

THE OPPORTUNITY FOR FRIENDSHIP IN THE WORKPLACE: AN UNDEREXPLORED CONSTRUCT

Christine M. Riordan

The University of Georgia

Rodger W. Griffeth

Georgia State University

ABSTRACT: This paper hypothesized and tested a theoretically-based model of the relationship between perceived friendship opportunities in the workplace and work-related outcomes. The empirical findings are based on the survey responses of 174 employees in a small electric utility. Results indicate that employees' perceptions of friendship opportunities in the workplace have direct effects on job involvement and job satisfaction, as well as indirect effects on organizational commitment and intention to turnover. Management implications of friendship opportunities and social features within the workplace are discussed.

The study of the relationship between job characteristics such as task identity, skill variety, autonomy, task significance, and feedback and work-related outcomes is well-established in the organizational and management literature (e.g., Hackman & Lawler, 1971; Hackman & Oldham, 1975; Fried, 1991; Sims, Szilagyi, & Keller, 1976). However, to date, the majority of research has primarily focused on the aforementioned dimensions as the "core" job characteristics with little attention being paid to two other job characteristics that were originally developed by Hackman and Lawler (1971). Namely, of the six original job characteristics developed by Hackman and Lawler (1971), the "interpersonal" job dimensions of dealing with others and friendship opportunities have received only cursory, if any, examination in many of the existing job characteristic studies. This lack of research evidence is surprising since improved interpersonal relationships may influence a variety of performance (e.g., performance quality; speed to solution, etc.;

Address correspondence to Christine M. Riordan, Department of Management, Terry College of Business, The University of Georgia, Athens, Georgia 30602.

Hackman & Morris, 1975) and attitudinal (e.g., job satisfaction; Hackman & Morris, 1975; Price & Mueller, 1981, 1986) outcomes. Subsequently, the purpose of this article is to examine in more detail one of these often "forgotten" interpersonal dimensions of the job dimensions model originally presented by Hackman and Lawler (1971). Specifically, the present study explores the friendship opportunities dimension and its relationship with work-related outcomes.

THEORETICAL RATIONALE

Friendship opportunity, as a dimension of perceived job characteristics, was originally developed to examine the degree to which a job allowed employees to talk with one another on the job and to establish informal relationships with other employees at work (Hackman & Lawler, 1971). While it is generally accepted that the "core" characteristics of a job (i.e., task identity, autonomy, skill variety, task significance, and feedback) have substantial impact upon attitudes, behaviors, and feelings of the job holder, there is relatively little theoretical or empirical work that has attempted to specify just what the attitudinal consequences are of perceived friendship opportunities within the job. Subsequently, in the present study, we propose a theoretically-based model of the relationship between perceived friendship opportunities and various work-related outcomes.

Examining the nature of the relationship between friendship opportunities within the workplace and work-related outcomes is important for several reasons. For one, despite the lack of research, the perceived friendship component of jobs is an important aspect of the human relations system within an organization. Informal social relations, both internal and external to the work environment offer many significant and rewarding benefits to the individuals involved (Reohr, 1991). Within the work context, friendships among employees can provide increased interaction, communication, trust, respect, cooperation, growth, development, support, energy, and security (Foote, 1985; Greeley, 1971; Krackhardt & Stern, 1988; Reohr, 1991), which in turn can influence work-related attitudes and behaviors.

