

PERCEIVED COWORKER SUPPORT AND TASK INTERDEPENDENCE IN LAW ENFORCEMENT: A TEST OF THE MEDIATING EFFECTS OF FELT RESPONSIBILITY

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ABSTRACT

A model hypothesizing relationships between work environment variables (perceived coworker support, task interdependence) and work outcome variables (job satisfaction, job performance, organizational citizenship behavior) through a mediator variable (felt responsibility) was tested. Data from 141 law enforcement officers supported the hypothesized relationships. Perceived coworker support and task interdependence positively influenced felt responsibility, which positively influenced the outcome variables. Importantly, this study extends previous research on the mediating effects of felt responsibility by recognizing that the perceived support of one's coworkers is necessary for the feeling of felt responsibility, even in a highly task interdependent work environment.

INTRODUCTION

Law enforcement is a unique profession. The public expects police officers to serve and protect the community by placing themselves between criminals and law-abiding citizens. Other than the military profession during combat operations, few professions bear a similar conjunction of relatively low pay and high risk. Ethnographic fieldwork in the police profession (van Maanen, 1975) and reality television programs such as "Cops" reveal that law enforcement is more than a mixture of monotonous paperwork and tedious traffic stops. The socialization of job attitudes in law enforcement takes time to develop, evolving through day-to-day interaction with one's peers. Even in relatively lawful locales, the law enforcement profession's most distinguishing trait is probably the interdependent nature of the tasks involved. Regardless how a police organization is structured—individual officers "working the beat," partners, or squads—members of the law enforcement profession must be able to rely on their fellow officers to come to their aid. The response to a call for backup in an emergency must be proficient and swift. Most professions require confidence in one's peers; but law enforcement may be unique in the extent to which it is essential to survival.

The purpose of this study was to test a model hypothesizing relationships between certain work environment variables and work outcome variables (see § 1). Police departments represented an ideal environment to explore the influence of perceived coworker support on felt responsibility in an interdependent work environment. While previous studies have established a relationship

between task interdependence and felt responsibility (Pearce & Gregersen, 1991), none has simultaneously examined the role of perceived coworker support on felt responsibility. The authors tested hypotheses derived from several work motivation theories using a structural equation model. Following a discussion of the theoretical basis of the model, we present the results of the study, and provide suggestions for future research.

BACKGROUND AND HYPOTHESES

Purely utilitarian views of human nature do not explain why some individuals in interdependent social situations--such as police departments--engage in cooperative behaviors that do not directly serve their own self-interest. Whenever interdependence exists in a social situation, there is always the risk of "defection" (as game theorists term the phenomenon), social loafing (George, 1995), shirking, or similar "propensities to withhold effort." (Kidwell Jr & Bennett, 1993). Nevertheless, as evidenced by the literature on prosocial behavior (Brief & Motowidlo, 1986), extra-role behavior (Pearce & Gregersen, 1991), and organizational citizenship behavior (Organ, 1988, 1990), in certain circumstances there exists a countervailing "propensity to provide extra effort." Under what circumstances will this propensity to provide extra effort exist? This paper attempts to answer this question in the context of the law enforcement profession.

Task interdependence is a job attribute that has demonstrated motivational effects in many studies (Kiggundu, 1981, 1983; Van der Vegt & Van De Vliert, 2005; Wageman, 1995). More specifically, studies have reported a positive relationship between task interdependence and extra-role or cooperative behavior (Anderson & Williams, 1996; Pearce & Gregersen, 1991; Wageman & Baker, 1997). Regardless of the type of task interdependence studied, one theoretical basis for task interdependence leading to cooperative behavior is that the interactive nature of the tasks contributes to experienced co-responsibility for each other's work outcomes (Kiggundu, 1983; Pearce & Gregersen, 1991). Further, the motivating effect of task interdependence relies on the view that an employee with a long-term time horizon will support other workers' efforts if they believe their coworkers will reciprocate (Anderson & Williams, 1996). This common human tendency has been incorporated into organizational behavior literature from sociology, namely from social exchange theory (Blau, 1964), and the norm of reciprocity (Gouldner, 1960).

