JOB CONTROL AND OCCUPATIONAL OUTCOMES AMONG PRISON WORKERS*

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Management studies have shown considerable theoretical development and empirical support for the proposition that giving workers an opportunity to influence decision making and to control operations results in desirable occupational outcomes. In contrast, the most widely recognized study of prison management, DiIulio's *Governing Prisons*, argues for a traditional management style that severely restricts prison employees' influence and control, and embodies a bureaucratic model of organization. This study tests whether, at an organizational level, job control influences prison workers' satisfaction and performance. Results from a study of 73 federal prisons support the model suggested by management studies over DiIulio's traditional model: Job autonomy and participation in decision making are associated with enhanced occupational outcomes including higher job satisfaction, stronger commitment to the institution, greater effectiveness in working with inmates, and less job-related stress.

Considerable attention has been given to workers' control over the substantive and procedural aspects of their jobs. It is commonly thought that more individual control is associated with a variety of desirable organizational outcomes including less alienation, greater productivity, enhanced job satisfaction, deeper commitment to the organization, and improved health. Popular management writers have made extraordinary claims for the benefit of job control. Kouzes and Posner (1995:186) suggest that "the more people believe that they can influence and control the organization, the greater

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organizational effectiveness and member satisfaction will be." According to Peters and Waterman (1982:14), a common characteristic of America's best-run corporations is that they provide their employees with sufficient autonomy and freedom to be entrepreneurial and innovative within their jobs.

The historical and theoretical roots of these claims are found in a variety of criticisms and reactions to traditional bureaucratic organizational forms. Traditional organizations are characterized as highly structured, with clear-cut roles and divisions of labor, well-defined levels of authority and channels of communication, and a high degree of control over the workers. Weber (1947) viewed bureaucracy as the most efficient form of organization but noted that bureaucratization placed extreme limitations on workers' freedom and spontaneity, and warned of its threat to individual freedoms and democracy (Mouzelis 1968:20-21). Marx (1964) similarly acknowledged the efficiency of capitalist organizations but discussed its significance in workers' lives; he suggested that the workers' loss of control over the means of production essentially entailed their loss of control over their occupational lives. Marx predicted that awareness of this condition would lead to alienation (Kohn 1976:111).

Not all early observers of organizational behavior regarded traditional bureaucratic organizational forms as a threat to the worker, as did Weber and Marx. Many early applied theorists, those concerned with productivity, viewed traditional structures as highly efficient and successful. Taylor (1923) argued that workers, in fact, would be happier without the responsibility of decision making and that productivity could be maximized through the proper design of monetary incentives.

Classical management theory forms the basis for traditional prison management. Most organizations—industrial, business, and governmental—incorporated elements of classical theory into their practices to varying degrees; a few, however—particularly the military, law enforcement, and prisons—assimilated traditional practices to their fullest extent (see Angell 1971). This approach was motivated by the belief that the mission of these organizations was so critical and so dangerous that control over workers and predictability were essential; little could be left to chance or to individual discretion.

To achieve a high degree of control and predictability, military, law enforcement, and prison organizations utilized rigid organizational structures characterized by a centralized hierarchy in which authority was distributed vertically along a monocratic structure of superior-subordinate relationships. Responsibilities were divided

among functional specialties, in which activities were standardized by formal policy and procedures (Angell 1971).

The broader field of organizational studies, however, has witnessed a persistent attack on classical management theory and advocation of greater job control among workers. In the 1920s the British Industrial Health Research Council demonstrated that workers' satisfaction, productivity, and quality could be increased by making the nature of work more meaningful to the individual (Wyatt & Langdon 1933). In the United States, the famous Hawthorne experiments revealed the weakness of classical theory in neglecting the motivational and group dynamics of human behavior in organizations (Roethlisberger & Dickson 1939). After World War II, employee involvement spread throughout western Europe and Japan through practices such as work councils and consultative committees. Research conducted during the 1950s by Kurt Lewin (1953) and his associates (Likert 1961) led many schools of management in the 1960s to advocate employee participation. The 1970s saw the emergence of the job redesign movement based on the research of Hackman and Lawler (1971), who found workers' autonomy to be related to productivity and satisfaction. In the 1980s and into the 1990s, workers' participation has been promoted through quality circles and total quality management (TQM) (Levine 1995:3-5).

In contrast to research on organizational behavior in general, the literature on prison management contains little criticism of classical management theory. In fact, one finds very little written about the effect of prison management on employees' performance and satisfaction. In her extensive review of research on correctional officers, Philliber (1987:29) concluded, "The views of 'administrators' loom large in the day-to-day frustrations of correctional officers, but the supervisors of correctional officers, both immediate and distant, have rarely been included in the systematic research in this area." Clear and Cole (1990:309), in their discussion of prison administration, stated, "Surprisingly little has been written about the management of prisons."

