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**A Longitude Field Study of Organization  
Development Using Archival Measures of  
Employee Absenteeism and Turnover**

**CEO Publication  
T 89-17 (160)**

Louis R. Pondy  
University of Illinois

Larry E. Pate  
University of Southern California

May 1994

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To be published in Journal of Organization Change Management 1989, 2 (2), in press.

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**A Longitudinal Field Study of the Intervention Process  
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**Abstract**

This research attempted to determine the power of an organization development (OD) program to reduce absenteeism and turnover rates among hourly employees of a medium-sized Midwestern life insurance company in the USA. Forty-six months of archival records were examined within Time Series and Interrupted Time Series designs (with and without non-equivalent control groups). Comparisons were also made against annual industry averages for companies within the same size and geographical region categories as the study organization. None of the six hypotheses relating OD to reduced employee absenteeism and turnover were supported, suggesting that the claims of OD supporters may be exaggerated.



## A Longitudinal Field Study of the Intervention Process Using Archival Measures of Employee Absenteeism and Turnover<sup>1</sup>

Several reviews have noted the tendency of organization development (OD) research to focus on attitudinal variables only and neglect archival measures of employee behaviors (Alderfer 1977; Friedlander and Brown 1974; Margulies, Wright, and Scholl 1977; Pate, Nielsen, and Bacon 1980; White and Mitchell 1976). White and Mitchell's (1976) review of 44 OD studies found only two studies (4.6% of the sample) that used archival records as a data source. Clearly, archival records of actual employee behaviors represent a potentially valuable yet neglected data source in OD research.

The present study examined archival records of employee absenteeism and turnover surrounding an 18-month OD program, conducted for all employee levels, in a medium-sized Midwestern life insurance company in the United States. The basic research question was whether or not an OD program conducted under conditions recommended throughout the literature (e.g., competent change agent, standard interventions, longitudinal effort, etc.) had any effect on actual behaviors of organizational members.

### Method

Forty-six months of archival data were gathered from the records of the study organization (The Firm), a comparison organization (Another Firm), and industry averages supplied by The Professional Association (TPA).<sup>2</sup> Space limitations prevent detailed discussion of the interventions or the research strategy

(cf. Pate and Nielsen, 1987). It suffices to say that the 10-phase OD program (see Table 1) was quite similar to the "typical" effort described by Margulies et al. (1977) and was conducted by an experienced and reputable change agent. Using the Aston taxonomy (Pugh, Hickson, and Hinings 1969), both The Firm and Another Firm would perhaps be best described by the "Implicitly Structured Organization" category, evidenced by low structuring of activities and independence experienced throughout; using Filley's organizational typology (Filley and Pate, 1986) for comparisons, each organization could be described as an aged "Promotion" type, such that OD was initiated in The Firm to facilitate growth and development toward an alternative "Administrative" type. Both firms were similar in size, geographical region, and sales volume (i.e., kind and number of policy coverages offered). The authors were not involved in the actual conduct of any of the interventions, but served as independent and post hoc examiners of the archival records from the three data sources.

- - - - -  
 Insert Table 1 about here  
 - - - - -

**Absenteeism Hypotheses**

High absenteeism among hourly employees had become a major problem within The Firm and was one of the factors that led to initiation of the OD program. High absenteeism rates are one of the more common problems of most organizations (Porter, Lawler, and Hackman 1975; Porter and Steers 1973; Vroom 1964). The

prediction, based on previous research findings (Bragg and Andrews 1973; Golembiewski, Hilles, and Kagno 1974; Hautaluoma and Gavin 1975; Schmuck, Runkel, and Langemeyer 1969) was that OD would result in reduced absences; such a reduction would typically result in substantial cost-savings to the organization (Jeswald 1974; Lawler 1973). The following hypotheses relating to changes in absenteeism were tested in this research:

- H<sub>1</sub>: The number of absences among hourly employees of The Firm will be reduced between study periods.
- H<sub>2</sub>: A greater reduction in absences will occur between study periods among hourly employees of The Firm than among hourly employees of Another Firm that did not receive an OD program.
- H<sub>3</sub>: A greater reduction in absences will occur between study periods among hourly employees of The Firm, where an OD program was conducted, than among hourly employees in the same types of jobs within the insurance industry.

