

# Emotion of football spectator behavior: Development of a measurement scale and its application to models

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## Introduction

In the field of consumer research, studies have recently been conducted on consumption emotion (Holbrook and Batra, 1987; Luce, 1998). Consumption emotion might be expected to contribute substantially to the explanation and prediction of postpurchase behavior, which, in addition to product usage, includes satisfaction appraisal, seller-directed complaint actions, word-of-mouth transmission, disposition behavior, and repurchase planning (Westbrook, 1987). In fact, it has been reported that consumption emotion has an influence upon consumer satisfaction (Mano and Oliver, 1993; Westbrook and Oliver, 1991) and behavior (Allen, 1992). Several studies also have been conducted on the measurement of consumption emotion (Havlena and Holbrook, 1986; Derbaix and Pham, 1991; Richins, 1997).

Although there are a few studies dealing with the emotions of sport spectators (Madrigal, 1995; Madrigal, 2003), little attention has been paid to this concept and to the development of a measurement scale for spectator emotion in sport consumer research. Moreover, very few attempts have been made to investigate the influence of spectator emotion on post-attendance behavior such as future game attendance of spectators. Brooks (1994) mentions that emotions generated by attending a game are intangible components of a sports product. Thus, a better understanding of fan emotion experienced during the game would assist marketers in promoting sport as a product.

The purpose of this study was to develop a scale to measure spectator emotion and investigate the influence of spectator emotion upon the antecedent variables of future game attendance of spectators.

## Method

The development of the measurement scale was conducted through the following procedure:

### 1. Collecting the items of measurement

The items were collected from the existing measure (Richins, 1997) and a field survey at a stadium. The survey was conducted on spectators, excluding the away-team fans, of a 2001 J. League (Japan Professional Football League) second stage game. The survey was carried out using a questionnaire that comprised open-ended questions concerning the respondents' emotions. This questionnaire was handed out at the stadium before kickoff. A total of 16 categories consisting of 93 items were collected.

### 2. Reducing the set of items

The set of 93 items was reduced to obtain a reasonable measurement scale for the field study. For this to be achieved, a second field survey was conducted at the stadium. The survey participants indicated how often they had experienced various emotions at the stadium, using the options "1 = never," "2 = rarely," "3 = sometimes," and "4 = often." To avoid fatigue, each participant reported on half of the items in the set. Cronbach's alphas were applied to each category in order to eliminate items that negatively influenced their reliability. Thirty-nine items were eliminated by this procedure, leaving 16 categories consisting of 54 items.

### 3. Confirming the validity and reliability of the measurement

A third field survey was carried out at the stadium, using a questionnaire. The number of effective respondents was 171. Confirmatory factor analysis was used in order to confirm its validity. The application of confirmatory factor analysis is particularly appropriate when there is a debate on the dimensionality or factor structure of a scale or measure (Kelloway, 1998). While confirming the validity of the model hypothesizing 16 factors with 54 items, it was suggested that the model could be improved. Modifications to the model were made with reference to modification indices. After testing its validity and reliability, a revised model hypothesizing 14 factors with 44 items was adopted. Through this procedure, an initial scale measuring 14 emotions (anger, excitement, fear, joy, shame, worry, envy, optimism, relief, pride, guilt, peacefulness, sadness, and surprise) was developed.

In the investigation into the influence of spectator emotion, three antecedent variables of future game attendance of spectators were selected. These variables were the intention to attend future games, team loyalty, and satisfaction. Affective experience and affective reaction were measured as spectator emotions using the newly-developed scale. The surveys were conducted using questionnaires at the stadium where the 2003 J. League game was being held. The number of effective respondents was 421. Three kinds of relationships among the variables were analyzed using multiple regression analysis and covariance structure analysis. These were: (1) the relationship between affective experiences and team loyalty, (2) the relationship between affective reactions and satisfaction, and (3) the relationship between affective reactions and intention to attend future games.

## **Results and Discussion**

As a result, it was observed that five affective experiences (worry, joy, surprise, pride, and envy) significantly influenced team loyalty, one affective reaction (joy) significantly influenced satisfaction, and three affective reactions (anger, envy, and pride) significantly influenced the intention to attend future games. These results show that emotional variables such as affective experiences and affective reactions might play an important role in explicating the mechanism of spectator attendance. It was also found that negative emotions such as anger and worry had positive effects and that higher-order social emotions such as pride influenced the antecedents of future game attendance. In conclusion, it was expected that further research and investigation regarding spectator emotion would help sport marketers to create more effective experience marketing strategies.

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