One study is distinctive in this regard for its attention to prison management. In the book, *Governing Prisons*, DiIulio (1987) reported on a study of Texas, California, and Michigan prisons. He concluded, "Poor prison conditions are produced by observable and, it appears, remediable defects in the way that prisons are organized and managed" (p.235). In contrast to the dominant trend in organizational studies, DiIulio claimed that the best prisons "are organized along bureaucratic, even paramilitary, lines and operated strictly 'by the book'. . . ." (p.237).

DiIulio's position was not ambiguous; he stated that by *bureaucratic* he meant exactly the organizational structure described by Weber. DiIulio addressed decision making among front-line personnel (correctional officers), arguing that they should have little discretion and that their behavior should be governed by a set of clearly defined operational rules. He explained, "Uniformed prison workers at all but the highest levels would be neither professionals nor craftsmen but bureaucrats in the same sense that soldiers are bureaucrats" (p.239).

DiIulio's assertions pose an intriguing conundrum in research and practice. His position seems to have three possible explanations. One is that prison management is a unique field; classical management practices that limit employees' job control elsewhere may not have the same effect on employees in this setting. Alternatively, as a qualitative researcher, DiIulio may have made the error in recording and interpreting qualitative observations which is called *distortion bias*: The failure to prevent his own values, beliefs, and opinions from influencing what he saw and how he interpreted those observations (Agnew and Pyke 1994:173-74). A third possibility is that less job control may have the same effects on prison employees as on individuals working in other sectors—lower job satisfaction and less commitment to the organization—but that these negative outcomes may be necessary to maintain strict organizational control. It becomes a trade-off to reduce acts of violence, exploitation, and disturbances and to increase predictability.

In this research we investigate further the relationship of job control to prison employees' satisfaction and commitment. Before proceeding with the details of this study, it will be helpful to examine the research on the relationship of job control to organizational outcomes n general, as well as the limited number of studies on this topic in regard to prisons.

JOB CONTROL AND ORGANIZATIONAL OUTCOMES

In organizational studies, the idea of job control by workers has been conceptualized and operationally defined in two ways: as autonomy and as participation in decision making. Each concept has been studied in relation to a variety of organizational outcomes with generally but not universally positive results.

A series of studies beginning in the 1950s consistently discovered an inverse relationship between workers' autonomy in performing their duties and the degree to which they were alienated. Walker and Guest (1952) found support for this relationship in their study of assembly line workers, as did Gouldner (1954) in his study of gypsum plant employees, and Blauner (1964) in his cross-

industry comparison of workers' alienation (as noted by Halaby and Weakliem 1989). In attempting to isolate the sources of alienation, one researcher (Kohn 1976) examined the effects of workers' control over their labor (ownership and hierarchical position) in comparison with their control over the work process (autonomy) and found that the latter had a more significant and more direct impact on workers' alienation. Kohn concluded that "opportunities to exercise initiative, thought and independent judgement" would be expected to reduce alienation (p.128).

According to a meta-analysis of 88 studies of perceived job control, autonomy correlated consistently with 19 employee outcome variables, as expected. Spector summarized his findings as follows:

> Employees who perceive comparatively high levels of control at work are more satisfied, committed, involved, and motivated. They perform better and hold greater expectancies. They experience fewer physical and emotional symptoms, less role ambiguity and conflict, are absent less, have fewer intentions of quitting, and are less likely to quit. (1986:1013)

The findings of one study of workers' autonomy are particularly significant in relation to research on prison workers (which we will review later). Ross and Reskin (1992) found that job autonomy was related to job satisfaction for all workers, but the effect was much stronger for better-educated workers.

Similar patterns are seen in the studies of the relationship between participation in decision making and employee outcomes. Earlier reviewers observed that participation could promote increased performance and greater satisfaction among employees (Cummings, Molloy, and Glen 1977; Lowin 1968). In a more recent meta-analysis, Spector (1986) found that participation was associated with greater job satisfaction, higher commitment and involvement, increased motivation and performance, fewer physical symptoms, less emotional distress and role stress, and fewer turnovers.

In recent years, Japanese management practices have been highly touted. What has been described as a "corporatist" organization contains an accumulation of structural and procedural elements that are intended to increase commitment, which appears in turn to enhance productivity. In an attempt to identify which of these elements contributes most to commitment, one study examined data from 8,000 workers employed in 100 Japanese and U.S. plants. Contrary to corporatist theory, high degrees of formal organizational structure were associated with decreased commitment. In contrast, and in keeping with theory, decentralized and

participatory decision making was associated with increased commitment (Lincoln and Kalleberg 1985).

