# ATTRIBUTIONS FOR SUCCESS AND FAILURE IN SPANISH TEAM SPORT PLAYERS

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### ABSTRACT

This study examined the role of ability, effort, luck and difficulty of the task in attributions for successful and unsuccessful performances made by Spanish team sport players, and determined if differences exist between athletes at different competition levels. Participants were 143 young men (soccer: N = 64; indoor soccer: N = 37; basketball: N = 42), ages 17 to 25 years (M = 20, SD = 5). Winners perceived ability and effort as the reasons behind their success while losers made attributions mainly to luck and the difficulty of the task. Ability and effort were in the three sports the reasons given for successful outcomes at various competition levels. Difficulty of the task was the factor rated higher by those who lost competing at a national level, while luck and effort were rated higher for those who lost competing at a regional and local level.

Key words: attribution, team sports. competition levels

#### RESUMEN

En este estudio se analizaron el papel de la habilidad, el esfuerzo, la suerte y la dificultad de la tarea en las atribuciones de éxito y fracaso realizadas por practicantes españoles de deportes colectivos y se determinó si existían diferencias entre jugadores con distintos niveles de competición. Participaron 143 chicos (fútbol: N = 64; fútbol sala: N = 37; baloncesto: N = 42), con edades comprendidas entre 17 y 25 años (M = 20, SD = 5). Los ganadores consideraban la habilidad y el esfuerzo como las razones responsables de su éxito, mientras que los perdedores realizadas nus atribuciones principalmente a la suerte y a la dificultad de la tarea. En los tres deportes estudiados, la habilidad y el esfuerzo se consideraban como las principales razones del éxito en los diferentes niveles competitivos. La dificultad de la tarea era la causa más puntuada por los perdedores que competían a nivel nacional, mientras que a nivel regional y local se otorgaba

Palabras clave: atribución, deportes colectivos, niveles de competición.

### INTRODUCTION

Attribution theory, founded by Fritz Heider and further developed by Bernard Weiner (Weiner, 1985), has become extensively studied in the sports context (Biddle & Hanrahan, 1998; Biddle, Hanrahan & Sellers, 2001). Weiner (1972) suggested that ability, effort, task difficulty and luck are factors provided by the individuals to explain success or failure outcomes. Although other causes also appear in sport and exercise settings, these four factors commonly emerge among sports participants (Roberts & Pascuzzi, 1979; Kimbrough, Marrs, & White, 2003). According to the Weiner's original model (Weiner, 1972) attributions may be classified in two dimensions: locus of control/causality (internal-external) and stability (stable-unstable). From these attributional categories, ability and effort are under personal control and can be considered as internal factors, whereas difficulty of the task and

luck during performance do not depend on personal control and are defined as external factors. Moreover, both ability of the athlete and difficulty of the task tend to be stable factors, where as effort and luck are unstable factors (Bukowski & Moore, 1980; Meyer, 1980). Weiner (Weiner, 1979, 1985) later expanded his theory to suggest that attribution should include a third dimension -controllability- used to rate whether an outcome is controllable or uncontrollable by either the individual or others. The stability dimension relates to how the person thinks he/she performs when placed in the same or similar achievement situation. Locus of control has been linked to affective responses of success and failure experiences, and the controllability is related to an individual's emotional reactions to the success or failure (White, 1993). Attribution processes have been found to be important determinants of the affective reactions, particularly for winners (McAuley, Russell & Grosss, 1983), while success and failure, respectively, increase and decrease self-efficacy (Bond, Biddle & Ntoumanis, 2001; Gernigon, & Delloye, 2003).

