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CAUSAL ATTRIBUTIONS FOR BASKETBALL OUTCOMES BY PLAYERS AND COACHES¹

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Weiner's attribution model dealing with internal-external and stable-unstable causes was applied to basketball achievements. Players and coaches were assumed to ascribe the success of players to mainly internal causes (i.e. ability and effort) (hyp. Ia and IIa), and the failure of players to mainly unstable causes (i.e. effort and luck) (hyp. Ib and IIb). It was also predicted that players, who received this attribution pattern from their coach, would increase their internal attributions for success over the season (hyp. III). — The subjects were seven varsity players of each of the twelve basketball teams of the Belgian First National League ($N = 84$) together with the head coach of the teams. The players completed at the beginning and at the end of the 1974-1975 season a questionnaire, dealing with the possible causes of their good and bad achievements. Near the end of that season, their coach described the degree to which he considered his players' achievements as due to the distinctive causes. — The data strongly supported the hypotheses Ia and IIa, dealing with successful achievements and only confirmed hypotheses Ib and IIb regarding the effort attribution. Hypothesis III was also confirmed. Implications of the attribution model are discussed with regard to fundamental and functional aspects of sport psychology.

THEORETICAL INTRODUCTION

The assumption underlying the study states that professional basketball players like to have a high sense of competence, a belief to be a good performer. Therefore, they are very concerned with the value of their achievements and search for information about the causes of their good and bad outcomes. The present study investigates the causes attributed by the players and their coaches for the players' good and bad basketball achievements and the potential impact of the coaches' causal indoctrination patterns on the players' attributional schemata.

The causes of a basketball outcome are multiple such as dribbling technique, shooting skill, game insight, concentration, endurance, strength of the opponent and accidental circumstances. According to Weiner's (1974) attribution model, these causes can be ordered into four clusters, which are primarily based on two independent and orthogonal dimensions. These are the locus of control of the outcome, being internal versus external, and the stability of the outcome, being fixed versus variable. A first group of factors is controlled by the

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performer and are stable causes. These refer to ability and are e.g. shooting skill and dribbling. A second group of factors is also controlled by the performer but are unstable causes. These refer to effort and are e.g. concentration and endurance. A third group of factors is not controlled by the performer and are stable causes. These refer to task and are e.g. strength of the opponent, toughness of the game. A fourth group is also not controlled by the performer but are unstable causes. These refer to luck and are e.g. chance, accidental circumstances.

Based on the players' need to keep up with a high sense of competence the following suppositions concerning causal explanations for good and bad achievements might be formulated. Basketball players will mainly attribute their good achievements to elements under their control. According to Weiner (1974, p. 32) causal attributions dealing with the locus of control generate affective emotional reactions such as pride in case good achievements are ascribed to internal factors. Therefore, the ability and effort attributions for good achievements will increase the players' sense of competence. Basketball players will mainly attribute their bad achievements to variable elements. According to Weiner (1974, p. 27) causal attributions regarding the stability dimension generate expectancy shifts such as the subjective probability to improve after a losing performance when this is ascribed to variable factors. Therefore, the lack of effort and bad luck attributions for bad achievements will not increase the players' sense of competence since they cannot serve as a prediction base for future failings. Moreover ego-defensive forces make it likely that failure is more attributed to external than internal factors.

These theoretical suppositions did receive large support in an empirical study conducted on the causal explanations of good and bad football (i.e. soccer) achievements by UCLA-players (Lefebvre and Cunningham, 1977). A success was primarily ascribed to ability and effort, and least to luck, a failure to lack of effort, then to bad luck and least to task. A related study (Frieze and Weiner, 1971) indicated that success is mainly ascribed to effort, ability, and least to luck, failure to task, lack of effort, and least to bad luck. In the latter study, however, psychology students had to imagine the causal attributions for an imaginary success and failure. The basketball and football studies are dealing with players making attributions about their real achievements.

Based on the theoretical suppositions and their support in the football study (Lefebvre and Cunningham, 1977), the following hypotheses for the players' attributions are formulated.

Hypothesis Ia: Basketball players will attribute their successful outcomes more to internal than to external causes.

Hypothesis Ib: Basketball players will attribute their failing outcomes more to unstable than to stable causes.

Essentially the same suppositions might be made concerning the causal

attributions coaches give to their players' achievements. Since no relevant research has been done on coaches' attributions, the hypotheses are tentatively formulated as follows.

Hypothesis IIa: Basketball coaches will attribute their players' success more to internal than to external causes.