Not all studies of participation and employee outcomes, however, have found a monolithic relationship (Cotton, et al. 1988; Lischeron and Wall 1975). The effects of participation on job satisfaction and performance appear to vary according to the form of participation, situational factors, and characteristics of employees.

PROFESSIONALISM AND JOB CONTROL AMONG PRISON EMPLOYEES

The professionalization of correctional officers is the one area in which researchers have considered the effects of job control of prison employees. In response to a variety of internal and external organizational threats during the 1970s and 1980s, officials throughout the criminal justice system sought to improve agencies through professionalization of front-line staff. By recruiting better-educated entry-level staff members, increasing training, and offering higher pay, agencies attempted to upgrade the level of professionalism within the organization, thereby reducing brutality, increasing compliance with due process provisions, and enhancing skills in managing offender populations. In corrections this move included an attempt to involve correctional officers in the treatment and reform of inmates.

Initial research supported the benefit of professionalization within corrections. Poole and Regoli (1980b:61) concluded that "commitment to a professional ideology lowers role conflict, work alienation, and anomie among correctional officers." They found that prison workers with a stronger professional identity were more likely to profess a human services orientation and to have more positive attitudes toward inmates (Poole and Regoli 1980a, 1980b).

In subsequent studies, Jurik and her colleagues (Jurik 1985; Jurik and Musheno 1986; Jurik and Winn 1987) discovered the relationship between professionalism and outcome to be more complex. Jurik and Musheno (1986:457) reported, "The failure to combine staff upgrading with more comprehensive organizational reforms merely heightened the frustrations within the workforce of the state's correctional institutions." Professionalization, by its very nature, requires management to demonstrate respect for staff members' education and training by according them sufficient autonomy to use their professional judgment in decision making. Such autonomy, however, runs counter to the limited discretion afforded by the traditional paramilitary structures of prison organizations. According to Jurik and Musheno (1986), frustrations arose

when more professional staff members were recruited into the prison service and then were not allowed to participate in decision making. Recruits who were attracted to the security-type work of prisons were more satisfied than new officers who were oriented toward human service. This observation appears to be consistent with the more general finding reported above, that the effect of job autonomy is stronger for better-educated workers.

A survey of state prison wardens found that prison executives were struggling with this issue. McShane and Williams (1993:52) report that wardens from their nationwide sample "believed in participatory management styles yet preferred to keep decisions and authority close at hand while keeping line officers removed from the policy process." Many wardens at a cognitive level endorsed shared decision making but reverted to more traditional styles in practice.

Jurik and Winn (1987) observed that the opportunity to influence institutional decision making was associated with turnover. Officers who believed they could influence policy, and who viewed their working conditions as more varied and as permitting greater autonomy, authority, and opportunities to learn, were less likely to terminate or be terminated in their prison employment.

Thus the literature on professionalism in corrections seems to imply that employees with greater control are more satisfied in their careers. As Jurik and Musheno (1986:477) claim, "Professionalization requires a management style that promotes far greater participation of line personnel in decision-making, particularly decisions related to the fundamentals of client relations and services." These studies, however, examined individual data which revealed that individual perceptions of job control are related to individual outcomes. What about organizational-level outcomes? DiIulio's qualitative observations and conclusions focus on the organization as an entity and on the aggregate benefits of bureaucratic controls.

One study set out explicitly to test DiIulio's model of prison management. Stohr et al. (1994) evaluated control-oriented management in relation to employees' development and participation styles in five podular jails. They found that employees at more developmental or participatory podular jails experienced greater job satisfaction, fewer psychosomatic stress symptoms, greater organizational identification, and less turnover. These findings are consistent with the literature about job control outside corrections and with the findings regarding professionalization within corrections; they, too, are limited, however. First, the research was conducted in jails, not in prisons, so there is a need to replicate the study in

prisons. Second, although this study was conducted at the organizational rather than the individual level, the small number of facilities confined the researchers to noninferential comparisons of rankings. Third, DiIulio (1987:237) claimed that a bureaucratic model was most needed in maximum-security facilities; this point suggests that studies of job autonomy and participation in decision making must control for security level.

In the present study we address the methodological concerns with previous studies raised here. We examine whether, at the organizational level, job control influences prison workers' satisfaction and performance. Our study, however, does not test the question raised above: whether reduced job control is necessary so that institutional control can prevent aggressive behavior and prison disturbances.

In this study we include a large number of facilities, conduct aggregate-level analyses, and control for security level. We test the following hypotheses: After controlling for physical and demographic characteristics of prisons, those institutions in which staff members (1) have greater job autonomy and (2) participate more fully in decision making will also display higher levels of commitment, greater job satisfaction, more efficacy in working with inmates, and less job-related stress.