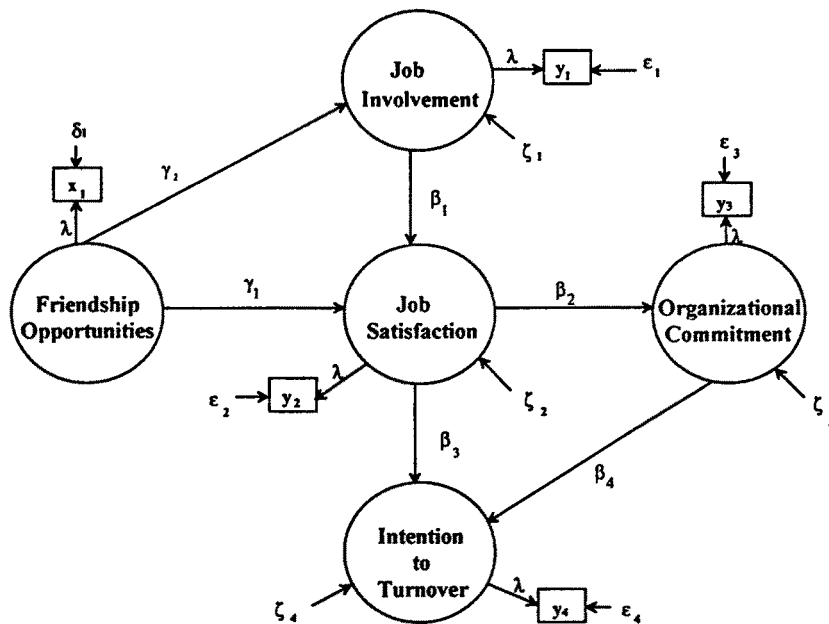
A second reason for examining the friendship component is that friendships developed within the workplace represent a key element in the informal structure of an organization (Barney, 1985). Organizational theorists have recently begun to study the friendship patterns and networks that emerge within organizations as relevant and powerful structural units that can either hinder or facilitate organizational effectiveness (e.g., Krackhardt & Stern, 1988). In fact, the formal organization, itself, contributes to the development of informal relations in the work

environment through the arrangement of subunits, departments, etc. Social principles suggest that frequent interaction and close proximity between individuals lead to friendship or at least to the opportunity for friendship formation (Festinger, Schachter, & Back, 1950; Shaw, 1981). Subsequently, friendship networks arise out of the formal organization and are part of the employees' everyday association with the formal organization.

A MODEL

The hypothesized causal model we tested in this study is depicted in Figure 1. The theoretical rationale for each path relationship in the model is discussed below. Friendship opportunities within the job environment were hypothesized to directly affect two attitudes commonly related to an individual's direct job experiences. First, since job satisfaction focuses on the daily experience, the nature of the workplace, and

Figure 1
Latent-Variable Representation of Friendship Opportunity Model



Note: λ , δ , and ϵ_1 through ϵ_4 are fixed parameters.

the work activities of an employee (Krackhardt & Porter, 1985), it was hypothesized that friendship opportunities would have a significant direct effect on an individual's satisfaction with his or her job (friendship opportunities \rightarrow job satisfaction; γ_1 ; Price & Mueller, 1981, 1986). That is, since job satisfaction is posited to be shaped by specific aspects of the job, we expect that employees' perceptions of a strong friendship component in the workplace will directly affect an employee's job satisfaction.

Similarly, job involvement is typically viewed as a function of the individual-job interaction, with people differing in the degree to which they are likely to become involved in their jobs, but with the situation either facilitating or hindering the opportunity to become involved in one's job (Lawler & Hall, 1970). A number of empirical studies have found that job involvement is, in fact, positively correlated with social features of the job (e.g., Lodhal & Kejner, 1965). Thus, we additionally hypothesized that friendship opportunities are a situational job characteristic that would have a direct relationship with an individual's job involvement (friendship opportunities \rightarrow job involvement, γ_2). Research in the area of job involvement has also generally supported the positive relationship between job involvement and job satisfaction (Lodhal & Kejner, 1965). Accordingly, we predicted such a path in our model to reflect this relationship (job involvement \rightarrow job satisfaction; β_1).

We also hypothesized that friendship opportunities may indirectly affect other work-related outcomes through its effects on job satisfaction and job involvement. Two such outcomes are organizational commitment and employee withdrawal cognitions or intention to turnover. Many empirical studies have established that job satisfaction has a significant positive relationship with organizational commitment (Mowday, Porter, & Steers, 1982). Subsequently, our model proposed that there would be a significant and positive relationship between job satisfaction and organizational commitment (job satisfaction \rightarrow organizational commitment; β_2), and that the job satisfaction would translate the effect of friendship opportunities on to organizational commitment. Thus, it was proposed that friendship opportunities would have a positive and indirect effect on organizational commitment through two paths: (1) friendship opportunities \rightarrow job satisfaction \rightarrow organizational commitment ($\gamma_1 \times \beta_2$); and (2) friendship opportunities \rightarrow job involvement \rightarrow job satisfaction \rightarrow organizational commitment ($\gamma_2 \times \beta_1 \times \beta_2$).