**Turnover Hypotheses**

Turnover, like absenteeism, is a form of withdrawal behavior that is often cited as a common organizational problem (Porter et al. 1975, Porter and Steers 1973). Some time ago, Lawler (1973) estimated the cost of turnover for lower level jobs to be \$2000 a person and five to ten times the individual's monthly salary at the managerial level. The environment of The Firm placed new and increased demands (e.g., longer working hours and expanding job markets) on both managerial and clerical personnel within all departments. As a result, top management was concerned that turnover at all levels might become a problem. Thus, consistent with Hess and Pate's (1986) notion of initiating OD as a form of preventive maintenance, one of the key factors influencing the

initiation of the OD program was the desire to curtail turnover where it had been a problem and to prevent it from spreading throughout The Firm. Only a few studies have examined the impact of OD interventions on turnover, however the tendency for the efficacy of OD is supported (Beckhard 1966; Beckhard and Lake 1971; Hautaluoma and Gavin 1975; Schmuck et al. 1969). Thus, based on previous research findings, the following hypotheses relating to changes in turnover were tested in this research:

- H<sub>4</sub>: A reduction of turnover among employees of The Firm will occur between study periods.
- H<sub>5</sub>: A greater reduction in employee turnover will occur between study periods within The Firm than within Another Firm that did not receive an OD program.
- H<sub>6</sub>: A greater reduction in employee turnover will occur between study periods within The Firm, where an OD program was conducted, than within comparison companies of the insurance industry.

#### Data Analysis Strategy

The archival data used in this analysis covered the period from January, 1973, to October, 1976. H<sup>1</sup> and H<sub>4</sub> were tested by One-Way Analysis of Variance (ANOVA) on repeated measures of monthly absenteeism and voluntary turnover data obtained from the records of The Firm; H<sub>2</sub> and H<sub>5</sub> were tested by comparing these data with identical data obtained from the records of Another Firm. For purposes of the ANOVA, the period from January, 1973 to December, 1974 constituted the Before period (24 months); the period from January, 1975 to June, 1976 constituted the During period (18 months); and the period from July, 1976 to October, 1976 constituted the After period (four months). It would have been convenient if the After period had lasted longer than four



months; however, a change in company policies (effective November 1, 1976) regarding the methods of accounting for absences, as well as the number of allowable absences, made comparisons beyond October, 1976 meaningless (i.e., the measuring instrument had changed). As it is, the data span over nearly four years; further, absenteeism and turnover policies had not changed in the preceding 10 years. Top management of The Firm simply felt that it was now time for a change in policy regarding withdrawal behavior.

H<sub>3</sub> and H<sub>6</sub> were tested using absenteeism and voluntary turnover data obtained from the archival records of The Firm, Another Firm, and TPA for the years 1973-1976. The approximately 190 member companies of the industry used a variety of methods of recording and penalizing absenteeism and turnover (e.g., 55 of the 190 member companies responding to the 1975 TPA survey computed absenteeism yearly). As a result, TPA published only yearly absenteeism and turnover figures. The comparison of absenteeism and turnover rates with industry figures are intended primarily to supplement the other tests and to note gross changes in the measures relative to similar organizations. Given the large sample size, TPA averages were regarded as constants and differences between them and The Firm were examined.