METHODS

Design and Sample

We examine organizational-level effects rather than specific effects and outcomes for individuals. Accordingly we seek to distinguish prisons by their perceived work environments to learn whether management practices influence outcomes for employees.

The sample consists of 73 federal prisons. We selected these facilities because they are the institutions in which the Federal Bureau of Prisons (BOP) surveyed staff members in 1994. (The Bureau initiated the annual survey of staff at all its facilities in 1988.) This survey provides information on employees' perceptions about the workplace.

We collected data from a stratified proportional probability sample of staff members at all levels and in all job categories at

each federal facility (see Saylor 1983 for a description of the sampling technique).[1] In 1994 there were 25,625 federal prison employees; 9,228 individuals received questionnaires in August; 8,115 returned usable surveys for a response rate of 87.9 percent.

Table 1 compares characteristics of the sample with those of population of BOP employees. In general, only minor differences exist between the respondent group and the population. Females, blacks, supervisors, and custody staff are slightly underrepresented in the sample; Hispanics are overrepresented. The sample is slightly younger than the population and has marginally fewer years of service in the Bureau of Prisons.

Measurement

The instrument used in the annual survey of federal prison staff members is the Prison Social Climate Survey (Saylor 1983). The questionnaire contains four sections: work environment, personal well-being, personal safety and security, and quality of life. Five of the variables used in this study were taken from the work environment section, which consists of 57 multiple-response items. Psychometric tests and properties of this section of the inventory are described by Saylor and Wright (1992).[2]

The work environment section contains four scales that measure federal prison employees' occupational outcomes, involving these four dependent variables:

Institutional commitment: Measures satisfaction within a particular facility and commitment to it.

Job satisfaction: Evaluates satisfaction with job assignments. Questions explore gratification, interest, suitability, and likelihood of change.

Efficacy: Explores whether staff members feel effective in dealing with inmates. This scale examines influence, accomplishment, and ease in working with inmates.

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[1] We selected subjects for inclusion in the survey with a stratified proportional probability sampling technique that segmented the population according to the presence or absence of five characteristics: employment in UNICOR (federal prison industries), minority status, female gender, supervisory position, and custody position. We made a proportional random selection from each permutation of the variables in the sample design.

[2] We established the validity of scale items by a series of pretests in which staff members at several institutions were asked to evaluate items for ambiguity and appropriateness. We then performed item analyses. To confirm subscale properties, we undertook exploratory factor analyses. With few exceptions, the observed factor pattern fit the theoretical structure. Item-to-subscale correlations confirmed the factor structure.

Job-related stress: Evaluates the impact of the job in terms of the strain, anxiety, and tension that result from working in an institution.

Each scale used a Likert-type response pattern with seven response categories: three negative, three positive, and one neutral. Each response was assigned a numerical value from the most negative (0) to the most positive (6). By summing response values for a particular scale and dividing the total by the number of items in the scale, we obtained a scale value from 0 to 6. Subjects with scale totals of 4 or more were considered to have a positive opinion about a given variable. We obtained facility-level measures for these four variables by computing the percentage of staff members with positive responses to the questions contained in the scale.

The two independent variables were also taken from the work environment section of the Prison Social Climate Survey. We used the following individual items to measure job autonomy and participation in decision making:

Participation in decision making: "My supervisor engages me in the planning process, such as developing work methods and procedures for my job." (PDM)

Job autonomy: "I have a great deal of say over what has to be done on my job." (AUT)

We obtained facility-level indicators for these variables by computing the percentage of staff members with positive responses to each question.

Several physical and demographic characteristics of each facility in the sample were also included as control variables. We obtained these data from the automated executive information system of the Bureau of Prisons, the Key Indicators and Strategic Support System (Saylor 1988, 1994). We used data from September 1994; the 1994 Prison Social Climate Survey also was conducted in that month. The variables include percentage of black inmates (BLCK), percentage of Hispanic inmates (HISP), average length of sentence (SENT), percentage of undesignated inmates (UNDSGNT), percent female staff (FEM-ST), percent nonwhite staff (NONWHT-ST), percentage of inmates with a history of violence (VIOL), percentage of staff with five or more years at the institution (5+YEARS), ratio of inmate population to the facility's rated capacity (POP/CAP), and staff-to-inmate ratio (STF/INM).

The Federal Bureau of Prisons designates its facilities by five security levels: minimum, low, medium, high, and administrative. Although dummy variables or effects vectors could be introduced to control for a facility's security level, we chose to use measures that are a function of the security level and provide a more substantively

meaningful set of statistical controls. The percentage of unsentenced or transient (undesignated) inmates distinguishes the administrative facilities from the other types. Average sentence length and percentage of inmates with a history of violence differentiate the other four security levels.