Additionally, research has suggested that both job satisfaction and organizational commitment reduce employee withdrawal cognitions or intentions to turnover (e.g., Angle & Perry, 1981; Price & Mueller, 1986; Steers & Mowday, 1981; Stumpf & Hartman, 1984). Our model correspondingly included the direct negative relationships between job satisfaction and intention to turnover (job satisfaction \rightarrow intention to turnover; β_3) and organizational commitment and intention to turnover

(organizational commitment \rightarrow intention to turnover; β_4). Hence, it was further proposed that friendship opportunities would have an indirect negative effect on employees' intention to turnover through four paths: (1) friendship opportunities \rightarrow job satisfaction \rightarrow organizational commitment \rightarrow intention to turnover ($\gamma_1 \times \beta_2 \times \beta_4$); (2) friendship opportunities \rightarrow job involvement \rightarrow job satisfaction \rightarrow organizational commitment \rightarrow intention to turnover ($\gamma_2 \times \beta_1 \times \beta_2 \times \beta_4$); (3) friendship opportunities \rightarrow job satisfaction \rightarrow intention to turnover ($\gamma_1 \times \beta_3$); and (4) friendship opportunities \rightarrow job involvement \rightarrow job satisfaction \rightarrow intention to turnover ($\gamma_2 \times \beta_1 \times \beta_3$).

METHODOLOGY

Sample

Participants in this study included 174 employees from a small electric utility located in the southeastern United States. This sample represented 88% of those available employees at the time of data collection. Approximately 26% of the respondents were in clerical positions; 52% were in trades and crafts positions, and 22% were in managerial positions. Additionally, 32% of the respondents were female; 89% were Caucasian; and over 50% of the respondents had been with the company for 10 or more years.

Data Collection and Measures

The measures used in the present study were part of a more extensive organizational opinion survey. Data were collected from subjects using surveys administered in employee meetings during regular working hours. Prior to survey administration, one of the researchers explained the purpose of the survey and obtained the employees' consent to participate in the project. Additionally, the confidentiality of responses was guaranteed by ensuring minimum respondent identification, processing of data off-site, and use of group means and frequency counts for organizational feedback purposes. Descriptions of the measures used in this study are listed below.

Friendship Opportunities. The construct of friendship opportunities was measured with six items derived from Hackman and Lawler's (1971) job dimensions instrument (mean = 3.63; sd = .77; alpha = .87). These items measured the degree to which employees perceived that their job allowed them to talk with one another while on the job and to establish informal relationships with other employees while at work. Scale anchors ranged from 1 (strongly disagree) to 5 (strongly agree).

Job Involvement. Job involvement was measured with eight items from Kanungo's (1979) instrument (mean = 3.67; sd = .70; alpha = .84). This measure was intended to assess the degree of employees' psychological identification with their work. Scale anchors for the eight items ranged from 1 (strongly disagree) to 5 (strongly agree).

Job Satisfaction. Global job satisfaction was measured using five-facet items including satisfaction with pay, coworkers, supervisor, the work itself, and growth opportunities. These five items were summed to obtain the global job satisfaction score for each employee (Warr, Cook, & Wall, 1979) (mean = 3.57; sd = .75; alpha = .81). Scale anchors ranged from 1 (strongly dissatisfied) to 5 (strongly satisfied).

Organizational Commitment. Organizational commitment was measured using the nine-item version of Mowday, Steers, and Porter's (1979) Organizational Commitment Questionnaire (mean = 3.16; sd = .78; alpha = .86). This measure was intended to assess the employees' general psychological attachment to the organization. Scale anchors ranged from 1 (strongly disagree) to 5 (strongly agree).

Intention to Turnover. Intention to turnover was assessed with the single item measure "I plan to look for a job with another company within a year" (mean = 2.88; sd = 1.1). This measure was designed to "tap" respondents' reported tendency to leave their employing organization. The scale anchor ranged from 1 (strongly disagree) to 5 (strongly agree).

Analytical Procedure

Structural equation modeling was used to examine the relationships among constructs in the friendship model depicted in Figure 1. This figure shows both the structural and measurement components of the model. One of the advantages of a structural equation modeling approach is that by incorporating the measurement component into the model, it corrects for unreliability in the measured variables used to represent the underlying latent variables (Widaman, 1985).