## Results

### Absenteeism Data

Measures of absenteeism and turnover are inherently linked to the total number of employees within The Firm. Thus, it was first necessary to determine if there were significant changes in

the number of employees across time periods. An ANOVA performed on these data showed a significant increase ( $F = 17.69, p < .001$ ); a similar trend was observed within Another Firm ( $F = 30.32, p < .001$ ). As a result, the following index of absenteeism, recommended by the U.S. Department of Labor and adopted by TPA, was used in the analysis:

$$\frac{\text{No. of person days lost through job absence}}{(\text{average no. of employees}) \times (\text{no. of workdays})} \times 100$$

An examination of Table 2 shows an increase in absenteeism occurred from 2.64% in 1973 to 2.94% in 1974; however, in 1975, when most of the OD program was conducted, the absenteeism rate within The Firm dropped to 2.5%. This drop in absenteeism continued to 2.32% in 1976, when the OD program ended. Such a downward trend in absenteeism rates would otherwise lend support to the prediction that OD would reduce absences, were it not for a similar increase within Another Firm from 2.65% in 1973 to 2.71% in 1974, followed by decreases to 2.40% in 1975 and 2.09% in 1976 (Table 2).

- - - - -  
Insert Tables 2 & 3 about here  
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When these data were examined by study period (Table 3), the absenteeism rate within Another Firm was also found to significantly decrease ( $F = 6.94, p < .01$ ) between study periods. Further, absenteeism rates steadily decreased from 1973-1976 within the insurance industry, for companies of the same size and geographical region (Midwestern United States) as The Firm and Another Firm (Table 2).

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Insert Table 4 & Figure 1 about here  
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A repeated measures ANOVA performed on the absenteeism rates from both organizations for the entire 46 month time span (Table 4) shows significant main effects for groups ( $F = 3.16, p < .05$ ) and time ( $F = 16.17, p < .001$ ), but no significant time by group interaction ( $F = 1.36, p < .62$ ). A graph of these data (Figure 1) illustrates that the pattern for Another Firm tended to remain more stable than The Firm throughout the study period, but that The Firm began to experience greater stability in 1975 and 1976 than in 1973 and 1974. Generally, the data indicate a tendency for absenteeism rates of both organizations to drop during the summer months and peak at the beginning of each year. One explanation for this apparent seasonal variation is that the winter months contributed to increased absenteeism due to increased behavioral demands, both job related and personal, on job occupants during these months. The Midwestern location of these organizations is typically characterized by several days of sub-zero weather during the winter months, which may have influenced management's understanding of and tolerance for high absenteeism. During the summer months, however, most employees typically took vacations, which may have helped to satisfy behavioral withdrawal needs; similarly, during the summer, management may have been more concerned with monitoring high absenteeism due to increased organizational demands characteristic of beginning a new fiscal year. Even though data

are not available to determine precisely the reasons for this apparent seasonal variation, it should nonetheless be considered in interpreting the effects of the OD program within The Firm.

When a two-way (group by time) ANOVA was performed for each phase of the OD program,<sup>3</sup> only the Employee Development Program (phase 9) and the Intergroup Sessions (phase 10) showed significant main effects for group; although these main effects were quite strong ( $F_{\text{phase 9}} = 27.21, p < .001$ ;  $F_{\text{phase 10}} = 14.14, p < .001$ ), further examination of Figure 1 reveals that during this time period (March through June, 1976) the rate for The Firm was actually higher than Another Firm, rather than lower as would be expected if OD were effective. Further, no group by time interaction effects were found for any of the analyses; all phases showed significant main effects for time at  $p < .05$  or greater. The overall implication of these several analyses is that the various phases of the OD program within The Firm appears not to have had the predicted positive effect on reducing absenteeism rates.

Finally, an examination of difference scores between absenteeism rates of The Firm, Another Firm, and the insurance industry (Table 5) shows absenteeism for both firms to be decreasing at a faster rate than industry averages, for each industry category. Absenteeism rates for The Firm were

