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Impact of Media Coverage of the 42nd World Archery Championships on Audience Attendance and Purchases

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ABSTRACT

Sports and the media, two of the most prevalent elements in contemporary society, rely on each other to prosper and have been deeply ingrained in our daily lives. While studies have been conducted on the influence of media on the consumption of major spectator sports (Bernstein & Blain, 2003; Donnelly, 1996; Real & Mechikoff, 1992; Schultz, 2002; Verveer, 2001:), to date no one has studied how media coverage influences an audience's attendance at and involvement in archery events. The purpose of this study was to explore the relationship between media coverage and spectator attendance at the 42nd World Archery Championships in New York City. The variables studied were two: (a) media coverage, including TV, radio, sports pages of newspapers, and professional archery magazines; and (b) audience demographic characteristics, including gender, income, education, occupation, and marriage. After evaluating 250 usable responses, results indicate that radio coverage of the event and Internet communication were the primary media that influenced attendance at the event. In addition, TV advertisements, an archery Web site, and viewing the televised event also influenced attendance at the World Archery Championships.

INTRODUCTION

Global impact of sports

Sports influence our daily lives, playing a key role in our socialization and entertainment. The Summer Olympic Games and Winter Olympic Games, hosted every four years, attract billions of viewers who enjoy the competitions through the global media. In 1996, the Centennial Olympic Games, which were hosted by Atlanta, Georgia, attracted almost a quarter million people and media representatives to the city to enjoy the gala. It was estimated that an additional 1.5 billion people watched the games through network and cable television (Marketing Matters, 1996). Verveer (2001) stated that the Sydney Olympics were broadcast to 220 countries and territories, making them the most-watched television sports event in history. In Dayan and Katz's view (1995), the hallmark of media events is their rarity and, therefore, their ability to interrupt our daily lives; media events are live and unfolding, and both broadcasters and audiences adjust their schedules in order to attend them (1995).

Importance of media coverage

The growth of modern sports is considered to provide an interesting example of globalization. Sports not only provide an attraction to bring people together, they also work to attract media involvement. A comparative study of television coverage in the context of sports (Bernstein & Blain, 2003) reported that the opening ceremony at the Barcelona Olympics drew 28 broadcasters from around the world. The media includes not only broadcasters but newspapers, magazines, books, movies, and the Internet. The media often serve the interests of people who have power and wealth, usually emphasizing images and messages consistent with dominant ideologies. The impact of global processes on sports may emphasize either globalization or processes such as Americanization, modernization and post-

modernization, as well as cultural imperialism and cultural dominance (Donnelly, 1996).

Through television and the other media, we can appreciate the outstanding performances of elite athletes. This process will get more people involved in sports, bringing more media participation, creating a positive circle. The more sports broadcasts, the larger the audience involved in sports. According to the Web site Tour de France á la Voile 2002, during 2001, 1,027 programs about the Tour de France were broadcast. The advertising value of the 2001 Tour de France television coverage has been estimated at 42 million francs (we141.lerelaisinternet.com). Do sports depend on the media? Do the media depend on sports? In reality, they have a reciprocal relationship, depending on each other. Sports produce a unique form of news and entertainment. Media coverage of sports enhances enjoyment of daily life. However, keep in mind that mass media do not shape sports, but rather intensify and extend the process and effects of commercialization of sports. They bring us information, interpret it for us, and entertain us. This process “re-presents” reality. As Real and Mechikoff (1992) state, specific media technology and commercial advertising provide the structure through which the public accesses media sports. Sporting events are becoming more common in society because of media that provide a connection between sports audiences and favorite teams and athletes. Sports have many dimensions, not just the shape presented by the media. And there is much more to the media than sports. In newspapers, sports sections provide more daily coverage of sports than any other single topic receives elsewhere in the edition. Televised sports events, a major part of programming, have continued to gain advertising revenue. A number of channels are now exclusively dedicated to sports and sports events, focused media packages satisfying people’s demonstrated needs.