Using LISREL VII (Jöreskog & Sörbom, 1989), the reliabilities of the measures, and the covariance matrix of the sample, this study tested the theoretical model depicted in Figure 1. The relatively small sample precluded the simultaneous estimation of both the measurement and the structural models. Therefore, scale reliabilities were used to fix the relationships between the observed scale scores and their corresponding latent constructs. That is, the reliabilities of each measure were used to estimate latent variables in the structural model by setting the path from a latent variable to its corresponding observed variable (λ) equal to the square root of the reliability of each measure (Podsakoff, Williams, & Todor, 1986). Since the construct of intention to turnover was measured with a single item and a reliability score was not

available, we followed Anderson and Gerbing's (1988) suggestion that a reliability of .90 be employed for single-item measures. Additionally, the error variances for each of the measures were also fixed. Specifically, the amount of random error variance (θ) was fixed to one minus the reliability of the measure times the variance of the observed score (Podsakoff et al., 1986).

Several statistics were used to evaluate model fit. Because sample size often affects the goodness-of-fit chi-square, several researchers have suggested multiple indices for judging the fit of a model to data (e.g., Marsh, Balla, & McDonald, 1988). Therefore, the following indices were used in the present study to evaluate model fit: (a) the normed fit index (NFI; Bentler & Bonett, 1980; Mulaik et al., 1989) as a relative comparison of the proposed model to a baseline model (i.e., null model); (b) the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973) as an additional incremental index to assess fit of the model to the data; (c) the goodness-of-fit index (GFI) as an overall degree of fit of the predicted square residuals compared to the actual data; (d) the adjusted goodness-of-fit index (AGFI) as an overall degree of fit adjusted for the degrees of freedom; (e) the chi-square test as an indication of fit between the predicted and obtained covariance matrix; and (f) the root-mean-square residual (rmsr; Jöreskog & Sörbom, 1989) as a measure of the average of the fitted residuals.

In brief, there is no single statistical test that best describes the "strength" of a model's predictions (Hair, Anderson, Tatham, & Black, 1992). Rather, a combination of the above indices were used to determine (a) overall model fit, and (b) comparative model fit to a baseline model. While there are no specific guidelines for assessing the fit of a model, in general, the larger the values of the TLI, NFI, GFI, and AGFI (i.e., values above .90), the better fitting the model (Bollen, 1989). For the rmsr, a value of less than .05 is considered acceptable. Furthermore, a nonsignificant chi-square value is further indication of acceptable model fit.

In addition, we examined the predicted relationship of each path in the model individually to determine the statistical significance of that particular relationship or component of the model (James, Mulaik, & Brett, 1982). Subsequently, following the test of the overall theoretical model, we examined each of the maximum likelihood parameter estimates and the t -values provided through LISREL VII to determine if the modeled parameter estimates were, in fact, statistically significant.

RESULTS

The means, standard deviations, alpha coefficients, and correlations among the modeled variables are presented in Table 1. As can be seen

Table 1
Means, Standard Deviations, and Correlation Coefficients*

Variable	Mean	s.d.	α	1	2	3	4	5
1. Friendship Opportunities	3.63	.77	.87	1.0				
2. Job Involvement	3.75	.65	.84	.63	1.0			
3. Job Satisfaction	3.62	.77	.81	.71	.74	1.0		
4. Organizational Commitment	3.16	.78	.86	.69	.69	.78	1.0	
5. Intention to Turnover	2.88	1.10	NA	-.47	-.47	-.57	-.66	1.0

*= all correlations are significant at $p \leq .05$; s.d. = standard deviation; α = alpha coefficient; NA = not applicable.

from this table, all reliabilities are within ranges deemed acceptable for basic research (Nunnally, 1978). Further, Table 1 shows that model constructs were significantly related. While this could signal a multicollinearity problem, it may not be a problem in this data set for two reasons. First, a correlation of .90 between two estimates is the most frequently cited value in the literature which might indicate collinearity problems (Hayduk, 1987). Second, when collinearity is a problem, the information matrix fails to converge to a maximum likelihood and no output is produced. Since the information matrix did converge and output was produced, and the correlations in Table 1 are less than .90, multicollinearity does not appear to be a problem in the present study.

