose, II: social purpose III: mental purpose.

in this study, we analyzed its internal consistency reliability using Cronbach's α . The result showed that the Cronbach's α of each of the public trust factors of Taekwondo live broadcasting during the London Olympics ranged from 0.711 to 0.832. Dependent variables, such as the intent to continue participation and intention to recommend Taekwondo training, were relatively high at 0.812-0.838, as shown in Table 4. In general, if the reliability coefficient is 0.70 or higher, it is acceptable, and thus this study's reliability was secured.

Data analysis

In order to analyze data, we first conducted a frequency analysis using SPSS 18.0 for Windows to determine the demographic characteristics of the subjects. Second, to secure validity and reliability of the survey items, we conducted an exploratory factor analysis and a reliability analysis. Third, to analyze the difference in public trust factors in live broadcasting of Taekwondo according to the demographic characteristics of the subjects depending on their intent to continue participation and to recommend Taekwondo to others, we conducted a t-test and one-way ANOVA. Fourth, to examine the effects of live broadcasting of Taekwondo matches during the London Olympics on subjects' intent to continue participation and to recommend Taekwondo to others, we conducted a correlation analysis and a

multiple regression analysis.

Results

Table 5 shows the results of the difference analysis on public trust in live broadcasting of the Taekwondo matches at the London Olympics, intent to continue participation, and the intention to recommend Taekwondo training according to the subject's current Taekwondo rank. The results show that there was a significant difference in expertise among the public trust factors and intent to continue participation according to the subject's current Taekwondo rank, where there was no significant difference in dynamics and reliability among the public trust factors as well as the intention to recommend Taekwondo training. To examine this result more specifically, we conducted a least significant difference (LSD) posteriori test, the results of which showed that 1st *poom* ($M = 3.44$), 2nd *poom* ($M = 3.32$), and 3rd *poom* ($M = 3.26$) were higher than *geup*-level holders ($M = 2.97$) in expertise among the public trust factors ($p < 0.05$). In intent to continue participation, 2nd *poom* ($M = 2.53$) was higher than 3rd *poom* ($M = 2.27$) ($p < 0.05$).

Moreover, there was a significant difference in expertise among the public trust factors according to the subjects' training purposes according to demographic characteristics, but there was no significant difference in

Table 7. Relationships between public trust in the live broadcasting of Taekwondo during the London Olympics, intent to continue participation, and intention to recommend training

| Variable | Expertise | Dynamics | Reliability | Intent to continue participation | Intention to recommend |
|----------------------------------|-----------|----------|-------------|----------------------------------|------------------------|
| Expertise | 1.00 | | | | |
| Dynamics | 0.469** | 1.00 | | | |
| Reliability | 0.522** | 0.512** | 1.00 | | |
| Intent to continue participation | 0.405** | 0.469** | 0.331** | 1.00 | |
| Intention to recommend | 0.430** | 0.524** | 0.648** | 0.324** | 1.00 |

*p < 0.05, **p < 0.01.

dynamics and reliability among the public trust factors as well as intent to continue participation and intention to recommend Taekwondo training (Table 6). The result of the LSD posteriori test showed that physical purpose (M = 3.32) was higher than mental purpose (M = 3.06) in expertise among the public trust factors (p < 0.05).

Correlation analysis of public trust in the live broadcasting of London Olympic Taekwondo matches, intent to continue participation, and intention to recommend Taekwondo training

Table 7 shows the results of the correlation analysis on the relationship among public trust in the live broadcasting of Taekwondo during the London Olympics, intent to continue participation, and intention to recommend Taekwondo training. Intent to continue participation showed a positive correlation between dynamics (r = 0.469), expertise (r = 0.405), and reliability (r = 0.331) among the public trust factors (p < 0.01). Intention to recommend Taekwondo training showed a positive correlation in the order of reliability (r = 0.648), dynamics (r = 0.524), and expertise (r = 0.430) among the public trust factors (p < 0.01). Moreover, there was a significant correlation between intent to continue participation and intention to recommend Taekwondo training (r = 0.324, p < 0.001), thereby showing a significant correlation among all variables.

Effects of public trust in live broadcasting on intent to continue participation

Table 8 shows the results of the multiple regression analysis to analyze the effects of public trust in the live broadcasting of Taekwondo during the London Olympics on the subjects' intent to continue participation. The results showed that the model has the explanatory power of 26.5% (R² = 0.265), and that the model was statistically significant (F = 40.361, p < 0.001). Moreover, dynamics (β = 0.345) had the most significant effect on the intent to continue participation among the public trust factors, which was followed by expertise (β = 0.224). Dynamics turned out to have the greatest effect on the subjects' intent to continue participation among all public trust factors.