Nevertheless, while the task interdependence construct measures the extent to which workers perceive that they are dependent upon each other, it does not measure the extent to which workers actually perceive or expect positive exchange outcomes. Consequently, while many studies have found a positive relationship between task interdependence and cooperative behavior, we posit that there is an interaction between task interdependence and the "expectation of reciprocation" generally unaccounted for in previous studies. Absent this expectation, task interdependence may not have the expected positive effect on cooperative behavior. In fact, if an individual expects that cooperative behaviors will not be reciprocated, task interdependence may lead to competitive behaviors (such as hoarding of resources), rather than cooperative behaviors. We propose that a perceived support variable can serve as a proxy for "expectation of reciprocation" in this context. Analogously, perceived organizational support correlates highly with leader-member exchange variables (Wayne, Shore, & Liden, 1997). Perceived coworker support should therefore reflect the positive affect (or lack thereof) that develops from repeated social interactions that do (or do not) result in reciprocated helping activity. Individuals that

perceive high support from their peers will feel a responsibility or obligation to reciprocate that support. Hence, we tested the following:

Hypothesis 1: *Perceived coworker support will be positively related to felt responsibility.*

Additionally, we tested the previously substantiated relationship between task interdependence and felt responsibility (Kiggundu, 1983; Pearce & Gregersen, 1991):

Hypothesis 2: *Task Interdependence will be positively related to felt responsibility.*

Support variables are antecedents to commitment, satisfaction, and performance variables in much of the academic literature (Bishop & Scott, 2000; Bishop, Scott, Burroughs, 2000; Wayne, Shore, & Liden, 1997). For example, Bishop, Scott, and Burroughs (2000) found that perceived organizational support positively relates to organizational commitment and that organizational commitment negatively relates to intentions to quit. Therefore, we expect perceived coworker support to enhance positive work outcomes such as job satisfaction, job performance, and extra-role behavior (such as organizational citizenship behavior). By extension, we expect perceived coworker support to diminish negative work outcomes such as intentions to quit. Subsequently, there should be a strong direct relationship between perceived coworker support and job satisfaction.

Hypothesis 3: *Perceived coworker support will be positively related to job satisfaction.*

For added theoretical support for this study, we turned to job characteristics theory, namely, the Job Characteristics Model (JCM) (Hackman & Oldham, 1975; Hackman & Oldham, 1976). Hackman and Oldham (1975, 1976) developed this widely tested theory of job design and motivation in which job characteristics, such as autonomy and skill variety, give rise to psychological states, such as feelings of responsibility for work, which in turn elicit personal work outcomes, such as satisfaction and motivation (see Figure 2 for a representation of the job characteristics model). Research has suggested that a sense of felt responsibility (Hackman & Oldham, 1976; Salancik, 1977) is fundamental to personal work outcomes such as internal motivation or general satisfaction. Therefore, we feel that felt responsibility should be positively related to job satisfaction.

Hypothesis 4: *Felt responsibility will be positively related to job satisfaction.*

Note that hypotheses 1, 3, and 4 taken together imply that the relationship between perceived coworker support and job satisfaction is partially mediated by felt responsibility. We reasoned that the positive relationship between perceived coworker support and job satisfaction could remain significant even when felt responsibility is low. For example, relatively new or lower level workers with little authority may not have a high degree of felt responsibility, yet may still feel highly supported and satisfied. On the other hand, experienced workers with higher authority would be expected to have increased job satisfaction from the sense of felt responsibility.

Interestingly, Pearce and Gregersen (1991) found that felt responsibility fully mediated the relationship between task interdependence and extra-role behaviors. With felt responsibility in the model, task interdependence no longer significantly affects extra-role behavior directly. Since we believe that perceived coworker support and task interdependence interact (covary) with each other in their influence on felt responsibility, we expect felt responsibility to fully mediate the relationship between perceived coworker support and extra-role behaviors.

Moreover, in-role and extra-role behaviors have been found to be highly correlated. In fact, Wayne, Shore, & Liden (1997) found that organizational citizenship behavior (extra-role behavior) was positively related to job performance ratings (in-role behavior). The influence of perceived coworker support and task interdependence on in-role and extra-role behavior through felt responsibility should therefore be similar. Finally, the job characteristics model itself supports the proposition that felt responsibility should have a positive relationship with in-role behavior (job performance) as it affects internal motivation. Based on the above analysis, we therefore submit:

Hypothesis 5: *Felt responsibility will be positively related to extra-role behavior (organizational citizenship behavior).*

Hypothesis 6: *Felt responsibility will be positively related to in-role behavior (job performance).*

METHOD

Participants

This study involved several police departments in the southwestern United States. A total of 141 police officers from three departments participated. Responses to items measuring perceived coworker support, task interdependence, job satisfaction, and felt responsibility were self-reports while responses to items measuring job performance and organizational citizenship behavior were supervisor reports. The self-report items are presented in Table 1, and the supervisor reported items are presented in Table 2.