Model Fit

The fit statistics from the model estimation were as follows: $\chi^2 = 4.29$ (5 df; $p < .650$); GFI = .98; AGFI = .96; rmsr = .009; TLI = .99; and NFI = .99. The nonsignificant chi-square indicates that the proposed model provided an adequate fit to the data. The high GFI, AGFI, TLI, and NFI values and the low rmsr also indicate an acceptable fit of the theoretical model. Additionally, for the entire model, the multiple correlation was .88 ($R^2 = .77$), which suggests that 77% of the variability in this model was accounted for by the relationships we hypothesized. This is further evidence of the strength of the path model assessed.

Parameter Estimates

Table 2 provides the structural parameter estimates (path coefficients) for the maximum likelihood solution. The results indicate that friendship opportunities had a significant effect (NOTE: all of the following significant findings are reported at the $p \leq .05$ level) on job satisfac-

Table 2
Maximum Likelihood Parameter Estimates

Parameters	Descriptions	Model Estimates*
γ_1	Friendship Opportunities to job satisfaction	.30
γ_2	Friendship Opportunities to job involvement	.59
β_1	Job Satisfaction to organizational commitment	.89
β_2	Job Involvement to job satisfaction	.72
β_3	Job Satisfaction to intention to turnover	-.61
β_4	Organizational Commitment to intention to turnover	-.27

* = all model estimates are significant at $p < .05$.

tion and job involvement (γ_1 and γ_2 , respectively). The relatively large coefficients indicate that those individuals perceiving friendship opportunities within the workplace were much more likely to be involved and satisfied with their jobs. Moreover, as predicted, the paths from job satisfaction to organizational commitment (β_3), job satisfaction to intention to turnover (β_2), and organizational commitment to intention to turnover (β_4) were also significant. Subsequently, friendship opportunities also had indirect effects on organizational commitment and intention to turnover.

Table 3 provides the decomposition of the total effect of friendship opportunities on organizational commitment and intention to turnover. Results from this study indicate that, in general, friendship opportunities (1) significantly increase organizational commitment through its effects on job satisfaction and job involvement [$(\gamma_1 \times \beta_1 \times \beta_3) + (\gamma_2 \times \beta_2) = .65$]; and (2) reduce employees' intention to turnover through its direct effect on job satisfaction and job involvement, as well as its indirect effect on organizational commitment [$(\gamma_1 \times \beta_2 \times \beta_4) + (\gamma_2 \times \beta_1 \times \beta_2 \times \beta_4) + (\gamma_1 \times \beta_3) + (\gamma_2 \times \beta_1 \times \beta_3) = -.61$].

DISCUSSION

This study hypothesized and tested a theoretical model of the relationship between the friendship opportunity dimension of jobs and work-related outcomes. All aspects of this model received initial support from the present study. Thus, this model appears to have provided an appropriate starting point in the examination of the relationship between perceived friendship opportunities and work-related outcomes.

Several conclusions are evident from the results of this study. Consistent with previous research on the "core" job characteristics, clear relationships exist between the "interpersonal" job dimension of friendship

Table 3
Decomposition of the Total Effect of Friendship Opportunities on
Organizational Commitment and Intention to Turnover

Paths	Model Estimates
<i>Organizational Commitment</i>	
(1) friendship opportunities → job satisfaction → organizational commitment ($\gamma_1 \times \beta_2$)	.27
(2) friendship opportunities → job involvement → job satisfaction → organizational commitment ($\gamma_2 \times \beta_1 \times \beta_2$)	.38
NET EFFECT OF ALL PATHS ON ORGANIZATIONAL COMMITMENT ($\gamma_1 \times \beta_1 \times \beta_3$) + ($\gamma_2 \times \beta_2$)	<u>.65</u>
<i>Intention to Turnover</i>	
(1) friendship opportunities → job satisfaction → organizational commitment → intention to turnover ($\gamma_1 \times \beta_2 \times \beta_4$)	-.07
(2) friendship opportunities → job involvement → job satisfaction → organizational commitment → intention to turnover ($\gamma_2 \times \beta_1 \times \beta_2 \times \beta_4$)	-.10
(3) friendship opportunities → job satisfaction → intention to turnover ($\gamma_1 \times \beta_3$)	-.18
(4) friendship opportunities → job involvement → job satisfaction → intention to turnover ($\gamma_2 \times \beta_1 \times \beta_3$)	-.26
NET EFFECT OF ALL PATHS ON INTENTION TO TURNOVER ($\gamma_1 \times \beta_2 \times \beta_4$) + ($\gamma_2 \times \beta_1 \times \beta_2 \times \beta_4$) + ($\gamma_1 \times \beta_3$) + ($\gamma_2 \times \beta_1 \times \beta_3$)	<u>-.61</u>