Although it has been generally found that there is a tendency to make internal attributions following success and external attributions following failure (i.e., selfserving bias), this claim is not always supported in sports settings. McAuley and Gross (1983) did not find any locus of causality dimension (internal/external) difference in relation to competitive outcome following a tennis table match, but clear differences appeared in stability and controllability. Observation of attributions made by winner and losers in squash and racquetball tournaments also suggested an absence of differences in the locus of causality, but more stable and controllable attributions for winners (Mark, Mutrie, Brooks & Harris, 1984). Furthermore, Grove, Hanrahan and McInman (1991) found that winning outcomes were attributed to more stable and controllable causes than losing outcomes by competitors in a basketball league and even a higher external control for winning athletes than for losing athletes has been reported in wrestlers (De Michele, Gansneder & Solomon, 1998). However, there have been a few exceptions to this finding. Thus, gymnasts who scored high and perceived their performance as successful made more internal, stable and controllable attributions (McAuley, 1985) and attribution for success in softball players was generally internal (White, 1993). Moreover, high school track athletes appear to attribute outcomes to more controllable, internal and stable causes when recalling their most successful performance (Hamilton & Jordan, 2000).

Past investigation has provided important information about the relation between sport outcome and causal attributions, but it is still not clear if differences exist between athletes in different types of sports. Although it has been suggested that internal and controllable causes are most frequent in successful team sport players compared to individual sport athletes (Hanrahan, Grove & Hattle, 1989; Pedersen & Manning, 2004), most research has found no significant sport differences in attributional dimensions (Arkin, Gleason & Johnson, 1976; McAuley, 1985). Moreover, although the concept of self-serving bias appears to be more relevant to the more experienced and able athletes (Santamaria & Furst, 1994), few studies have addressed the effect of expertise level on the attribution of causality (Hamilton & Jordan, 2000; Leith & Prapavessis, 1989). In addition, it has to be noted that, although much is know about causal attributions for successful and unsuccessful performance, the studies have been mostly conducted in the United States and English Speaking countries, and there is relatively little descriptive research in other countries with a different sports culture (Dabrowska, 1991). If cultural variations are not considered theoretical perspectives may be misleading.

The present study examined the role of ability, effort, luck and difficulty of the task in attributions for successful and unsuccessful performances made by Spanish team sport players, to observe differences that might exist in attributions made by winners and those who lost. It was hypothesised that the participants on winning teams would ascribe their success more often to ability and effort (internal locus of control) and the participants on losing teams would ascribe their loss to luck and difficulty of the task (external locus of control). An additional purpose was to determine whether attributional causality differences exist between athletes at different competition levels and whether age influences attributions. Given the somehow mixed character of the literature regarding those aspects, no explicit hypotheses were established.

### METHOD

### Participants

Data were obtained on a voluntary basis, after written consent had been signed by participants and coaches, from 143 male team sport players (soccer: N = 64; indoor soccer: N = 37; basketball: N = 42). Age of the participants ranged from 17 to 25 years (M = 21, SD = 5). Parents of subjects younger than 18 were given a summary of the study and were asked to give their permission for their children's participation. Subjects came from 18 different Spanish teams, and competed at a local (N = 39), regional (N = 47) or national (N = 57) level.

## Instruments

After a game in the middle of the season, subjects from the two participating teams scored on a 9-point Likert-type scale (ranging from 1-not at all important to 9-extremely important) the importance given to four possible reasons for success or failure (ability, effort, luck, and difficulty of the task ). Winners and losers responded four questions for assessment of loss or success attributions, respectively

(Table 1). To counterbalance for order effects, subjects were instructed to first read through each of the four questions before responding to each as presented (Rejeski & Lowe, 1980). In addition, participants completed a questionnaire assessing demographic information such as gender, age, sport played, and competitive level.

TABLE 1.
Questions for assessment of loss or success attributions

Assessment of attributions for loss
To what extent do you feel that your team's lack of ability was a factor in the loss?
To what extent do you feel the loss was a result of your/your team's bad luck?
To what extent do you feel the loss was a result of your opponents playing very well?
To what extent do you feel the loss was a result of your team's lack effort?
Assessment of attributions for success
To what extent do you feel that your team's ability was a factor in the victory?
To what extent do you feel the victory was a result of your team's good luck?
To what extent do you feel the victory was a result of your opponents playing poorly?
To what extent do you feel the loss was a result of your team's high effort?

