

## A Case Study of Leadership in Women's Intercollegiate Softball

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### **Abstract:**

The relationship of selected characteristics to the relative leadership status within a women's intercollegiate softball team was investigated using a multiple regression design. At the beginning of the season all 23 members of the team were assigned to Team A (the first team with the more highly skilled players) or Team B. Players were also classified according to their class year (juniors and seniors vs. Freshmen and sophomores), their primary playing position (catchers and infielders vs. pitchers and outfielders), and whether or not they had previous experience playing on the intercollegiate softball team. Leadership status was assessed with a questionnaire completed by all team members three times, at the beginning, middle, and end of the season. Separate step-wise multiple regression analyses were used to determine the relationship of the selected characteristics (Team, class year, playing position and previous experience) to leadership status at each of the three times. The results were similar for all analyses with the combination of Team, playing position and previous experience significantly predicting leadership status. Members of Team A had greater leadership status than members of Team B; players with previous experience had greater leadership status than players without such experience; and catchers and infielders had greater leadership status than pitchers and outfielders. Thus, Team, playing position and previous experience were related to leadership status as predicted, and that relationship was consistent throughout the season.

### **Article:**

Leadership in sport teams, including such issues as the emergence and maintenance of leadership, leader-follower relationships, and the relationship of leadership to other group characteristics and processes, is clearly a relevant topic for sport psychologists and sport sociologists. Substantive research on leadership in sport teams is, however, noticeably lacking. The current case study was designed to add empirical evidence to the area of leadership in sport by investigating the relationship of selected characteristics to the relative leadership status of members of a woman's intercollegiate softball team. The specific characteristics of interest were Team (the team was subdivided into Team A, which was the first string, and Team B, which was the second string), class year, previous experience on the intercollegiate softball team, and playing position.

The Team classification may be considered a rough equivalent of skill level, with Team A consisting of the more highly skilled players. Although no evidence directly relates skill to leadership in sport teams, several authors (e.g., Hollander and Julian, 1969, 1970; Shaw, 1976) have indicated a general relationship between skill, especially skill that is directly relevant to the group task, and leadership. Thus, the members of Team A were expected to have greater leadership status within the team than members of Team B. It was also hypothesized, although with little empirical support, that class year and previous experience are related to leadership. Upper classmen (juniors and seniors) were expected to have greater leadership status than freshmen and sophomores; and players with previous experience on the intercollegiate softball team were expected to have greater leadership status than those without such experience.

Playing position, in contrast to the other characteristics under investigation, has received considerable empirical attention. In fact, the relationship of playing position to leadership, using Grusky's (1963) model as a base, has been one of the most widely researched topics in group dynamics as related to sport teams. Grusky (1963) proposed that the formal structure of a group (playing position in baseball) influences the chances of the

occupants of particular positions assuming leadership roles within the organization. Grusky classified the playing positions in baseball as high interactors (catchers and infielders) and low interactors (pitchers and outfielders). Catchers and infielders were designated as high interactors because they are centrally located, perform predominantly dependent tasks, and have a high frequency of interaction with other positions. Outfielders, at the other extreme, are peripherally located, perform mainly independent tasks, and have a relatively low frequency of interaction with other positions. Pitchers, although centrally located, perform highly independent tasks, seldom interact with the other positions, and are designated as low interactors along with outfielders. Grusky proposed that high interactors are more popular and respected, more likely to learn cooperative social skills, and should be selected for executive positions more often than low interactors. Grusky provided empirical support for his model by reporting that managers in professional baseball were more likely to come from the high interaction positions (catchers and infielders) than from the low interaction positions (pitchers and outfielders). Loy and Sage (1970) supported Grusky's propositions with high school baseball teams by demonstrating that high interactors were more likely to be team captains than low interactors. Loy and his colleagues (Loy, Curtis and Sage, 1978; Loy, McPherson and Kenyon, 1978) have cited considerable support for Grusky's model with sport teams, but much of the data is unpublished and no published studies have used female teams. A major purpose of the current study was to extend Grusky's model to female sport teams. It was hypothesized that high interactors have greater leadership status than low interactors.

In addition to examining the relationship of the characteristics cited above to leadership status within the team, the current study also examined changes in leadership status over time. Hollander and Julian (1969, 1970) have noted the dynamic nature of leadership as a process involving an influence relationship. Leadership is not static, but subject to considerable change over time. With sport teams that are typically formed at the beginning of a season and undergo considerable change by the time they complete the season, changes in leadership relationships seem inevitable. Thus, leadership status was assessed three times in the current study, at the beginning, middle, and end of the season. No hypotheses regarding changes over the season were proposed.