Measurement

Items were measured using seven-point Likert scales, ranging from “strongly agree” to “strongly disagree” with the exception of the job satisfaction scale, with response options ranging from “extremely satisfied” to “extremely dissatisfied.” Existing scales provided most of the items; however, the authors slightly modified some scales to fit the context.

Perceived Coworker Support

Items measuring perceived coworker support were adapted from the perceived organizational support scale used by Wayne, Shore, and Liden, (1997), originally from Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Police officer respondents answered questions related to the caring and concern they perceive from their coworkers.

Task interdependence

Items measuring task interdependence were adapted from Pearce & Gregersen (1991) and Bishop, Daily, Scott, & Lara (2005). While some researchers have divided task interdependence into “initiated” and “received” components, for our purposes we combined these into “reciprocated” task interdependence, as developed by Pearce and Gregersen (1991), accepting their argument that initiated and received interdependence have too high a covariance to be viewed as independent constructs. Police officer respondents answered questions related to the extent their work is highly coordinated and dependent upon others.

Felt responsibility

Items reflecting felt responsibility came from Pearce & Gregersen (1991) and Bishop, Daily, Scott, & Lara (2005). Police officer respondents answered questions related to the extent to which they feel personally responsible for their work outcomes.

Job satisfaction

Items relating to job satisfaction were taken directly from Hackman & Oldham (1980) or slightly modified from that scale as from Bishop, Daily, Scott, & Lara (2005). Police officer respondents answered questions related to the extent they were satisfied with the opportunities, importance, challenges, and sense of accomplishment they receive from their job.

Job performance

Most of the items relating job performance came from Williams & Anderson (1991). Supervisor respondents answered questions related to the extent to which individual police officers met the expected requirements of the job.

Organizational citizenship behavior

Organizational citizenship behavior originated with Organ (1988). Items from Wayne, Shore, & Liden (1997) and Williams & Anderson (1991) measured the construct. Supervisor respondents answered questions related to the extent to which individual police officers engaged in extra-role behaviors not considered required aspects of their jobs.

RESULTS

Scale Verification

The measurement properties of the six scales described above are in Table 3. Maximum likelihood factor analysis using oblique rotation was used to confirm the structure of the data. Missing data were handled with pair-wise deletion. As expected, six factors emerged from the data, with adequate reliabilities as measured by Cronbach's alpha ranging from .79 - .94 (Nunnally & Bernstein, 1994), providing evidence of convergent and discriminant validity for the measures. Nevertheless, many of the factor loadings are lower than 0.7, suggesting that some of the items do not represent their corresponding constructs very well. Note that the square of the loading represents the explained variance, so that a factor loading of 0.7 explains approximately half of the variance of its corresponding construct. Despite this, the authors have chosen to leave the measurement scales intact, as the structural model demonstrates adequate fit with all of the items included.

Model Fit

Structural equation modeling using Lisrel 8.72 was conducted to test the relationships given in Figure 1. Figure 3 shows the completely standardized path coefficients and significance levels. All hypothesized paths were significant in the direction predicted. The authors reviewed many potential modifications, but chose leave the hypothesized model unmodified. Notably, allowing the errors of job performance and organizational citizenship behavior to correlate would have improved fit significantly, and this is probably theoretically justifiable, as a highly significant path from organizational citizenship behavior to job performance has been demonstrated in previous literature (Wayne, Shore & Liden, 1997). In addition, many within-construct items were similarly worded and highly correlated. See for instance, the wording of FR3 and FR4, and PERF2 and PERF3. Allowing these errors to correlate would be reasonable, and would improve fit. Ultimately, to ease interpretation of the results, the authors chose not to add these modifications.

The resulting goodness-of-fit statistics represent adequate to good fit of the model to the data (Hu & Bentler, 1999), as $\chi^2(772) = 1259.241$; Normed $\chi^2(772) = 1.63$; RMSEA = 0.0671

(90% confidence interval (0.0604, 0.0738)); CFI = 0.945, NNFI = .941. While the GFI was relatively low (GFI = .695), this statistic is negatively biased when degrees of freedom are large relative to sample size (Steiger, 1990). Steiger's (1990) suggested adjustment for this situation is GFI-hat. GFI-hat for our hypothesized model was 0.927, indicating adequate fit.