Effects of public trust in live broadcasting on intention to recommend Taekwondo training

Table 9 shows the effects of public trust in the live broadcasting of Taekwondo during the London Olympics on subjects' intention to recommend Taekwondo training. The results of the regression analysis showed that our model had the explanatory power of 47.2% (R² = 0.472), and that it was statistically significant (F = 100.073, p < 0.001). Moreover, reliability (β = 0.492) had the most significant effect on the intention to recommend

Table 8. Effects of public trust in the live broadcasting of Taekwondo during the London Olympics on the subjects' intent to continue participation

| Dependent variable | Independent variable | B | SE | β | t | p |
|----------------------------------|----------------------|------------------------|---------------|-----------|----------|-------|
| Intent to continue participation | Expertise | 0.227 | 0.058 | 0.224 | 3.918*** | 0.000 |
| | Dynamics | 0.377 | 0.062 | 0.345 | 6.090*** | 0.000 |
| | Reliability | 0.041 | 0.065 | 0.037 | 0.638 | 0.524 |
| | | R ² = 0.265 | F = 40.361*** | p < 0.001 | | |

*p < 0.05, **p < 0.01, ***p < 0.001.

Taekwondo training among the public trust factors, which was followed by dynamics ($\beta = 0.244$). Reliability had the greatest effect on the intention to recommend training among all public trust factors.

Discussion

This study aimed to investigate the effects of public trust in the live broadcasts of Taekwondo matches during the 2012 London Olympics on elementary school (grades 4-6) Taekwondo trainees’ intent to continue participation in Taekwondo and their intention to recommend training.

As a result of a difference analysis on public trust factors in live broadcasting of Taekwondo, intent to continue participation, and intention to recommend training according to demographic characteristics, it was found that there was a significant difference in expertise among the public trust factors and the intent to continue participation according to the trainees Taekwondo rank. In particular, 1st *poom*, 2nd *poom*, and 3rd *poom* trainees were higher than *geup* level holders in expertise, while in the intent to continue participation, 2nd *poom* was higher than 3rd *poom*. A study by Lee, Kim, and Noh (12) showed that expertise among the public trust factors of sports broadcasters was a highly critical factor for teenagers’ satisfaction in TV viewing and intention to rewatch, which is partially consistent with the results of this study. These results suggest that there is a difference in the expertise factor among the public trust factors according to the level of trainees, and intent to continue participation was especially high in 2nd *poom* trainees.

It would be possible to increase expertise and intent to continue participation if education programs were subdivided in light of the aforementioned facts and education services meet the needs of trainees (6). Furthermore, physical purpose was higher than mental purpose in expertise among public trust factors according to training purpose. Ham (4) showed that physical purpose was higher than mental purpose in the intent to continue participation, which partially supports the results of this study. In light of these results, it is necessary to increase the intent to continue participation

by providing differentiated and diverse programs according to the training purpose of trainees (6) and by carrying out constant promotional activities.

Among the public trust factors, dynamics turned out to have the most significant effect on the intent to continue participating in training, which was followed by expertise. Dynamics had the greatest effect on the intent to continue participation, which is similar to Lee et al.’s findings (15). This result may have been due to the fact that Taekwondo matches require more aggressive and dynamic motions or movements compared to other sports (19). Furthermore, expertise had a significant effect on the intent to continue participation among the public trust factors, which is consistent with Lee’s (14) results. The current study suggests that expertise in knowledge, command of language, and expressivity are the key factors for live broadcasts of Taekwondo to maintain and increase the intent to continue participation in Taekwondo. In other words, selecting commentators with more professional and dynamic skills to increase public trust in the live broadcasts of Taekwondo matches may also increase intent to continue participation in Taekwondo.

Our results showed that reliability had a significant effect on the intention to recommend training among the public trust factors. As for reliability among the public trust factors, recipients do not trust a message if the commentator’s intention does not seem genuine, no matter how high their expertise (9). In this context, considering that reliability is a relatively more critical factor than expertise among the public trust factors in live broadcasting with regard to the intention to recommend Taekwondo training, it seems the role of reliability in determining public trust cannot be overvalued (7). Therefore, without public trust in live broadcasts of Taekwondo matches, media recipients may not accept the information stated during those broadcasts even if it is provided by expert commentators. Finally, organizations related to Taekwondo must make constant efforts for Taekwondo trainees to watch more live broadcasting of

Taekwondo. Public trust of Taekwondo trainees in live broadcasting will increase by expanding live broadcasting of domestic and overseas Taekwondo

Table 9. Effects of public trust in the live broadcasting of Taekwondo during the London Olympics on subjects’ intention to recommend training

| Dependent variable | Independent variable | B | SE | β | t | p |
|------------------------|----------------------|---------------|---------------------|-------------|----------|-------|
| Intention to recommend | Expertise | 0.060 | 0.049 | 0.059 | 1.217 | 0.224 |
| | Dynamics | 0.267 | 0.052 | 0.244 | 5.090*** | 0.000 |
| | Reliability | 0.541 | 0.055 | 0.492 | 9.892*** | 0.000 |
| | | $R^2 = 0.472$ | $F = 100.073^{***}$ | $p < 0.001$ | | |

*p < 0.05, **p < 0.01, ***p < 0.001.

competitions, through which the intent to continue Taekwondo training and intention to recommend Taekwondo training will also increase.

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