PURPOSE OF THE STUDY

This study may be the first one of how media coverage influences audience attendance at archery events. Undoubtedly, without mass media and adequate audiences participating in archery events, sponsorship and the general awareness of archery would not grow; archery as part of major competitions could even be terminated.

The International Archery Federation (FITA) Congress held in Helsinki in 1955 introduced the “FITA Round,” which to today’s audiences likely would seem a very boring competition format. From 1955 until 1985, world championships were to be determined in a “Double FITA Round,” comprising a similarly dull format. It was, in short, a style poorly suited to the modern broadcasting style because it lacked excitement. Therefore, in 1988 FITA introduced the “Grand FITA Round,” which later became today’s “Olympic Round.” The new formats were meant to enhance interest in archery within the media.

With the FITA revisions in mind, the main purpose of this study was to explore the relationship between media coverage and a major archery event held in New York City. It is important to consider this relationship, because our ideas about sports are formed by the images and messages throughout sports media. The study included the following aims:

1. To identify the relationship between media coverage and the archery event.
2. To explore the demographic characteristics of audiences involved in archery.
3. To investigate the media sources used by persons in deciding to attend the World Archery Championships.
4. To analyze the relationship between the audience’s involvement in FITA and the purchase of merchandise at or related to archery events.

REVIEW OF LITERATURE

Relationship of sports and the media

Sports and the media are no doubt two of the most prevalent elements in contemporary society. As we know, mass media play an important part in American industry, and not just in relation to sports. On the other hand, sports themselves, at all levels, are approached as a business (some as multimillion-dollar businesses); they rank 11th among America's industries, by size (Meek, 1997). The value of media coverage generated by a sports event is often built into estimates of that event's economic effect (Dwyer et al., 2000; Higham, 1999). How do the two giant industries sports and media establish and cement their symbiotic relationship in order to benefit each other? During leisure time, people have such choices as to watch television, read magazines, or play sports; mass media and sports, in this aspect, fall in the same dimension, but in direct competition with each other. A North American folklore has developed involving watching sports on television (Wenner & Gantz, 1998). However, mass media have in fact done much more for the development of sports than most people imagine (P.E. Centre Web site).

Sports and mass media clearly rely on each other to prosper. The mass media profit from offering a valuable commodity, sports information, which the public seems to want; sports, in turn, gains popularity and wealth by offering broadcast rights (Smith & Blackman, 1982). Heinemann (n.d.) describes the mutual interests of sports and mass media as follows:

Sport has become an essential part of the entertainment program of the mass media; simultaneously there is another advantage for sport: the widespread coverage of sport via the mass media contributed to its popularization. Interest in a particular sport rises considerably when its television coverage is extensive. (¶ 5).

Mass media's role in this particularly reciprocal relationship centers on the huge injection of money it provides to sports; this creates an ever-ascending spiral that has meant better media coverage of sports, better sports equipment and facilities, larger sports audiences, additional sponsorship opportunities, and larger athlete and staff salaries. Mass media benefits, on the other hand, from using sports as a powerful promotion outlet attracting advertising contracts and the viewing public's attention, thanks to exclusive sports information. The symbiotic relationship between sports and mass media creates nothing less than a win-win strategy.

The importance of media coverage

The mass media are becoming steadily more dependent on sports, which can be seen in all media coverage. USA Today, presently the widest circulating daily newspaper in the nation, has a sports section occupying more than 25% of the editorial space for each issue (National Register Publishing, 1993). The all-sports television networks (e.g., ESPN) are exclusively devoted to sports coverage and serve at least 95 million households worldwide (Baker & Boyd, 1997). The powerful Web site Yahoo Sports delivered full coverage of the 1998 Olympic Winter Games in seven different languages, giving 1.5 million global users a quick and easy experience of events in Nagano (Yahoo.com, 1998). These examples demonstrate that mass media rely on sports and use sports' worldwide popularity to their great advantage.