Using a method for computing power for structural equation models from MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996) we found our model was extremely high powered, approaching 1.00. In fact, to achieve a desirable power of 0.8 for our model would require a sample size of only 38 due to its very high degrees of freedom. A probable cause of the high power of this study is the high number of indicators used. Some of our constructs contained 9 or 10 items. Although larger scales tend to increase reliability (coefficient alpha), the resulting increased degrees of freedom and high power may provide a negative bias to some fit statistics.

Hypothesis Testing

Hypothesis 1 stated that perceived coworker support would be positively related to felt responsibility. The completely standardized path was positive and significant (0.264, $p < 0.05$) indicating support for Hypothesis 1. Hypothesis 2 posited that task interdependence would be positively related to felt responsibility. The path was positive and significant (0.431, $p < 0.001$) indicating support for Hypothesis 2. Hypothesis 3 stated that perceived coworker support would be positively related to job satisfaction. The path was positive and significant (0.598, $p < 0.001$).

Finally, Hypotheses 4, 5, and 6 posited that felt responsibility would be positively related to job satisfaction (0.254, $p < 0.001$), organizational citizenship behavior (0.367, $p < 0.001$), and job performance (0.464, $p < 0.001$) respectively. All of these hypotheses were supported.

Mediating effects

Mediating effects were calculated using techniques recommended by Baron and Kenney (1986). In general, full mediation is demonstrated if a direct path from one construct to another changes from significant to insignificant when an intervening mediator is added to the model. Partial mediation is demonstrated if the strength of the direct path is reduced but remains significant when a mediator is added to the model.

Partial mediation for the path from task interdependence to job satisfaction through felt responsibility was supported. The direct path t-statistic was significant ($t = 4.91$ ($p = 0.0000$)), and the mediated path t-statistic was reduced but still significant ($t = 3.31$ ($p = 0.0004$)). Full mediation for the relationship between task interdependence and job performance through felt responsibility was supported (direct path $t = 1.91$ ($p = 0.0282$); mediated path $t = -0.77$ ($p = .2207$)). Table 4 presents the results of the mediation tests. In general, the hypothesized mediating influence of felt responsibility was supported, although a couple of the path tests barely missed the level of significance (or insignificance) necessary to support the hypothesis of full mediation.

DISCUSSION AND CONCLUSION

This study's results confirm previous findings that task interdependence is associated with extra-role behavior only through the mediation of felt responsibility. It extends this finding by verifying that task interdependence is also associated with in-role behavior through the

mediation of felt responsibility. Additionally, perceived coworker support is associated with both in-role and extra-role behavior through the mediation of felt responsibility. It appears that work environments perceived to be simultaneously interdependent and supportive are likely to generate the psychological state of felt responsibility. This psychological state, in turn, positively influences satisfaction and performance.

This study is subject to many limitations. First, the reliability of some of the measures used was marginal. Ideally, all scale items would have factor loadings above 0.7. Further scale development is needed for task interdependence and felt responsibility in particular. Second, job performance and organizational citizenship behavior were highly correlated. It could be that our model is misspecified in that it does not include a path between them. Other studies have divided both task interdependence and felt responsibility into their foci. In other words, felt responsibility has been divided into felt responsibility for one's own work and felt responsibility for other's work. Task interdependence has been divided in some studies in a similar way. We may be confounding our constructs by using non-directional measures. In addition, our sample of police officers may not be generalizable to less interdependent work environments. Future research using different work settings could help to establish the generalizability of our model.

For future research, it appears that the Affect Theory of Social Exchange (Lawler, 2001) may provide a better theoretical framework for capturing the "expectation of reciprocation" we attempted to capture here with perceived coworker support. By directly measuring the emotions involved in repeated social exchanges on the job, future researchers may be able to create a better fitting model of work motivations. In addition, future researchers may wish to determine whether felt responsibility is distinguishable from conscientiousness. Conscientiousness, one of the so-called "Big 5" personality traits, has been shown to be highly related to positive work outcomes (Judge & Higgins, 1999), and appears to be very similar to felt responsibility.

Ultimately, the results of this study are very encouraging for researchers in job design, exchange theories, and work motivation. Although the fit statistics of our model were not extremely high, this may be due to oversized or weak scales rather than misspecification. Anderson & Williams (1996) suggested that a direct assessment of relationship quality might improve researchers' understanding of the relationship between interpersonal behaviors and helping behavior. This study was partially successful at modeling such a relationship. The results of the present study imply that the impact of task interdependence on work outcomes through felt responsibility is largely contingent upon positive emotional responses to repeatedly successful social exchanges in the workplace.

Paper edited due to length restrictions. Tables and figures are available by email from first author.

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