# Procedure

Participants were asked to meet with the researchers immediately after the game. At that meeting, they were provided with information about the nature of the study and given the instructions for completing the questionnaires. Anonymity was guaranteed and assurance that all data would be kept strictly confidential was given. Participants were asked to answer each item as honestly as possible. No problems were encountered in completing the scale or understanding the nature of the questions.

### Data analysis

For a descriptive characterization, means and standard deviation of individual items were calculated. In order to determine whether attributions differed as a function of outcome and competition level, scores were used as dependent variables in a 2 (outcome: success/failure) x 3 (level: national/regional/local) MANCOVA, with age as covariate (Tabachnick & Fidell, 2000; Stevens, 1992). Significant multivariate effects were followed up by univariate analysis and stepwise discriminant analysis using Wilks' method. A one-way ANOVA was used to analyse the different attributional factors when considered separately for the different sports at the various competition levels. Significance was accepted at the 5% level. A SPSS+ vers. 13.0 statistical software (Chicago, IL). Effect sizes were reported by Cohen's f (Cohen, 1988).

#### RESULTS

When an outcome by level MANCOVA with age as covariate and the four causal attribution factors as the dependent variables was conducted, the effect of the covariate itself was non significant (Wilk's lambda=.980;  $F_{4,134}$ =.66, p<.617), and the model could thus be reduced to a simple MANOVA. Significant main effects were obtained for outcome (Wilk's lambda=.354;  $F_{4,134}$ =60.96, p<.001; Cohen f=.19) and level (Wilk's lambda=.694;  $F_{8,268}$ =4.52, < .001; Cohen f=.14). Analysis also revealed a significant outcome x level interaction (Wilk's lambda=.776;  $F_{8,268}$ =4.01, p<.001; Cohen f=.12),

Follow-up univariate F tests and standardized discriminant function coefficients (SDFC) indicated that winners and losers significantly differed in their ratings on all four of the attributional factors. Winners perceived ability ( $F_{1,137}$ =14.02; SDFC=.83) and effort ( $F_{1,137}$ =11.04; SDFC=.87) as the reasons behind their success while losers made attributions mainly to luck ( $F_{1,137}$ = 8.06; SDFC=-.31) and difficulty of the task ( $F_{1,137}$ =5.44; SDFC=-.51) (Figure 1).



FIGURE 1: Comparison of causal attributions (M and SD) made by winners (N = 72) and losers (N = 71). \*p < .01; \*\*p < .05 against same factor in winners.

Figure 2 shows results of the univariate F test for competition level. There were no significant differences in the attributional ratings on ability ( $F_{2,137}$ =.24) and effort ( $F_{2,137}$ =2.75) but athletes competing at national level rated lower the external factors, luck ( $F_{2,137}$ =7.87) and difficulty of the task ( $F_{2,137}$ =7.72).



FIGURE 2: Comparison of causal attributions (M and SD) made by participants in different competition levels. p < .01; p < .05 against same factor at national level.

When the importance given to the different attributional factors was considered separately for the different team sports at the various competition levels, it was found that ability and effort were the two reasons given for successful outcomes in all cases, with significantly higher scores when compared to luck or difficulty of the task (Tables 2-4). Certain variability appeared, however, in the attributional causes given by losers. Difficulty was the factor rated higher by individuals competing at a national level in the three sports, while luck and effort acquired increasing importance for practitioners at a regional and local level (Tables 2-4).