The effects of media coverage on the sports industry have also become particularly apparent over the last few years. According to an informal survey ranking coverage, conducted by Latelinews.com, sports news in June 2003 was fifth in importance out of all news programming and related hits (Latelinews.com, 2003). Furthermore, a survey of spending habits conducted by Outsports.com showed that 79% of the site's readers attend at least three fee-for-admission sporting events annually and buy an average of some 4.5 sports-related articles of clothing every year (Outsports.com, 2002). With the prevalence of personal computers and Internet access, online sports services, with their strong consumer base, have become big business, with purchases reaching \$3 billion in 2003 (Schultz, 2002). Such evidence shows that sports today are not simply competition or even entertainment;

they are also an essential part of our daily life, one of the most important variables within the “consumer black box.”

METHOD

The purpose of this research was to fully explore the relationship between media coverage and the sport of archery, by analyzing the audience at an archery event, the 42nd World Archery Championships. (The event marked the 100th anniversary of FITA world-championship competition and was held in New York City.) The predictor variables were (a) media coverage (that is, TV, radio, newspapersports pages, and professional archery magazines); and (b) audience demographic characteristics including gender, income, education, occupation, and marital status.

Concerning sampling strategy, Rea and Parker (1997) state that “a crucial question at the outset of a survey research project is how many observations are needed in a sample so that the generalizations can be made about the entire population” (p. 114). The present researchers distributed questionnaires at the 42nd World Archery Championships, outside the entrance to the archery field. They later collected the completed surveys from audience members at the same place. This procedure generated a response of 169 completed surveys.

The instrument used for data collection was a four-part survey questionnaire (Appendix A) designed by Shih (1998). Each part of the instrument had 25 questions pertaining to TV, radio, newspaper, magazine, and Internet sports coverage. Respondents were asked to indicate how much they had been influenced by the particular media in terms of their decision to become involved in the event. As recommended by Ary et al. (1996), Babbie (1989), and Rea and Parker (1997), a 5-point response scale was used, with responses ranging from “low” to “high,” plus the option “not available” for respondents not having access to a particular media source. To assure reliability and validity of the instrument, the questionnaire was drawn from Shih’s published instrument from his “Study of the Relationship between Media Coverage, Audience Behavior, and Sporting Events” (1998). Using the split-half technique with the questionnaire’s reliability coefficients, a measure of 0.86 was found for media coverage. The present researcher modified the questionnaire for application to the archery event, testing the factor analysis to determine the involvement factor.

Version 11.0 of the SPSS program for Windows was utilized to analyze the data from the questionnaires. First, the frequencies and percentages of demographic characteristics were analyzed in terms of the structure and distribution of the subjects. Second, the raw score, the mean, and the standard deviation for each question were measured by the SPSS program. Third, the questionnaire was tested with the Cronbach’s alpha tool (which provides reliability coefficients); furthermore, statistical t-testing, one-way ANOVA, regression, and logistic regression were used in seeking significant factors influencing individual decisions to become involved in the 42nd World Archery Championships.

Each question’s use of a 5-point scale meant all answers constituted categorical data, not continuous data; hence, all answers were ordinal in nature rather than interval or ratio data. Logistic regression analysis, in such a case, can pinpoint the best-fitted, most reasonable model describing the relationship between the criterion and predictor variables (Hosmer & Lemeshow, 1989). The odds ratio, which is the outcome of logistic regression, provides a fairly comprehensive view of results interpreting their relationship. Hosmer and Lemeshow (1989) furthermore state that “the odds ratio is defined as the ratio of the odds for predictor variables equal to one (likely) to the odds for predictor variables equal to zero (unlikely).” Therefore, an odds ratio obtained via logistic regression was the key to the present interpretation of results concerning the surveyed audience’s purchase of merchandise related to the archery event.