FINDINGS

Univariate statistics for the dependent and independent variables are presented in Table 2. The four occupational outcome variables are expressed as the percentage of staff members at a particular facility who have positive attitudes toward their jobs. On average, about half of the staff at each facility in the sample report being committed to their institutions; about two-thirds report being satisfied with their jobs and effective in working with inmates. A small proportion report job-related stress in working in their institutions. Among the 73 facilities in the sample, however, we observed considerable variation, as indicated by the standard deviations and minimum and maximum values in the four variables. We obtained similar results for the two job control variables. Slightly more that half the staff, on average, indicated that they participate in decision making and have autonomy in doing their jobs. Even so, we note considerable variation across facilities. These findings are important in that they indicate that the facilities differ as to staff members' views of their occupational outcomes and job control. This variation allows us to test the hypotheses about the relationship between staff members' perceived influence on institutional operations, as indicated by participation in decision making and job autonomy, and by perceptions of occupational outcomes among employees at a particular facility.

Findings displayed in Table 3 indicate that the four dependent variables are related moderately, as would be expected. Except for commitment and efficacy and commitment and job-related stress, all relationships are significant.

The bivariate correlation coefficients presented in the last two rows of Table 3 are encouraging. Both participation in decision making and job autonomy are related significantly to all four occupational outcome variables. The two job control variables are related moderately; $r = .55$ (not shown in the table.) In addition, some of the institutional control variables are associated with the dependent variables. This finding empirically supports our theoretical reasons for believing that the response measures need to be adjusted for these influences.

To determine whether job control is related to occupational outcomes among the federal prisons in the sample, we first regressed

the four dependent variables on the 10 control variables (Model 1). We then added participation in decision making and job autonomy to the models to see what they contributed to the models' overall explanatory power (Model 2). The results of these analyses are presented in Tables 4-7.

Because our purpose is to compare Models 1 and 2 for each outcome measure, we present the adjusted R^2 to account for the fact that R^2 is a nondecreasing function of the number of explanatory variables in the model.

For institutional commitment (Table 4), the model using the institutional control variables alone provides an adequate fit; the R^2 is significant and explains a moderate proportion of the variance (adj. $R^2 = .464$). Four explanatory variables are significant: Institutional commitment is higher at facilities with fewer black inmates, where inmates are serving longer sentences, where fewer inmates have histories of violence, and where a greater percentage of the staff members have five or more years at the institution.

The addition of job autonomy and participation in decision making to the model significantly increases the amount of the variance explained, by about nine percentage points. The fit is still acceptable. The same four control variables remain significant, but participation in decision making is also significant.

In regard to job satisfaction (Table 5), the model containing the 10 institutional control variables is significant but explains only a small portion of the variance (adj. $R^2 = .151$). Three variables are significant: the proportion of black inmates and the staff/inmate ratio vary inversely with job satisfaction, while sentence length exerts a positive effect.

The model improves notably when participation in decision making and job autonomy are included. In the second model, the adjusted R^2 increases by 21 percent, and job autonomy is significant.

Four control variables are significant in the model that explains efficacy in working with inmates (Table 6). Higher proportions of Hispanic inmates and of female and nonwhite staff members are associated with more staff members' feeling of efficacy in working with inmates. As the staff/inmate ratio grows, efficacy declines.

Once again, the inclusion of the job control variables improves the model: The adjusted R^2 increases by 7 percent. Job autonomy is significant for efficacy.

With the final occupational outcome variable, job-related stress, we observed a pattern similar to that for job satisfaction (Table 7). Although significant, the institutional control variables

model explains only a modest amount of the variance, and the fit is not particularly good. Only two of the variables are significant at .10 or less. As would be expected, working with more dangerous inmates is associated with more staff members' job-related stress. The relationship between job-related stress and the percentage of staff with five or more years at the institution may indicate that more experienced staff members suffer burnout.

As with the previous three dependent variables, the model improves with the inclusion of job control variables, but by only six percentage points in this case. Job autonomy is significant again.

To summarize, all four sets of multivariate analyses support the hypothesis that job control contributes positively to prison employees' occupational outcomes. The inclusion of the job control variables improved the ability to explain the variation in the dependent variables beyond the contribution of the institutional control variables alone. Participation in decision making is related positively to institutional commitment; job control has a positive influence on job satisfaction and efficacy, and is related inversely to job-related stress.