opportunities and work-related outcomes. Namely, friendship opportunities are associated with increases in job satisfaction, job involvement, and organizational commitment, and with a significant decrease in intention to turnover. The significant decrease in intention to turnover is particularly notable since previous research has suggested that turnover intentions are directly related to actual turnover (Steel & Ovalle, 1984). These findings suggest that further exploration of informal relations within organizations, such as friendships, may be productive for increasing our understanding of the dynamics of organizational behavior.

Additionally, the results of this study also suggest that continued

research is needed to fully comprehend the significance and utility of perceived friendship opportunities within work contexts. There is relatively little theoretical or empirical work that has attempted to examine the attitudinal and behavioral consequences of informal relationships within the work context. Subsequently, friendship within the work environment may be severely underrated and underutilized as a condition for individual and organizational effectiveness. As noted by Krackhardt and Stern (1988), much of the influence and the actual work within an organization is accomplished through an informal structure of friends, contacts, and accidental communications. Thus, increased attention to the development and processes of informal relationships may be advantageous for improving both individual and organizational effectiveness. For example, one critical research topic may be the examination of friendship opportunities using a multi-level approach. That is, future research should examine differences between work groups, job groups, and organizations with regard to friendship opportunities and work-related outcomes. One could postulate that some work groups or jobs may not allow much informal interaction or the opportunity to develop friendships. Similarly, some organizations may have cultures or climates that discourage or encourage friendships within the workplace. If distinct groups or organizations can be identified as critical sources of positive and/or negative perceptions of friendship opportunities, we could more clearly understand the relationship between workplace friendships and their effects on employees and organizations.

Evidence that friendship opportunities are related to positive organizational outcomes may also have implications for many organizational interventions. For example, Krackhardt and Stern (1988) proposed that friendship structures must be designed consciously by organizations to increase the effectiveness of the informal structure. The results of this study indicate that such a perspective may be useful. The study of job characteristics, in general, was intended to facilitate job redesign. However, the majority of the job redesign interventions include only the "core" job dimensions which address the content of jobs. Perhaps it would be advantageous to include the "forgotten" dimension of perceived feelings of friendship opportunities in redesign efforts. The inclusion of this dimension would broaden interventions by examining the environmental context in which the work is conducted.

It is also conceivable that strong friendships at work are particularly important where employees work long hours and have little opportunities to develop non-work friendships. Moreover, in stressful jobs, close friends at work can provide support, understanding, and advice which may be needed to cope with the work since they, too, may have experienced similar stresses and strains. Thus, strong friendships at work may increase employee retention, up to a point. Eventually, how-

ever, situational demands (e.g., long hours, low or unfair pay, lack of promotional opportunities, etc.; Price & Mueller, 1981, 1986) will likely "push" even close friends from the job. Conversely, just as positive relationships at work may increase retention, negative relationships may reduce it. Thus, severe interpersonal conflicts may also "push" employees from the organization. This predicted turnover depends, of course, on the availability of other viable alternatives (Hom & Griffeth, 1991; Steel & Griffeth, 1989). At the very least, negative relationships can create stress at work, which can cause other problems. Clearly, this is speculation at this point, with empirical research needed to test these ideas. In sum, managers should encourage the development of friendships at work, but realize it is not a panacea for poor work circumstances.