RESULTS

The purpose of this study was to explore the relationship between media coverage of and audience involvement at a major archery event. The data were collected from 169 subjects attending the 42nd World Archery Championships in New York City as spectators. Study results are presented in two sections: (a) a description of the population and demographic data; and (b) statistical analyses including factor analysis, reliability analysis, t-testing, one-way ANOVA, regression, and logistic regression measuring how much influence media had in determining the audience for this world championship event.

A total of 250 questionnaires were distributed to spectators entering the archery field area; 169 valid questionnaires were returned, for an overall response rate of 67.6% (Tables 1 and 2).

Factor Analysis

Factor analysis of the event attend items allowed for one factor to be extracted; therefore, we combined all the involvement items and used the combined score for the dependent variable in the subsequent analysis. The eigenvalues from the “greater than 1 criterion” are shown in Table 3.

Reliability Analysis

Cronbach’s reliability alpha showed that the involvement items’ internal consistency reached $\alpha = .9407$; all items were highly intercorrelated, and the average item-total correlation was $.8256$.

T-test

For event attend items, the paired t-test of gender was tenable, at .05 level of significance, $t(167) = .944, p = .347$, as shown in Table 4. Hence, no evidence from the sample suggests that males and females had differential degrees of involvement in these world archery championships.

For event attend items, the paired t-test of marital status was also tenable, at .05 level of significance, $t(167) = -1.114, p = .27$, as shown in Table 5. Hence, no evidence from the sample suggests that single and married participants had differential degrees of involvement in the championships.

ANOVA

For event attend items, the one-way ANOVA for income level proved statistically significant, $F(2, 167) = 4.789, p < .05$, as shown in Table 7. As to post hoc comparisons, only the income categories “US \$35,000–\$65,000” and “above US \$65,000” reached the specified .05 significance level, $t(167) = 1.831, p < .05$, as shown in Table 6. We therefore concluded there was sufficient evidence from the sample to suggest that participants with different incomes, particularly the groups with annual income of \$35,000 or above demonstrated statistically distinct degrees of involvement in these world archery championships.

For the event attend items, the one-way ANOVA for education level was tenable, at the .05 level of significance, $F(2, 167) = .315, p = .73$, as shown in Table 8. Hence, there is no evidence from this sample suggesting that participants of different education levels had differential degrees of involvement in the championships. Also in terms of the event attend items, the one-way ANOVA for number of children was tenable, at the .05 level of significance, $F(2, 167) = .529, p = .59$, as shown in Table 9. No evidence from this sample suggests that involvement in the archery event varied with the number of one’s children. For event attend items again, the one-way ANOVA for age was tenable, at the .05 level of significance, $F(2, 167) = .472, p = .625$, as shown in Table 10. Again, no evidence from this sample suggests that participants of different ages had different degrees of involvement in the championships.

For the event attend items, the one-way ANOVA for years of participation was tenable, at the .05 level of significance, $F(2, 167) = .862, p = .424$, as shown in

Table 11. Hence, no evidence was obtained from the sample to suggest that likelihood of involvement in the 42nd World Archery Championships varied with the number of years one had been involved in the sport of archery.

Regression Analysis

To develop a scale of enjoyment, we used Internet column, on-site commentator, newspaper sports-page column, TV commentator, professional archery magazine editor, and radio commentator as the predictor variables, with involvement in the 42nd World Archery Championships as the criterion variable. Multiple regression analysis was used to test the amount of influence the six predictor variables wielded in terms of enjoyment derived from event participation. The multiple regression analysis yielded a significant result: $R^2 = .58$, $F(6,162) = 36.48$, $p < .05$, shown in Table 12. The R-squared value indicates that about 58% of the variance in involvement in the event is explained by the six predictor variables. During post-test procedures, only radio commentator and Internet column reached the specified .05 significance level, $t(1) = 3.166$, $p < .05$ and $t(1) = 1.559$, $p < .05$ respectively, as shown in Table 12. Hence, we concluded there is enough evidence from the sample to suggest that media coverage, particularly radio comment and Internet postings, have a significant, positive influence on enjoyment associated with event participation.