Causal attributions (W and SD) made by societ players								
Result	Level	N	Luck	Difficulty	Effort	Ability	ANOVA	
							F	р
Winners	National	11	1.41 (.51)	4.83 (2.03)	5.33 (1.30)	8.00 (.85)	51.3	.001
	Regional	11	3.27 (1.34)	3.36 (1.02)	7.09 (1.57)	8.00 (.77)	44.9	.001
	Local	11	2.85 (1.21)	1.71 (.48)	8.14 (.90)	7.57 (.79)	94.6	.001
Losers	National	10	2.62 (1.06)	6.75 (1.16)	2.62 (1.30)	6.50 (1.19)	30.2	.001
	Regional	10	4.45 (1.04)	2.46 (1.03)	5.90 (1.64)	4.45 (1.03)	22.2	.001
	Local	11	5.50 (2.42)	6.33 (1.75)	2.66 (1.36)	3.16 (1.72)	5.5	.005

TABLE 2. Causal attributions (M and SD) made by soccer players

				TABLE 3.				
Causal attributions (M and SD) made by indoor soccer players								
Result	Level	N	Luck	Difficulty	Effort	Ability	ANOVA	
							F	р
Winners	National	7	3.76 (1.58)	4.00 (1.51)	7.00 (1.30)	7.62 (.91)	17.5	.001
	Regional	6	2.66 (1.03)	4.33 (1.96)	6.66 (1.03)	7.33 (.52)	16.6	.001
	Local	6	3.66 (.51)	4.00 (.89)	6.83 (0.75)	8.16 (.75)	52.3	.001
Losers	National	6	6.57 (1.45)	7.75 (.70)	3.37 (1.06)	3.00 (.92)	40.4	.001
	Regional	6	8.83 (.40)	3.66 (1.50)	2.00 (.89)	2.16 (.98)	58.5	.001
	Local	6	7.16 (.75)	4.00 (.89)	5.00 (.89)	3.80 (.53)	19.2	.005

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TABLE 4.
Causal attributions (M and SD) made by basketball players

Result	Level	Ν	Luck	Difficulty	Effort	Ability	ANOVA	
							F	р
Winners	National	7	2.09 (1.44)	2.45 (1.37)	8.09 (1.04)	7.62 (.91)	69.6	.001
	Regional	7	2.83 (1.17)	2.67 (1.03)	8.43 (.53)	7.00 (.63)	72.2	.001
	Local	7	3.00 (1.29)	4.85 (1.34)	7.42 (.98)	7.86 (.69)	29.7	.001
Losers	National	7	3.63 (1.91)	6.45 (2.11)	5.60 (2.11)	5.80 (1.75)	4.1	.010
	Regional	7	8.00 (.65)	5.50 (.54)	1.33 (.52)	4.83 (1.17)	77.8	.001
	Local	7	5.14 (1.07)	5.42 (1.27)	4.29 (.95)	5.00 (1.29)	1.3	NS

### DISCUSSION

Frequency of endorsements for each of the causal attributes differed in this study between winners and losers, with winners perceiving ability and effort as the reasons for their success, while losers made attributions mainly to luck and difficulty of the task. In terms of dimensionality the analyses indicated that winners chose reasons that suggested more internal locus of control than losers, but no clear differences appeared in terms of stability, because both stable and unstable factors were perceived as important regardless of whether the performance was successful or unsuccessful. This finding is consistent with previous research in American softball players (White, 1993) and elite Polish athletes (Dabrowska, 1991), which also suggested an internal attribution for success and a higher importance ascribed to effort and abilities by successful athletes.

Nevertheless, it is necessary to be cautious when considering the practical implications of these results. Because of the high degree of egocentrism in causal attribution (Leith & Prapavessis, 1989; McAuley, 1985), the athlete is likely to attribute his/her success to internal factors, when the win may actually be due to a lack of skill or effort on the part of the opponent. Similarly, following a loss athletes

are likely to blame transitory and external causes, such as bad luck, for defeat. When this happens the coach must encourage successful athletes to maintain proper motivation and to help the unsuccessful athletes to attribute outcome to factors over which they have control, such as ability and effort (Leith, 1990).