- - - - -  
Insert Table 5 about here  
- - - - -

higher than Another Firm for each year, with a drop of .13 (from

.23 in 1974 to .10 in 1975) over Another Firm when the OD program began; the 1976 rate for The Firm did not reflect a decreasing trend (returning to the 1974 rate of .23). From further examination of Table 2 it is possible to calculate the overall change in rate of absenteeism from 1973 to 1976. This calculation shows that the .32 drop in rate of absenteeism for The Firm (from 2.64 to 2.32) was not as pronounced as any of the other three comparison categories: Another Firm dropped .56 (from 2.65 to 2.09); TPA companies the same size as The Firm dropped .51 (from 2.69 to 2.18); and TPA companies within the same midwestern region of the USA as The Firm dropped .49 (from 2.46 to 1.97). Thus, while absenteeism rates for each category were decreasing, overall these data show that absenteeism within The Firm was decreasing at a slower rate than Another Firm and comparison companies within the insurance field. One interpretation of these data is that the OD program prevented more of a decrease than would otherwise have occurred, in which case the initiation of OD may be worse than neutral for an organization of this type. In any case, it appears that the OD program did not affect absenteeism rates in the direction predicted by the literature.

#### Turnover Data

The rate of employee turnover within The Firm is susceptible to the same problems encountered with employee absenteeism, with regard to the number of individuals employed by The Firm. Therefore, the formula used by TPA to calculate turnover rate, also suggested by the U.S. Department of Labor, was used as an

index of turnover in this analysis. This turnover index is:

$$\frac{\text{Average number of terminations}}{\text{Average number of employees}} \times 100$$

Table 6 reports a summary of the annual turnover rates for The Firm, Another Firm, and the insurance industry. With the single exception of the slight increase in 1974 annual turnover within The Firm (from 33.56% to 34.47%), each entry in Table 6 shows a steady downward trend in turnover throughout the period of the study. The average monthly turnover rates between study periods for both The Firm and Another Firm (Table 3) also show a significant ( $p < .01$ ) decrease in employee turnover, with the rate for Another Firm slightly below the rate for The Firm within each period. Consistent with the research of Forrest et al. (1973), a 1975 TPA report attributes this increased turnover directly to external economic conditions:

The turnover rates have dropped in all but one category [males in companies with less than N=100 employees] for the year 1975. . . . Reduction in terminations can be directly attributed to the economic conditions in 1975; jobs were scarce and employees tended to remain where they were. It will be interesting to see if this downward trend will continue in the future.

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 Insert Table 6 about here  
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An examination of difference scores between turnover rates of The Firm, Another Firm, and the insurance industry (Table 5) shows mixed results, with an upward trend appearing only in the column comparing The Firm with industry averages for companies within the same TPA size category. This upward trend indicates that, even though the rate for The Firm remained below industry

averages for the entire time period (from -6.64 in 1973 to -.12 in 1976), the turnover rate within The Firm was increasing faster than the rate within the industry (TPA size category only). An examination of overall change in rate of turnover from 1973-1976 (cf. Table 6) indicates that, like absenteeism, the amount of rate change for The Firm was well below similar rate changes for the three comparison categories: turnover rate within The Firm dropped from 33.56 to 30.17 (-3.39); Another Firm dropped from 32.01 to 26.59 (-5.42); TPA averages for companies the same size as The Firm dropped from 40.20 to 30.29 (-9.91) -- a reduction of nearly 25% -- and TPA averages for companies within the same midwestern region as The Firm dropped from 32.46 to 23.98 (-8.48). Thus, all figures indicate a downward trend in turnover; however, turnover within The Firm was decreasing at a slower rate than comparison data. Again, like absenteeism, one interpretation of these data is that the OD program actually hurt the turnover rate within The Firm. A more cautious interpretation is simply that the OD program within The Firm did not appear to have much effect on reducing the rate of employee turnover.

Discussion

This research hypothesized decreases in absenteeism and turnover, relative to Another Firm and the industry averages, between study periods. An examination of the data summarized in Tables 2-6 and Figure 1 indicates that absenteeism and turnover rates within The Firm were decreasing between study periods as predicted, providing support for H<sub>1</sub> and H<sub>4</sub>. However, similar

trends were observed for each comparison category. Further, the rate of absenteeism and turnover within The Firm was found to be decreasing at a slower rate than each comparison category. As a result, support was not found for any of the hypotheses that absenteeism and turnover within The Firm would decrease at a faster rate than comparison companies, and the support indicated for H<sub>1</sub> and H<sub>4</sub> cannot be attributed directly to the OD program. Further, no significant group by time interaction was found (Table 4); separate two-way ANOVAs conducted on the various phases of the OD program also failed to demonstrate support for these hypotheses. Therefore, these data do not support the claim made in the literature that OD will result in reduced absences.