Although this study has advanced knowledge about the dimension of friendship opportunities within the work place, a few limitations of the present study should be noted. First, when interpreting the results of this study, one must recognize that the sample was limited to a single organization within the electric utility industry. In future research, it will be important to investigate multiple organizations within different industries to identify the friendship networks that develop and the relationship they have with work-related outcomes. Second, the present study was limited by constraints in interpretation due to monomethod bias. Namely, all of the variables studied in the theoretical model were obtained through surveys. However, this may not be as serious as once thought. A recent study by Crampton and Wagner (1994) examined "percept-percept" inflation using 42,934 correlations published in 581 articles. They concluded that their "findings challenge the validity of general condemnations of self-report methods, suggesting instead that domain-specific investigations are required to determine which areas of research are especially susceptible to percept-percept effects" (Crampton & Wagner, 1994, p. 67). Additionally, while many of the job characteristic studies have received criticism for the use of perceptual self-report measures for both job dimensions and work-related outcomes (Aldag, Barr, & Brief, 1981; Campion, 1988; Schwab & Cummings, 1976), it can be argued, particularly for the friendship dimension, that it is, in fact, the *perception* of friendship within the workplace that influences employee behavior and attitudes and not, for example actual interdependencies or role relationships (Burt, 1982). Future research could benefit, however, by the inclusion of hard criterion measures as well as the use of sociometric techniques, such as network analysis to analyze the friendship patterns that may exist within organizations. Third, this study was an initial test of a particular model. Future research should replicate these results and also begin to examine the factors that affect the friendship opportunities component.

In sum, the present study suggests that perceived friendship opportunities may be more closely associated with work-related outcomes than has been implied by previous research. For example, Price and Mueller (1981, 1986) suggest its direct impact was solely on job satisfaction. Yet, our results show that friendships directly impact both job satisfaction and job involvement. Thus, the effects of friendship opportunities appear to be more extensive than originally thought. Theoretically-based research on friendship, like this one, is needed to clarify the role of informal friendship relations within the job and work context and to more firmly establish how friendships are related to individual and organizational effectiveness.

REFERENCES

- Aldag, R.J., Barr, S.H., & Brief, A.P. (1981). Measurement of perceived task characteristics. *Psychological Bulletin*, *90*, 415-431.
- Anderson, J.C., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*, 411-423.
- Angle, H.L., & Perry, J.L. (1981). An empirical assessment of organizational commitment and organizational effectiveness. *Administrative Science Quarterly*, *26*, 1-14.
- Barney, J.B. (1985). Dimensions of informal social network structure: Toward a contingency theory of informal relations in organizations. *Social Networks*, *7*, 1-46.
- Bentler, P.M., & Bonett, D.G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, *107*, 238-246.
- Bollen, K.A. (1989). *Structural equations with latent variables*. New York: John Wiley & Sons.
- Burt, R.S. (1982). *Toward a structural theory of action: Network models of social structure, perception, and action*. New York: Academic Press.
- Campion, M.A. (1988). Interdisciplinary approaches to job design: A constructive replication with extensions. *Journal of Applied Psychology*, *73*, 467-481.
- Crampton, S., & Wagner, J. (1994). Percept-percept inflation in microorganizational research: An investigation of prevalence and effects. *Journal of Applied Psychology*, *79*, 67-76.
- Festinger, L.S., Schachter, S., & Back, K.W. (1950). *Social pressure in informal groups*. New York: Harper.
- Foote, N.N. (1985). Love. *Psychiatry*, *16*, 245-251.
- Fried, Y. (1991). Meta-analytic comparison of the job diagnostic survey and job characteristics inventory as correlates of work satisfaction and performance. *Journal of Applied Psychology*, *76*, 690-697.
- Greeley, A. (1971). *The friendship game*. New York: Image Books.
- Hackman, J.R., & Morris, C.E. (1975). Group tasks, group interaction process, and group performance effectiveness: A review and proposed integration. In L. Berkowitz (ed.), *Advances in Experimental Social Psychology*, Vol. IX. New York: Academic Press, 1975.
- Hackman, J.R., & Lawler, E.E., III. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology*, *55*, 259-286.
- Hackman, J.R., & Oldham, G.R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, *60*, 159-170.
- Hair, J.R., Jr., Anderson, R.E., Tatham, R.L., & Black, W.C. (1992). *Multivariate Data Analysis*. New York, NY: Macmillan Publishing Company.
- Hayduk, L.A. (1987). *Structural evaluation modeling with LISREL: Essentials and advances*. Baltimore, MD: The Johns Hopkins University Press.