Hypothesis IIb: Basketball coaches will attribute their players failure more to unstable than to stable causes.

The second part of the present study concerns the changes in the players' causal attributions over the season. Among other things such as the final record of the team and the players' overall season achievement, the changes might be due to the coaches' attributional communication for the players' achievements. An ideal indoctrination pattern, used by the coach, might consist of a high effort and ability attribution and a low task and luck attribution for a successful achievement. Indeed, effort is a cause under the player's control and can be increased. Ability is also controlled by the player and has a positive effect on the sense of competence. It might be expected that players under an indoctrination pattern will be positively influenced regarding their internal attributions for the good achievements. Hence, the following hypothesis is formulated.

Hypothesis III: Basketball players, who received after a success relatively more effort and ability attributions from their coach than other players and less task and luck attributions, will increase their internal attributions for success over the season more than the other players do.

METHOD

QUESTIONNAIRE

The questionnaire method was used for both players and coaches. The players' questionnaire dealt with successful and failing achievements. Each player divided a 100% of causality into four causes: effort, ability, task and luck. The questionnaire read as follows: "think about a few good achievements you recently performed. To what percentage do you believe the good achievement was due to ability: e.g. shooting skill, effort: e.g. concentration, task: e.g. strength of the opponent, and luck: e.g. accidental circumstances." A same procedure was followed for the failing achievements. The coaches' questionnaire consisted of seven points scales dealing with the four causes for a successful respectively failing achievement. On each scale the coach described the degree to which he considered the success respectively the failure of a varsity player's achievement as due to the cause mentioned on the scale. The coach's answer was supposed to reflect attributions and outcomes related to the player's whole season rather

than to any specific game. The change from the players' questionnaire type to the 7-point scale method used by the coach is due to the fact that the latter method is easier to answer. The reliability of the players' questionnaire was investigated on students of Physical Education and yielded a median test-retest correlation of $r = .78$ (Dewulf, 1976). The internal validity of the method was tested in a pilot study.

SUBJECTS AND PROCEDURE

The questionnaire for the players was administered together with other questions to all varsity players of the 12 basketball teams of the Belgian First National League. This occurred at the beginning and at the end of the 1974-1975 season. Seven varsity players of each team completed the questionnaire twice, yielding a total of 84 subjects. Tape recorded instructions either in English for the American players, in French for the Walloon players, or in Dutch for the Flemish players described the meaning of the causes, the purpose of the study and the procedure to answer the questions. The questionnaire for the coaches was administered near the end of the season. Ten of the 12 coaches completed the questionnaire.

ENDOCTRINATION PATTERN

The criterion for an ideal indoctrination pattern of attributions was based on the theoretical considerations. A score system was made for the coach's attributions to each player after the player's successful achievement (Dewulf, 1976).

RESULTS

HYPOTHESIS I

The attributions by players were computed with regard to the distinctive causes for success and for failure. An inspection of Table 1 reveals that basketball players consider effort (lack of effort) and ability (lack of ability) as the basic causes for their good (bad) outcomes. The rank order of causes is identical for the good and bad outcomes with exception of the luck element. Statistical analyses compared each cause with any other cause for success and for failure. Between-within analyses of variances were used with the 12 basketball teams as Between Subjects factor and the two causes as Within Subjects factor. The F -values of the Within Subjects factor, computed on any two attributional comparisons for success, were as follows: effort-ability ($F = 11.05$, $df = 1/72$, $p < .01$), effort-task ($F = 120.05$, $df = 1/72$, $p < .001$), effort-luck ($F = 391.64$, $df = 1/72$, $p < .001$), ability-task ($F = 148.43$, $df = 1/72$, $p < .001$), ability-luck ($F = 238.30$, $df = 1/72$, $p < .001$) and task-luck ($F = 10.89$, $df = 1/72$, $p < .01$). These significant differences are in the expected direction as shown in Table 1 and, therefore, confirm Hypothesis Ia.