A problem with the absenteeism data is that it is limited to monthly averages. Similarly, the industry data supplied by TPA report only yearly averages. Had finer units of analysis been available, more detailed examination of the data would have been possible. Also, the manner of measuring absences is a potential problem with this research, since only the number of absences, as opposed to the instance of absences, was measured. Since these alternative methods of measuring absenteeism may yield quite different results, it would have been preferable to conduct comparative analyses. However, data were available on number of absences only and could not be identified with particular employees to determine instances. This controversy surrounding the method of measuring absenteeism deserves research attention in future intervention programs.



A problem with the turnover data within The Firm is that the rate was exceptionally high throughout the study; experimental mortality (Campbell and Stanley 1963) serves as a threat to the internal validity of any experiment, but particularly one in which the turnover rate is as high as that reported here. Approximately one-third of the members of The Firm terminated each year, with a steady increase over the period of the study. From both a managerial and research point of view, a lower rate of employee turnover would have been desirable and was one of the reported reasons for the initiation of OD in the first place.

The present study demonstrates the value of examining non-attitudinal data as a data source in OD research. Had the study been limited to self-report data, a quite different interpretation of the effects of OD might have been made. The use of archival data in OD research, as advocated by White and Mitchell (1976) and used herein, represents a useful source of information about actual behaviors of employees. Secondly, OD research studies need to examine possible alternative explanations for findings, as recommended throughout the literature, yet too seldom conducted. Had the present study not employed data from Another Firm or TPA, for example, we could not reject the hypothesis that decreased absenteeism and turnover were a result of the OD program. However, when such comparisons were made, it became clear that alternative explanations, such as the general economic conditions within the insurance industry, were more viable explanations for the downward trends in these measures than the presence of an OD program. Far too many OD

studies have been conducted using posttest-only instruments, in which case very little can be said of the findings. It is an interesting consequence of the present research that support for previous findings demonstrating OD to be effective in reducing absenteeism and turnover was not found. The suggestion is that when OD is put to a more rigorous test, it is incapable of standing up to its claims.

### Footnotes

<sup>1</sup>The authors wish to thank the members of the study organizations and the change agent, whose cooperation and assistance made this research possible. Requests for reprints should be addressed to Larry Pate, BRI6, Graduate School of Business Administration, University of Southern California, Los Angeles, CA 90089-1421, USA.

<sup>2</sup>A pseudonym.

<sup>3</sup>Phases 1 and 2, having to do with the selection of an internal change agent and a steering committee, both occurred in January 1975; phase 3, the preliminary diagnostic phase, was completed the following month (cf. Table 1). Thus, for practical reasons, a single two-way ANOVA was computed for the first three phases. Similarly, a single two-way ANOVA was computed for phase 4 (data feedback training) and phase 5 (data feedback), since they were both completed at the same time (April, 1975).

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TABLE 1  
CHANGE PROGRAM SEQUENCE

| Intervention                                 | Initiated | Completed |
|--|-----------|-----------|
| (1) Select Internal Change Agent             | 1- 1-75   | 1-15-75   |
| (2) Select Steering Committee*               | 1- 1-75   | 2- 1-75   |
| (3) Preliminary Diagnosis                    | 2- 1-75   | 3- 1-75   |
| (4) Data Feedback Training                   | 4- 1-75   | 4-10-75   |
| (5) Data Feedback and Problem Identification | 4-10-75   | 4-15-75   |
| (6) Management Development Workshops         | 6- 1-75   | 8-31-75   |
| (7) Team Skills Training                     | 9- 1-75   | 9-30-75   |
| (8) Team Building/Action Planning            | 10- 1-75  | 3-31-76   |
| (9) Employee Development Program             | 3- 1-76   | 5-31-76   |
| (10) Intergroup Sessions                     | 4- 1-76   | 6-30-76   |

\* Includes time committee spent giving guidance to the diagnostic phase.