CONCLUSIONS

In management studies, a rich literature including both theory and research links the control exercised by employees in performing their duties to a variety of desirable organizational outcomes. It has been argued that giving employees a voice in operations and decision making reduces alienation and results in heightened productivity, greater job satisfaction, deeper commitment to the organization, and enhanced physical health in the workforce. Research in a variety of organizations supports this claim.

McShane and Williams (1993) found that prison wardens, at a cognitive level, endorse the value of giving employees a voice in institutional operations. That research, however, also revealed that wardens are reluctant to relinquish control. Clearly, there are grounds for this executive position. Administration of prisons is serious business; mistakes can lead to personal injury, escapes, and loss of control of the institution to the inmates, all of which can result in human suffering and death. Mistakes also have serious political ramifications for public officials and can lead to the end of a prison warden's career.

Wardens found grounds for using traditional management styles, as documented in DiIulio's (1987) much-heralded study. On the basis of his observation of prisons in Texas, Michigan, and California, DiIulio concluded that prisons are best run by bureaucratic

methods whereby line staff members receive little discretion and are governed by a clearly articulated set of policies.

DiIulio's judgment, however, runs counter to the large body of literature developed in other organizations. This divergence raises a question: Is management of prisons different from management in all other organizations? Research on prison workers' professionalization suggests that DiIulio may have been incorrect in his conclusions. A study of podular jails supports this position.

Still unresolved are research questions about whether there is an organizational (aggregate) benefit in granting prison employees greater job control. The results of this study, however, which addressed many of those questions, support the position that greater participation in decision making and increased job autonomy enhance prison workers' occupational outcomes, leading to elevated commitment to the institution, higher job satisfaction, greater efficacy in working with inmates, and less job-related stress. These are exactly the same outcomes as found in other settings.

The combined evidence now weighs heavily against DiIulio's position. Still, other questions remain. Even if prison employees benefit from greater job control, prisons where staff members are allowed more discretion and more freedom in decision making may have more assaults, escapes, and riots. Other dependent variables must be examined in future research. Furthermore, evaluations of job control have now been conducted in podular jails and federal prisons, but the results obtained there may not necessarily generalize to state-operated facilities. This study must be replicated in those settings.

At a more fundamental level, we must establish whether the phenomenon at issue is an organizational (structural) or an individual causal process. The studies cited here were conducted at the individual level, whereas the present study was conducted with the institution as the unit of measure. The hypotheses about the influence of participatory management have been supported at both the individual and the organizational levels. Significant developments have occurred in the methods designed to help researchers dissect organizational properties into structural- and individual-level processes. These new methods expand the work of Hauser (1971), Alwin (1976), and Lincoln and Zeitz (1980), and provide the tools to test hypotheses about the nature of these organizational processes in the context of hierarchial linear models (Bryk & Ramdenbush 1992).

Table 1. A Comparison of the Sample and the Population of Federal Bureau of Prisons Employees

Demographic Variable	Survey Respondents	Population	Difference
Percent Female	24.7%	26.3%	-1.6%
Percent Black	15.5%	18.4%	-2.9%
Percent Hispanic	10.8%	9.3%	1.5%
Percent Supervisors	17.7%	18.9%	-1.2%
Median Age	35.0	35.4	-.4
Median Yrs of Service	4.8	4.9	-.4
Percent Custody Staff	33.9%	36.8%	-2.9%
N	8,115	25,625	

Table 2. Univariate Statistics, BOP Employees

Variable	*N*	Mean	SD	Min.	Max.
COMMITMENT	73	52.40	14.65	26.40	78.80
JOB SAT	73	67.12	6.11	55.00	84.90
EFFICACY	73	62.56	8.82	31.90	83.50
JOBSTRESS	73	14.89	5.35	2.10	28.60
BLCK	73	35.59	15.31	4.00	63.00
HISP	73	26.95	17.24	2.00	83.00
SENT	73	110.72	51.80	19.90	274.20
UNDSGNT	73	11.83	25.25	.00	98.10
FEM-ST	73	25.58	8.65	6.50	54.10
NONWHT-ST	73	30.60	20.15	3.80	74.00
VIOL	73	32.16	23.95	3.90	93.60
5+YEARS	73	32.55	19.38	.00	68.90
POP/CAP	73	1.52	.79	.82	7.50
STF/INM	73	.30	.13	.05	1.00
PDM	73	58.44	7.03	43.90	74.40
AUT	73	56.63	8.56	36.70	81.90

NOTE: BLCK=percent black inmates, HISP=percent Hispanic inmates, SENT-average length of sentence, UNDSGNT=percent undesignated inmates, FEM ST=percent female staff, NONWHT-ST=percent nonwhite staff, VIOL=percent inmates with a history of violence, 5+YEARS=percent staff with five or more years at the institution, POP/CAP=ratio of inmate population to the facility's rated capacity, STF/INM=staff-to-inmate ratio, PDM=percent staff with positive responses regarding participation in decision making, AUTON=percent staff with positive responses regarding job autonomy.