As to the scale of attendance activities, we took into account the same six predictor variables and criterion variable as used for the enjoyment factor. From the multiple regression analysis a significant result was obtained, $R^2 = .599$, $F(6,162) = 39.86$, $p < .05$, as shown in Table 13; the R-squared value indicates that about 60% of the variance in involvement in the event is explained by the six predictor variables. During the post-test procedures, TV advertisement, archery Web site, and televising of the event showed significant influence on attendance activities, with respective findings of $t(1) = 4.122$, $p < .05$, $t(1) = 2.406$, $p < .05$, and $t(1) = 2.169$, $p < .05$, as shown in Table 13. There is enough evidence, we therefore concluded, present in the sample to suggest that media coverage—particularly TV advertising, archery Internet sites, and televising of events—had a significant, positive influence on attendance at the 42nd World Archery Championships.

In our evaluation of purchases of archery merchandise, an extremely skewed outcome from our Number 8 demographic question prompted us to merge the original 11 categories within two groups, under US \$100 and above US \$100. Logistic regression was first used to test the relationship between the set of predictor variables and the criterion variable and then to detect which predictor variables, if more than one, were effective predictors of archery merchandise purchase.

Results of logistic regression were significant in that the obtained likelihood ratio showed at least one predictor variable contributing significantly to archery merchandise purchase, $\chi^2(6, N = 169) = 36.92$, $p < .05$, as shown in Table 14. As for post-test procedures, on-site display appears to be the only effective media coverage prompting purchases of merchandise ($\chi^2(1, N = 169) = 36.05$, $p < .05$). The value of the odds ratio indicates that purchase of archery merchandise was 1.29 higher among participants who had viewed an on-site display than among those not viewing an on-site display; on-site display, then, can be regarded as an effective predictor of archery merchandise purchase.

DISCUSSION AND CONCLUSIONS

This study was designed to analyze both an audience at and media coverage of the 42nd World Archery Championships in New York City. (It was during this global archery event that New York City made its enthusiastic resolution to host the 2012 Olympic Games.) In Central Park on-site media such as a movable large-screen TV “wall,” experienced broadcasters and announcers, and attention-grabbing televised entertainment drew busy New Yorkers to consider the archery event being staged in their city and even to become involved in it. In addition, leading sports publications and broadcasts had

joined the professional archery magazines in publicizing, to varying degrees, this biennial event.

A quantitative methodology was used to collect data from persons attending the archery event as audience members. The topic of media influence on audience involvement at an archery event had not previously been much explored. The present study described the demographics of an archery event audience and explored factors influencing attendance by this audience along with its enjoyment of the event. The demographic variables were chosen to aid understanding of the characteristics of the sample; the logistic regression method was subsequently used to search for the factors which statistically influenced attendance and enjoyment. A total of 250 questionnaires were distributed, 169 of which were returned and found valid. The overall response rate, then, was 67.6%.

Demographically speaking, this study found that two income groups ("US \$35,001–\$65,000" and "above US \$65,000") were most likely to attend the archery event. In terms of media influence, involvement in the archery event was most likely to occur in the presence of radio and Internet publicity about the event, according to the results. Other media predictors of attendance found by the study are TV advertising, archery Web sites, and televising of an event. Purchases of archery-related merchandise were influenced most strongly by on-site displays, the main predictor of such purchases.

In general, most of the respondents reported enjoying the 42nd World Archery Championships, and many of them said they were willing to participate in similar events in the future. Involvement with archery in the future questionnaire items drew a positive response in 83.4% of cases. An even larger 97.6% of the audience reported satisfaction with the event. In sum, the study showed that both the International Archery Federation and the New York City Organizing Committee performed to an excellent standard and contributed to creating potential archers and archery audiences for the future.

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