TABLE 2

SUMMARY OF ABSENTEEISM RATES FOR THE FIRM, ANOTHER FIRM, AND THE INSURANCE  
INDUSTRY (BY SIZE AND GEOGRAPHICAL REGION) FOR 1973-1976

| Year and<br>Data Source  | Average Number<br>of Person Days<br>Lost Through<br>Job Absence | Average Number<br>of Employees | Average Number<br>of Workdays | Rate of<br>Absenteeism |
|--------------------------|---|--------------------------------|-------------------------------|------------------------|
| <u>1973</u>              |   |                                |                               |                        |
| The Firm                 | 1002  | 151.96                         | 250                           | 2.64                   |
| Another Firm             | 997   | 149.96                         | 251                           | 2.65                   |
| *Industry                |   |                                |                               |                        |
| Size (34)                | 905.98  | 132.69                         | 253.82                        | 2.69                   |
| Geographical Region (41) | 1093.06   | 176.54                         | 251.69                        | 2.46                   |
| <u>1974</u>              |   |                                |                               |                        |
| The Firm                 | 1151  | 156.62                         | 250                           | 2.94                   |
| Another Firm             | 1004  | 148.21                         | 250                           | 2.71                   |
| *Industry                |   |                                |                               |                        |
| Size (37)                | 716   | 112.65                         | 252.25                        | 2.52                   |
| Geographical Region (34) | 1024  | 184.92                         | 250.70                        | 2.21                   |
| <u>1975</u>              |   |                                |                               |                        |
| The Firm                 | 1005  | 160.22                         | 251                           | 2.50                   |
| Another Firm             | 879   | 146.51                         | 250                           | 2.40                   |
| *Industry                |   |                                |                               |                        |
| Size (33)                | 595.30  | 102.45                         | 252.56                        | 2.30                   |
| Geographical Region (34) | 860.47  | 163.69                         | 252.25                        | 2.08                   |
| <u>1976</u>              |   |                                |                               |                        |
| The Firm                 | 942   | 162.41                         | 250                           | 2.32                   |
| Another Firm             | 865   | 165.50                         | 250                           | 2.09                   |
| *Industry                |   |                                |                               |                        |
| Size (51)                | 699.12  | 127.62                         | 251.29                        | 2.18                   |
| Geographical Region (69) | 909.56  | 183.91                         | 251.05                        | 1.97                   |

\* Industry data are reported for companies that were categorized by TPA to be of the same size (N = 100-200 employees) and geographical region (Midwest) as The Firm. The number of companies reporting data in each TPA category is shown in parentheses.



TABLE 3

ANALYSIS OF VARIANCE SUMMARY ASSOCIATED WITH CHANGES IN ABSENTEEISM  
AND TURNOVER MEASURES FROM THE FIRM AND ANOTHER FIRM  
BETWEEN STUDY PERIODS

| Assessment Measures                      | Intervention Period |        |       |                |
|--|---------------------|--------|-------|----------------|
|  | Before              | During | After | <u>F</u> value |
| <u>The Firm</u>                          |                     |        |       |                |
| Absences                                 |                     |        |       |                |
| Average Percentage<br>Absent Per Day     | 2.79                | 2.41   | 2.30  | 5.41**         |
| Turnover                                 |                     |        |       |                |
| Average Percentage<br>Turnover Per Month | 2.83                | 2.56   | 2.46  | 5.20**         |
| <u>Another Firm</u>                      |                     |        |       |                |
| Absences                                 |                     |        |       |                |
| Average Percentage<br>Absent Per Day     | 2.68                | 2.34   | 1.96  | 6.94**         |
| Turnover                                 |                     |        |       |                |
| Average Percentage<br>Turnover Per Month | 2.60                | 2.30   | 2.17  | 6.07**         |