Attributional endorsements of causality appear to scarcely differ between different types of sports, except those involving strength or fitness-related abilities (De Michele et al., 1998; Leith, 1990). Thus, the same factors were seen as important in objectively evaluated and subjectively evaluated sports by Canadian subjects from an academic centre (Leith & Prapavessis, 1989) and, although it has been hypothesized that athletes on successful teams have higher internal, controllable and intentional attributions than athletes in individual sports (Hanrahan et al., 1989; Pedersen & Manning, 2004) this has not be confirmed. In fact, no significant differences on the attributional dimensions have been found for athletes in the two types of sport (Arkin et al., 1976) and attribution of causality is positively related in individual and team American sport players (McAuley, 1985). In the present results Spanish team sports players reported ability and effort as the predominant contributing factors for success while mainly external factors were blamed for defeat, with no marked differences between the different sports studied.

Although little research has been done on the relationship between level of expertise or competition level reached by the athletes and attribution of causality has received scant attention until now, the concept of self-serving bias suggests that the experience or ability dimension may have an important effect. More experienced and able athletes, who have committed considerable time and energy to a particular sport, may be more susceptible to self-serving biases in attribution. Presumably this is because the outcome has greater implications for their self-esteem and their expectations are higher (Miller & Ross, 1975; Santamaria & Furst, 1994). However, Mark et al. (1984) found no differences between American players of different experience levels in organized squash and racquetball tournaments. More recently Hamilton and Jordan (2000) reported that freshmen and senior USA high school track athletes did not significantly differ from each other in their attribution making. Data in the present study indicated that ability and effort were always the reasons given for successful outcomes in athletes from different competition levels, while losers showed a higher variability in their causal attributions. Thus, difficulty was the factor rated higher by individuals competing at a national level in the three sports, while luck and effort was reported at the regional and local level. In other words, losers competing at a high level were more gracious in sharing the credit for their loss and to weigh their opponent's contribution to the games' final outcome.

It may well be the case that, as previously suggested by Leith and Prapavessis (1989) in a study on Secondary School Canadian athletes, elite players are more consistent in their attributions of causality because they have more experience of their own and others' abilities and are probably beteer at assessing problems and successes. Moreover, less expert, and possibly younger, athletes appear to be unable to distinguish between the relative contributions of personal effort and ability to their failures. This finding coincides with the report by Santamaria and Furst (1994) of significant differences along the dimensions of locus of causality and controllability in American distance runners of different ages, with adolescent runners regarding their less successful performances due to unstable, changing causes when compared to adults who made relatively stable attributions regardless of performance outcome. Nevertheless, conflicting results have been obtained concerning the changes with age in the attribution process, and its has been reported (White, 1993) that when causal attributions given by softball players involved in a tournament in the southwest region of the United States just after their success or failure in a match were examined, younger softball players perceived the positive outcomes to be due to more stable, unchanging causes than adult softball players. In fact, the present study, with a sample of athletes ranging from 17 to 25 years-old, when an outcome by level MANCOVA with age as covariate was conducted, the effect of the covariate itself was non significant. In any case, because athletes with a lower degree of expertise do not clearly recognize personal deficiencies in their ability as determinants of the performance outcome, it is clear that putting a relatively heavy emphasis on technique and skill learning would be advantageous.

In the present study, the effects on causal attributions of aspects such as personal experiences of success or failure, winning or losing team record, or influence of coaching, officials and teamwork were not evaluated. Another important limitation is the fact that causes rather than causal dimensions were measured, and motivational properties of causes lie in these dimensions. In spite of those limitations, the fact remains that, in line with previous literature findings from different Western countries, Spanish sports team participants differed significantly in the way they reported attributions when comparing successful and unsuccessful performances and that athletes competing at a higher level were more consistent in their attributions of causality. Since causal attributions can either increase or decrease motivation, the coach must be aware of the importance of the attributional process in order to create more positive and productive experiences for the athlete and to increase the probability of future successful performances. Usefulness of this line of research is in finding motivational strategies for athletic performance.

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