The F -values of the Within Subjects factor, computed on any two attributional comparisons for failure, were as follows: lack of effort-lack of ability ($F = 16.70$, $df = 1/72$, $p < .01$), lack of effort-task ($F = 21.33$, $df = 1/72$, $p < .001$), lack of effort-bad luck ($F = 34.70$, $df = 1/72$, $p < .001$), lack of ability-task ($F = 2.04$, $df = 1/72$,

	success		failure
effort	43.00%	lack of effort	38.75%
ability	38.00%	lack of ability	24.50%
task	10.50%	task	17.50%
luck	8.50%	bad luck	19.25%
	100.00%		100.00%

TAB. 1. CAUSAL EXPLANATIONS FOR SUCCESS AND FAILURE BY BASKETBALL PLAYERS OF THE BELGIAN FIRST NATIONAL LEAGUE ($N = 84$)

p NS), lack of ability-bad luck ($F = 11.12$, $df = 1/72$, $p < .01$), and task-bad luck ($F = 1.03$, $df = 1/72$, p NS). The significant differences mainly deal with the cause effort and are in the expected direction as shown in Table 1. The Hypothesis Ib is confirmed for the cause effort and tentatively for the cause ability.

HYPOTHESIS II

The causal attributions by coaches for their players' success and failure are shown in Table 2. Effort, ability, then task and finally luck are considered by the coaches as important for their players' achievements. T -tests² were computed between any pair of attributions for success and for failure. The t -values concerning the successful outcomes are significant at least at the .01 level for any pair comparisons: effort-ability ($t = 24.00$), effort-task ($t = 21.01$), effort-luck ($t = 23.88$), ability-task ($t = 5.02$), ability-luck ($t = 8.08$), and task-luck ($t = 2.44$). The direction of the difference is consistent with the hypothesis IIa, as can be inferred from Table 2.

	success		failure
effort	5.48	lack of effort	4.51
ability	4.15	lack of ability	3.41
task	2.51	task	3.60
luck	1.90	bad luck	3.20

TAB. 2. CAUSAL EXPLANATIONS BY COACHES FOR SUCCESS AND FAILURE OF THEIR VARSITY PLAYERS OF THE BELGIAN FIRST NATIONAL BASKETBALL LEAGUE ($N = 10$ Coaches) ($N = 70$ Players)

² The raw data of the T -test for dependent means were the attributions made by 10 coaches for the achievements of each of their 7 varsity players.

Significant t-values concerning the player's failure only occur in the following pair comparisons: lack of effort-lack of ability ($t = 3.84$, $p < .01$), lack of effort-task ($t = 3.24$, $p < .01$) lack of effort-bad luck ($t = 3.30$, $p < .01$). Since the lack of effort attribution is always greater than the compared attribution (see Table 2), the Hypothesis IIb is confirmed with regard to the cause effort.

HYPOTHESIS III

The Hypothesis III, concerning the changes in the players' attributions for success as influenced by different indoctrination patterns of the coach was investigated on the players' internal attributions. The 10 players with the most efficient indoctrination pattern were compared with the 10 players with the less efficient indoctrination pattern. The internal attribution score for success consisted of the summed attributions of effort and ability with regard to successful performances. The attribution scores at the beginning of the season were subtracted from those at the end of the season. A t-test for independent means revealed a statistically significant difference ($p < .05$), confirming the Hypothesis III.

DISCUSSION

The results of both players and coaches concerning the attributions for success are straightforward and in line with the Hypotheses Ia and IIa. Ability and especially effort are the major causes for success and are assumed to increase the players' sense of competence. The results of both players and coaches concerning the attributions for failure mainly confirm the Hypotheses Ib and IIb with regard to the lack of effort ascription. The causes lack of ability, task and bad luck mostly

2	1
3	-2
1	-2
2	-3
-2	-2
-2	-3
1	-2
3	-2
2	-3
1	-4
11	-22
group A	group B

TAB. 3. INTERNAL ATTRIBUTION FOR SUCCESS BY PLAYERS, RECEIVING AN EFFICIENT ENDOCTRINATION PATTERN (GROUP A), AND BY PLAYERS, RECEIVING AN UNEFFICIENT ENDOCTRINATION PATTERN (GROUP B)

do not differentiate from each other. This is due to an attributional decrease for ability after failure together with more external attribution after failure than after success. Finally, the players' internal attributions for success show a shift over the season in correspondence with an indoctrination pattern of the coach.

In conclusion, the findings of the present study provide some new avenues both for fundamental and functional sports psychology. Fundamental sports psychology can use the applicability of the attribution model to explore and discover some cognitive aspects of the psychological world of the basketball players. Further research can refine the causal attributions with regard to the performance and learning aspects of basketball achievements. The extension of this attributional analysis towards a broad range of basketball outcomes provides sufficient data to be transformed into norm tables. These normative data might be utilized by the functional sports psychology. The comparison between the normative profile and a player's attribution serves as one diagnosis of the player's achievement level. The coach might use the efficient attributional communication towards his players to promote their sense of competence and to improve indirectly their achievements.

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