\*  $p < .05$ ,    \*\*  $p < .01$ ,    \*\*\* $p < .001$

TABLE 4

MONTHLY ABSENTEEISM RATES FOR THE FIRM AND ANOTHER FIRM  
FOR ENTIRE 46 MONTHS OF THE STUDY (WITH GROUPS BY TIME ANOVA)

|           |    | The Firm<br><u>X</u> | Another Firm<br><u>X</u> |                                     |
|-----------|----|----------------------|--------------------------|-------------------------------------|
| (January) |    |                      |                          |                                     |
| (1973)    | 1  | 3.35                 | 3.05                     |                                     |
|           | 2  | 2.64                 | 3.01                     |                                     |
|           | 3  | 3.45                 | 2.63                     |                                     |
|           | 4  | 2.69                 | 2.57                     |                                     |
|           | 5  | 1.99                 | 2.59                     |                                     |
|           | 6  | 1.81                 | 2.30                     |                                     |
|           | 7  | 1.22                 | 2.04                     |                                     |
|           | 8  | 2.12                 | 2.11                     |                                     |
|           | 9  | 3.82                 | 2.74                     |                                     |
|           | 10 | 2.50                 | 2.51                     |                                     |
|           | 11 | 2.02                 | 2.73                     |                                     |
|           | 12 | 3.69                 | 3.52                     |                                     |
| (1974)    | 13 | 3.92                 | 3.79                     |                                     |
|           | 14 | 3.61                 | 3.34                     |                                     |
|           | 15 | 3.79                 | 2.94                     |                                     |
|           | 16 | 3.13                 | 2.51                     |                                     |
|           | 17 | 3.32                 | 2.23                     |                                     |
|           | 18 | 1.81                 | 2.02                     |                                     |
|           | 19 | 2.07                 | 2.37                     |                                     |
|           | 20 | 1.87                 | 2.52                     |                                     |
|           | 21 | 2.62                 | 2.04                     |                                     |
|           | 22 | 2.91                 | 2.63                     |                                     |
|           | 23 | 2.72                 | 2.97                     |                                     |
|           | 24 | 3.51                 | 3.16                     |                                     |
| (1975)    | 25 | 4.41                 | 3.31                     | Preliminary Phases                  |
|           | 26 | 3.19                 | 3.27                     |                                     |
|           | 27 | 2.98                 | 3.04                     |                                     |
|           | 28 | 2.68                 | 2.86                     | Data Feedback (& Training)          |
|           | 29 | 2.50                 | 2.12                     |                                     |
|           | 30 | 2.43                 | 1.72                     | Management Development<br>Workshops |
|           | 31 | 1.82                 | 1.89                     |                                     |
|           | 32 | 2.35                 | 1.93                     |                                     |
|           | 33 | 1.75                 | 2.06                     | Team Skills Training                |
|           | 34 | 2.19                 | 2.41                     |                                     |
|           | 35 | 1.42                 | 2.19                     | Team Building/Action Planning       |
|           | 36 | 2.28                 | 2.00                     |                                     |
| (1976)    | 37 | 2.41                 | 2.52                     |                                     |
|           | 38 | 2.43                 | 2.31                     |                                     |
|           | 39 | 2.44                 | 2.16                     | Employee Development Program        |
|           | 40 | 2.17                 | 2.23                     |                                     |
|           | 41 | 2.52                 | 2.04                     |                                     |
|           | 42 | 2.49                 | 1.96                     | Intergroup Sessions                 |
|           | 43 | 2.02                 | 1.63                     |                                     |
|           | 44 | 1.96                 | 1.82                     |                                     |
|           | 45 | 2.21                 | 2.23                     |                                     |
|           | 46 | 2.55                 | 2.00                     |                                     |

|             | ANOVA    |          |
|-------------|----------|----------|
|             | <u>F</u> | <u>P</u> |
| Groups      | 3.16     | .0437    |
| Time        | 16.17    | .0010    |
| Interaction | 1.36     | .6210    |