## METHOD

### SUBJECTS AND DESIGN

All 23 members of the 1973 women's intercollegiate softball team at the University of Illinois participated in the study. Originally 26 players were selected for the team, but three players who left the team near the beginning of the season were not included in the study. At the beginning of the season players were assigned to either Team A or Team B, with Team A being the "first" team. Players were also classified according to their class year (juniors and seniors vs. freshmen and sophomores), their primary playing position (catchers and infielders vs. pitchers and outfielders), and whether or not they had previous experience playing on the intercollegiate softball team. The basic design of the study was a multiple regression design with Team, class year, experience, and playing position as predictors of leadership status.

### LEADERSHIP MEASURES

Leadership status was assessed with a questionnaire completed by all team members three times during the season. The questionnaire consisted of two parts. Part 1 required the respondent to rank all team members, in order, from the person who had the most leadership influence on the team to the person who had the least. The team member with the most influence was ranked number 1 and no ties were permitted.

Part 2 of the questionnaire required the respondent to rate every team member on leadership influence using a 10-point scale ranging from most leadership influence (1) to no influence (10). A mean rank and a mean rating were calculated to assess the relative leadership status of every member of the team. Thus, in contrast to the formal leadership measures of managerial rank and team captaincy used by Grusky (1963) and Loy and Sage (1970), the current study involved the more informal leadership status within the team.

### PROCEDURES

The leadership questionnaire was administered three times - at the first practice session after the team had been selected, at a practice session approximately one month later midway through the season, and at the last practice

session of the season. The questionnaire was administered at the beginning of each practice session by a female graduate student. Each team member was given a questionnaire, an instruction sheet, and an alphabetical list of all team members that identified each player with a letter. Those letters, rather than players' names were used on the actual questionnaires. Upon completion of the study each player was given a written summary of the purposes and results, but no individual results were reported.

## RESULTS

### LEADERSHIP DIFFERENTIATION

A mean rank and a mean rating were calculated for each player at each of the three times and the three mean ranks and ratings were averaged to calculate an overall rank and rating for each player. The rankings forced respondents to rank players from 1 to 23 while the ratings were not restricted, but the obtained scores with the two measures were quite similar. The correlation between the mean rank and mean rating ranged from .97 ( $p < .001$ ) at time 1 to .94 ( $p < .001$  at time 3, and the correlation between the overall rank and overall rating was highly significant  $r = .97$ ,  $p < .001$ ).

To determine whether players differed in relative leadership status, the chi-square for ranks (Friedman test), coefficient of concordance, and average intercorrelation were calculated (Winer, 1971) for each of the three times. The chi-square for ranks was highly significant for time 1,  $\chi^2(22) = 218.36$ ,  $p < .001$ , time 2,  $\chi^2(22) = 219.59$ ,  $p < .001$ , and time 3,  $\chi^2(22) = 226.37$ ,  $p < .001$ , indicating that players did differ in relative leadership status within the team. The accompanying measures of the coefficient of concordance (.43 at time 1 and time 2, .45 at time 3) and the average intercorrelation (.41 at time 1 and time 2, .42 at time 3) indicated consensus among the respondents in their rankings. Thus, players definitely differed in leadership status and, surprisingly, that leadership differentiation did not increase very much over the season. Apparently relative leadership status was well-established at the beginning of the season and remained consistent throughout the season.

### PRODUCTION OF LEADERSHIP STATUS

Multiple regression analyses were used to examine the relationship of Team (A or B), class year (junior-senior or freshman-sophomore), previous team experience (yes or no), and playing position (catcher-infielder or pitcher-outfielder) to leadership status. Separate step-wise multiple regression analyses were performed for the ranks and ratings at each of the three times and for the overall rank and rating. The results were similar for all analyses. Generally the combination of Team, experience and playing position significantly predicted leadership ranks and ratings. Playing position was generally a weaker but significant predictor than either previous experience or Team. Class year did not contribute significantly to any of the stepwise regression analyses.

In the step-wise regression analyses of the leadership ranks all three predictors (Team, experience, and position) significantly contributed to the multiple regression at times 1 and 2 and for the overall rank. In all three cases experience was the first variable entered followed by Team and position, respectively. Adding position did not significantly improve the prediction of leadership ranks at time 3 over the multiple regression with only Team and experience as predictors, but the overall pattern of regression weights was similar to the other leadership rank results. The multiple regressions of leadership ranks on the three predictors are summarized in Table 1.