Table 3. Bivariate Relationships between Occupational Outcomes and Institutional Characteristics and Job Control Variables

Variable	Institution Commitment	Job Satisfaction	Efficacy	Job-Related Stress
COMMITMENT				
JOB SAT	.24*			
EFFICACY	.01	.36*		
JOBSTRESS	-.02	-.39*	-.51*	
BLCK	0.19	-.31*	-.26*	.25*
HISP	-.08	.12	.29*	-.17
SENT	.01	-.03	-.54*	.35*
UNDSGNT	-.10	-.14	.10	-.24*
FEM-ST	-.01	.15	.51*	-.30*
NONWHT-ST	-.32*	.00	.41*	-.24*
VIOL	-.03	-.15	-.62*	.42*
5+YEARS	.65*	-.03	-.19	.23*
POP/CAP	-.08	.18	.09	-.06
STF/INM	.21	-.27*	-.54*	.25
PDM	.31*	.35*	.45*	-.45*
AUT	.26*	.52*	.36*	-.36*

NOTE: BLCK=percent black inmates, HISP=percent Hispanic inmates, SENT=average length of sentence, UNDSGNT=percent undesignated inmates, FEM-ST=percent female staff, NONWHT-ST=percent nonwhite staff, VIOL=percent inmates with a history of violence, 5+YEARS=percent staff with five or more years at the institution, POP/CAP=ratio of inmate population to the facility's rated capacity, STF/INM=staff-to-inmate ratio, PDM=percent staff with positive responses regarding participation in decision making, AUTON=percent staff with positive responses regarding job autonomy.

Table 4. OLS Models of Occupational Outcomes

	Institutional Commitment		Job Satisfaction		Efficacy		Job-Related Stress	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
INTERCEPT	56.485*	-.912	71.068*	38.867*	49.797*	20.102#	10.055#	23.692*
BLCK	-.300*	-.273*	-.186*	-.154*	.126	.152*	.070	0.052
HISP	-.155	-.058	-.016	.004	.161*	.186*	.039	.041
SENT	.144*	.140*	.084*	.071*	.000	-.010	-.031	-.022
UNDSGNT	.075	.071	.0002	-.001	-.019	-.022	-.047	-.045
FEM_ST	-.085	.055	.104	.184#	.339*	.413*	-.049	-.084
NONWHT_ST	-.169*	-.186*	-.026	-.011	.085#	.095*	-.002	-.016
VIOL	-.321*	-.183	-.082	-.001	-.085	-.010	.115	.079
5+YEARS	.407*	.388*	-.009	-.022	.002	-.010	.058#	.065#
POP/CAP	-2.708	-2.211	-.313	-.085	.630	.849	.243#	.162
STF/INM	8.229	14.380	-15.550*	-10.743#	-18.046*	-13.832#	2.004	-.458
PDM		.749*		.183		.207		-.003
AUT		.018		.262*		.201#		-.190*
R^2	.539	.628	.269	.467	.567	.640	.279	.355
Adj. R^2	.464	.554	.151	.361	.497	.568	.162	.226
F	7.240*	8.444*	2.285*	4.387*	8.106*	8.904*	2.394*	2.748*

NOTE: BLCK=percent black inmates, HISP=percent Hispanic inmates, SENT=average length of sentence, UNDSGNT=percent undesignated inmates, FEM_ST=percent female staff, NONWHT_ST=percent nonwhite staff, VIOL=percent inmates with a history of violence, 5+YEARS=percent staff with five or more years at the institution, POP/CAP=ratio of inmate population to the facility's rated capacity, STF/INM=staff-to-inmate ratio, PDM=percent staff with positive responses regarding participation in decision making, AUTON=percent staff with positive responses regarding job autonomy.

*$p \leq .05$; # $p \leq .10$

Table 5. OLS Models of Job Satisfaction, BOP Employees

	Model 1			Model 2		
	Parameter Estimate	Standard Error	*T*	Parameter Estimate	Standard Error	*T*
INTERCEPT	71.068	6.789	10.50*	38.867	9.664	4.02*
BLCK	-.186	.070	-2.66*	-.154	.061	-2.53*
HISP	-.016	.060	-0.27	.004	.055	.09
SENT	.084	.032	2.67*	0.071	.028	2.56*
UNDSGNT	.002	.034	.07	-.001	.030	-.04
FEM_ST	.104	.111	.93	.184	.098	1.87#
NONWHT_ST	-.026	.040	-.66	-.011	.036	-.31
VIOL	-.082	.072	-1.15	-.001	.065	-.01
5+YEARS	-.009	.039	-.23	-.022	.034	-.65
POP/CAP	-.313	.975	-.32	-.085	.849	-.10
STF/INM	15.550	7.395	-2.10*	-10.743	6.498	-1.65#
PDM				.183	.117	1.57
AUT				.262	.087	3.00*
R^2	.269			.567		
Adj. R^2	.151			.497		
F	2.285*			4.387*		