- Hom, P.W., & Griffeth, R.W. (1991). Structural equations modeling test of a turnover theory: Cross sectional and longitudinal analyses. *Journal of Applied Psychology, 76*, 350-366.
- James, L.R., Mulaik, S.S., & Brett, J.M. (1982). *Causal Analysis*. Beverly Hills, CA: Sage.
- Jöreskog, K.G., & Sörbom, D. (1989). *LISREL VII: User's guide*. Mooresville, IN: Scientific Software.
- Kanungo, R.N. (1979). The concepts of alienation and involvement revisited. *Psychological Bulletin, 86*, 119-138.
- Krackhardt, D., & Porter, L.W. (1985). When friends leave: A structural analysis of the relationship between turnover and stayers' attitudes. *Administrative Science Quarterly, 30*, 242-261.
- Krackhardt, D., & Stern, R.N. (1988). Informal networks and organizational crises: An experimental simulation. *Social Psychology Quarterly, 51*, 123-140.
- Lawler, E.E., III, & Hall, D.T. (1970). Relationship of job characteristics to job involvement, satisfaction, and intrinsic motivation. *Journal of Applied Psychology, 54*, 305-312.
- Lodahl, T., & Kejner, M. (1965). The definition and measurement of job involvement. *Journal of Applied Psychology, 49*, 24-33.
- Marsh, H.W., Balla, J.R., & McDonald, R.P. (1988). Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin, 103*, 391-410.
- Mowday, R.T., Porter, L.W., & Steers, R.M. (1982). *Employee-organization linkages*. New York: Academic Press.
- Mowday, R.T., Steers, R.M., & Porter, L.W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14*, 224-247.
- Mulaik, S.A., James, L.R., Van Alstine, J., Bennett, N., Lind, S., & Stiwell, C.D. (1989). Evaluation of goodness-of-fit indices for structural equation models. *Psychological Bulletin, 105*, 430-445.
- Nunnally, Jum C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Podsakoff, P.M., Williams, L.J., & Todor, W.D. (1986). Effects of organizational formalization on alienation among professionals and nonprofessionals. *Academy of Management Journal, 29*, 820-831.
- Price, J.L., & Mueller, C.W. (1981). A causal model of turnover for nurses. *Academy of Management Journal, 24*, 543-565.
- Price, J.L., & Mueller, C.W. (1986). *Absenteeism and turnover of hospital employees*. Greenwich, CT: JAI Press.
- Reohr, J.R. (1991). *Friendship: An exploration of structure and processes*. New York: Garland Publishing, Inc.
- Schwab, D.P., & Cummings, L.L. (1976). A theoretical analysis of the impact of task scope on employee performance. *Academy of Management Review, 1*, 23-35.
- Shaw, M.E. (1981). *Group dynamics: The psychology of group behavior*. 3rd edition. New York: McGraw-Hill.
- Sims, H.P., Szilagyi, A.D., & Keller, R.T. (1976). The measurement of job characteristics. *Academy of Management Journal, 19*, 195-212.
- Steel, R.P., & Griffeth, R.W. (1989). The elusive relationship between estimates of perceived employment opportunity and ensuing turnover behavior: A methodological or conceptual artifact? *Journal of Applied Psychology, 74*, 846-854.
- Steel, R.P., & Ovalle, N.K. (1984). A review and meta-analysis of research on the relationship between behavioral intentions and employee turnover. *Journal of Applied Psychology, 69*, 673-686.
- Steers, R.M., & Mowday, R.T. (1981). Employee turnover and postdecision accommodation processes. In L.L. Cummings & B.M. Staw (Eds.), *Research in organizational behavior*, Vol. 3, pp. 235-282. Greenwich, CT: JAI Press.
- Stumpf, S.A., & Hartman, K. (1984). Individual exploration to organizational commitment or withdrawal. *Academy of Management Journal, 27*, 308-329.
- Tucker, L.R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38*, 1-10.
- Warr, P.B., Cook, J., & Wall, T.D. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology, 52*, 129-148.
- Widaman, K.F. (1985). Hierarchically nested covariance structure models for multitrait-multimethod data. *Applied Psychological Measurement, 9*, 1-26.