TABLE 5

ABSENTEEISM AND TURNOVER DIFFERENCE SCORES BETWEEN RATES OF THE FIRM,  
ANOTHER FIRM, AND THE INSURANCE INDUSTRY (BY SIZE AND  
GEOGRAPHICAL REGION) FOR 1973-1976

| Year and<br>Dependent<br>Variable | The Firm vs.<br>Another Firm | The Firm vs.<br>Industry |      | Another Firm<br>vs. Industry |      |
|-----------------------------------|------------------------------|--------------------------|------|------------------------------|------|
|                                   |                              | a                        | b    | a                            | b    |
| <u>1973</u>                       |                              |                          |      |                              |      |
| Absenteeism                       | -.01                         | -.05                     | +.18 | -.04                         | +.19 |
| Turnover                          | 1.55                         | -6.64                    | 1.10 | -8.19                        | -.45 |
| <u>1974</u>                       |                              |                          |      |                              |      |
| Absenteeism                       | +.23                         | +.42                     | +.73 | +.19                         | +.50 |
| Turnover                          | 4.11                         | -2.22                    | 7.35 | -6.33                        | 3.24 |
| <u>1975</u>                       |                              |                          |      |                              |      |
| Absenteeism                       | +.10                         | +.20                     | +.42 | +.10                         | +.32 |
| Turnover                          | 2.54                         | -.35                     | 6.56 | -2.89                        | 4.02 |
| <u>1976</u>                       |                              |                          |      |                              |      |
| Absenteeism                       | +.23                         | +.14                     | +.35 | -.09                         | +.12 |
| Turnover                          | 3.58                         | -.12                     | 6.19 | -3.70                        | 2.61 |

a = comparison made within same TPA size category

b = comparison made within same TPA geographical region category

TABLE 6

## SUMMARY OF TURNOVER RATES FOR THE FIRM, ANOTHER FIRM, AND THE INSURANCE INDUSTRY (BY SIZE AND GEOGRAPHICAL REGION) FOR 1973-1976

| Year and Data Source     | Average Number of Employees | Average Number of Terminations | Annual Turnover Rate |
|--------------------------|-----------------------------|--------------------------------|----------------------|
| <u>1973</u>              |                             |                                |                      |
| The Firm                 | 151.96                      | 51                             | 33.56                |
| Another Firm             | 149.96                      | 48                             | 32.01                |
| *Industry:               |                             |                                |                      |
| Size (29)                | 129.62                      | 52.11                          | 40.20                |
| Geographical Region (34) | 172.41                      | 55.96                          | 32.46                |
| <u>1974</u>              |                             |                                |                      |
| The Firm                 | 156.62                      | 54                             | 34.47                |
| Another Firm             | 148.21                      | 45                             | 30.36                |
| *Industry:               |                             |                                |                      |
| Size (34)                | 110.91                      | 40.69                          | 36.69                |
| Geographical Region (36) | 186.22                      | 50.50                          | 27.12                |
| <u>1975</u>              |                             |                                |                      |
| The Firm                 | 160.22                      | 50                             | 31.21                |
| Another Firm             | 146.51                      | 42                             | 28.67                |
| *Industry:               |                             |                                |                      |
| Size (40)                | 103.66                      | 32.71                          | 31.56                |
| Geographical Region (43) | 193.16                      | 47.61                          | 24.65                |
| <u>1976</u>              |                             |                                |                      |
| The Firm                 | 162.41                      | 49                             | 30.17                |
| Another Firm             | 165.50                      | 44                             | 26.59                |
| *Industry:               |                             |                                |                      |
| Size (47)                | 124.69                      | 37.77                          | 30.29                |
| Geographical Region (51) | 186.24                      | 44.66                          | 23.98                |

\* Industry data are reported for companies that were categorized by TPA to be of the same size (N = 100-200 employees) and geographical region (Midwest) as The Firm. The number of companies reporting data in each TPA category is shown in parentheses. Industry figures in this table differ from those reported in Table 2, since not all companies responding to the TPA survey reported both absenteeism and turnover figures.

FIGURE 1

MONTHLY ABSENTEEISM RATES FOR THE FIRM AND ANOTHER FIRM