NOTE: BLCK=percent black inmates, HISP=percent Hispanic inmates, SENT=average length of sentence, UNDSGNT=percent undesignated inmates, FEM_ST=percent female staff, NONWHT_ST=percent nonwhite staff, VIOL=percent inmates with a history of violence, 5+YEARS=percent staff with five or more years at the institution, POP/CAP=ratio of inmate population to the facility's rated capacity, STF/INM=staff-to-inmate ratio, PDM=percent staff with positive responses regarding participation in decision making, AUTON=percent staff with positive responses regarding job autonomy.

* $p \leq .05$; # $p \leq .10$

Table 6. OLS Models of Efficacy, BOP Employees

	Model 1			Model 2		
	Parameter Estimate	Standard Error	*T*	Parameter Estimate	Standard Error	*T*
INTERCEPT	49.797	7.520	6.62*	20.102	11.455	1.75#
BLCK	.126	.077	1.63	.152	.072	2.11*
HISP	.161	.067	2.40*	.186	.064	2.87*
SENT	.000	.035	.01	-.010	.033	-.31
UNDSGNT	-.019	.038	-.49	-.022	.035	-.63
FEM_ST	.339	.123	2.75*	.413	.116	3.55*
NONWHT_ST	.085	.044	1.92#	.095	.042	2.26*
VIOL	-.085	.800	-1.06	-.010	.077	-.13
5+YEARS	.002	.044	.05	-.010	.041	-.24
POP/CAP	.630	1.083	.58	.849	1.006	.84
STF/INM	-18.046	8.215	2.20*	-13.832	7.702	1.80#
PDM				.207	.139	1.49
AUT				.201	.103	1.94#
R^2	.567			.640		
Adj. R^2	.497			.568		
F	8.106*			8.904*		

NOTE: BLCK=percent black inmates, HISP=percent Hispanic inmates, SENT=average length of sentence, UNDSGNT=percent undesignated inmates, FEM_ST=percent female staff, NONWHT_ST=percent nonwhite staff, VIOL=percent inmates with a history of violence, 5+YEARS=percent staff with five or more years at the institution, POP/CAP=ratio of inmate population to the facility's rated capacity, STF/INM=staff-to-inmate ratio, PDM=percent staff with positive responses regarding participation in decision making, AUTON=percent staff with positive responses regarding job autonomy.

* $p \leq .05$; # $p \leq .10$

Table 7. OLS Models of Job-Related Stress, BOP Employees

	Model 1			Model 2		
	Parameter Estimate	Standard Error	*T*	Parameter Estimate	Standard Error	*T*
INTERCEPT	10.055	5.883	1.71#	23.692	9.303	2.55*
BLCK	.070	.061	1.16	.052	.059	.88
HISP	.039	.052	.75	.041	.053	.77
SENT	-.031	.027	-1.12	-.022	.027	-.81
UNDSGNT	-.047	.030	-1.57	-.045	.029	-1.56
FEM_ST	-.002	.035	-.06	-.016	.034	-.47
NONWHT_ST	-.002	.035	-.06	-.016	.034	-.47
VIOL	.115	.062	1.85#	.079	.063	1.27
5+YEARS	.058	.034	1.71#	.065	.033	1.96*
POP/CAP	.243	.848	.28	.162	.817	.20
STF/INM	2.004	6.427	.31	-.458	6.256	-.07
PDM				-.003	.112	-.03
AUT				-.190	.084	-2.26*
R^2	.279			.355		
Adj. R^2	.162			.226		
F	2.394*			2.748*		

NOTE: BLCK=percent black inmates, HISP=percent Hispanic inmates, SENT=average length of sentence, UNDSGNT=percent undesignated inmates, FEM_ST=percent female staff, NONWHT_ST=percent nonwhite staff, VIOL=percent inmates with a history of violence, 5+YEARS=percent staff with five or more years at the institution, POP/CAP=ratio of inmate population to the facility's rated capacity, STF/INM=staff-to-inmate ratio, PDM=percent staff with positive responses regarding participation in decision making, AUTON=percent staff with positive responses regarding job autonomy.

* $p \leq .05$; # $p \leq .10$

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