Generally, analyses of the leadership ratings, summarized in Table 2, yielded similar, but slightly weaker relationships. For the ratings at time 2, and for the overall rating, position added to the multiple regression

TABLE 1  
Multiple Regression Results for Leadership Ranks

	Rank 1	Rank 2	Rank 3	Overall Rank
Predictors	Standardized	Regression	Coefficients	
Team	.54 **	.59 **	.54 **	.58 **
Experience	.58 **	.52 **	.41 *	.52 **
Position	.34 *	.34 *	.28	.34 *
Multiple R	.81 **	.80 **	.69 **	.80 **
Multiple R <sup>2</sup>	.66	.64	.48	.64

\* p < .05.  
\*\* p < .01.

TABLE 2  
Multiple Regression Results for Leadership Ratings

	Rating 1	Rating 2	Rating 3	Overall Rating
Predictors	Standardized	Regression	Coefficients	
Team	.52 **	.50 **	.42 *	.51 **
Experience	.54 **	.46 *	.38	.48 **
Position	.32 *	.31	.30	.33
Multiple R	.77 **	.71 **	.61 *	.73 **
Multiple R <sup>2</sup>	.59	.50	.37	.53

\* p < .05.  
\*\* p < .01.

at only the .10 level of significance. The multiple regression of leadership ratings on the three predictors at time 3 reached statistical significance,  $F(3, 19) = 3.67$ ,  $p < .05$ , but when the step-wise procedure was applied none of the three predictors accounted for sufficient variance to enter the step-down regression equation.

Although all three predictors did not reach the .05 level of statistical significance in every regression analysis, the overall pattern of regression weights and their relationship to leadership status was quite consistent, and the three predictors account for substantial variance in the overall leadership ranks (6%) and overall ratings (53%). All three predictors were related to leadership status as predicted. Noting that lower leadership scores indicate greater leadership status, members of Team A had higher leadership status ( $M = 9.93$  for ranks,  $M = .01$  for ratings) than members of Team B ( $M = 13.89$  for ranks,  $M = 5.01$  for ratings); players with previous experience had higher leadership status ( $M = 10.3$  for ranks,  $M = .07$  for ratings) than players without such experience ( $M = 1.58$  for ranks,  $M = 5.2$  for ratings); and catchers and infielders had greater leadership status ( $M = 10.69$  for ranks,  $M = .15$  for ratings) than pitchers and outfielders ( $M = 13.3$  for ranks,  $M = .95$  for ratings).

## DISCUSSION

The nature of the current case study, involving only one selected softball team, necessitates caution in interpreting and generalizing from the results. Nevertheless, the multiple regression results were quite consistent and confirmed the expected influence of Team, experience, and playing position on leadership. It should be noted that these three characteristics are all specific to the softball team situation while class year, the only factor not related to leadership in the current study, is a more general characteristic. Although freshmen and sophomores did not differ from juniors and seniors, freshmen had less leadership status ( $M = 15.12$  for ranks,  $M = 5.70$  for ratings) than the other three groups. The lower leadership status of freshmen may, however, simply reflect the fact that freshmen have no previous experience on the team. The results of the current study suggest

that class year, per se, does not influence leadership status, but rather, experience, which is more directly relevant to the team's activity, is the critical factor.

The relationship of playing position to leadership status, while not overwhelming, suggested that Grusky's (1963) proposals apply to female as well as male teams, and to leadership status within a team as well as to formal leadership positions such as team captain or manager. It may be noted that the player who was consistently ranked highest on leadership over all three times was not the team captain. This observation suggests that team captaincy should not automatically be equated with team leadership, especially when leadership as an influence process within a team is of concern.

Neither leadership differentiation nor the relationship of member characteristics to leadership changed substantially over the season. Perhaps the most notable finding concerning the three measures was that the relationship of the three characteristics (Team, experience, and position) to leadership decreased slightly over time while leadership differentiation and consensus did not decrease but, in fact, increased slightly. Thus, the factors under investigation became less important over the season without an accompanying deterioration in leadership structure within the team. Although the actual changes were slight, the observation underscores the importance of the distinction between leadership emergence and leadership maintenance. Team, experience, and playing position are all highly visible factors, even at the beginning of the season. These characteristics would also logically be perceived as relevant to the team by the members. As Hollander and Julian (1969) emphasize, characteristics which are perceived as relevant to the group are much more likely to be related to leadership than general personality traits. Quite possibly, as team members interact over the season, other characteristics and variables that were not assessed in the current study become important in the leadership process. Consequently, the highly visible characteristics that were critical at the beginning of the season decrease in relative importance.

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