

Effects of work environment variables on Chinese prison staff organizational commitment

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Abstract

Staff are critical for the proper functioning of a prison; empirical research into the forces that affect salient organizational attitudes of staff, such as organizational commitment, is equally important. A survey instrument measuring affective commitment and personal (i.e. gender, tenure, age, and educational level), job (i.e. perceived dangerousness of the job, job variety, and supervision), and organizational variables (i.e. instrumental communication and input into decision-making) was completed by 322 employees in two prisons in southern China. The results of ordinary least squares regression showed that job and organizational variables of perceived dangerousness of the job, job variety, supervision, instrumental communication, and decentralization explained 54% of the variance in the dependent variable organizational commitment and were much stronger predictors than personal characteristics. Among the significant variables, decentralization had the largest sized effect, followed by perceived job dangerousness, job variety, and instrumental communication. Except for the organizational variable of perceived supervision quality, the job and organizational predictors of affective commitment for these Chinese prison staff appear to mirror those typically found for staff in US prisons.

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The attitudes and behaviors of prison staff are critical for the success (or failure) of a prison. Organizational commitment is a particularly important staff attitude. High levels of commitment among prison staff are typically associated with positive organizational outcomes, such as increased organizational citizenship and heightened job performance. On the other hand, low levels of commitment are often linked with negative outcomes for an organization, such as increased turnover intent/turnover, absenteeism, and staff burnout (Camp, 1994; Hogan, Lambert, & Griffin, 2013; Lambert, Edwards, Camp, & Saylor, 2005; Lambert & Hogan, 2009; Lambert, Hogan, & Griffin, 2008; Lincoln & Kalleberg, 1990; Stohr, Self, & Lovrich, 1992).

Organizational commitment refers to an employee's level of psychological attachment to the employing organization (Allen & Meyer, 1990), his or her psychological identification with the organization, acceptance of the organization's values and goals, intention to remain a member of the organization, and willingness to put forth effort to help the organization be successful (Mowday, Porter, & Steers, 1982). Meyer and Allen (1991) distinguished three forms of organizational commitment—*affective*, *continuance*, and *normative*—each form corresponding with a particular psychological state of mind. *Affective* commitment refers to an employee's "emotional attachment to, identification with, and involvement in the organization" (Meyer & Allen, 1991, p. 67). *Continuance* commitment refers to the investments an employee makes in the organization, such as pension plans and non-transferable job skills, which results in continued organizational membership because the employee perceives the price of leaving the organization as too high (Allen & Meyer, 1990; Jaros, Jermier, Koehler, & Sincich, 1993). *Normative* commitment, also known as *moral commitment*, refers to an employee's beliefs and values formed prior to and after joining the organization (Allen & Meyer, 1990), or as Wiener (1982) stated, "the totality of internalized normative pressures to act in a way which meets organizational goals and interests" (p. 421). Allen and Meyer (1990) distinguished the psychological states associated with the three forms of organizational commitment stating, "employees with strong affective commitment remain because they *want* to, those with strong continuance commitment because the *need* to, and those with strong normative commitment because they feel that they *ought* to stay" (p. 3).

The current study focused on the affective form of organizational commitment for several reasons. First, as Mercurio (2015) contends, affective commitment goes to the core essence of organizational commitment. Second, according to Allen and Meyer (1990),

the most prevalent approach to organizational commitment in the literature is one in which commitment is considered an affective or emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in the organization (p. 2).

Third, affective commitment is the most common form of organizational commitment studied, including among correctional staff (Lambert, Hogan, & Jiang, 2008; Mathieu & Zajac, 1990; Mercurio, 2015; Meyer et al., 2012). Fourth, compared to continuance and normative commitment, affective commitment typically shows stronger associations with salient work outcomes such as lower absenteeism, reduced turnover/turnover intent, higher engagement in organizational citizenship behavior (i.e. going above what is expected), and better work performance (Mercurio, 2015; Solinger, van Olffen, & Roe, 2008). For example, Lambert, Kelley, and Hogan (2013a, 2013b) observed that for US prison staff, job burnout had no association with normative commitment, a positive association with continuance commitment, and a negative association with affective commitment. Unless otherwise noted, henceforth, the term commitment refers to affective organizational commitment.

The importance of commitment has led to a growing number of studies that have explored its predictors for staff in Western prisons. Past research on several public and private prisons, mainly in the US, has examined the relationship between commitment and personal characteristics (e.g. age, gender, and tenure), job characteristics (e.g. job variety, quality of supervision, perceived dangerousness of the job), and organizational characteristics (e.g. input into decision-making, instrumental communication, organizational support) (Garland, McCarty, & Zhao, 2009; Griffin, Armstrong, & Hepburn, 2005; Griffin & Hepburn, 2005; Lambert & Hogan, 2009; Lambert & Paoline, 2008; Lambert, Paoline, & Hogan, 2006; Rogers, 1991). These studies have provided important information regarding the antecedents and effects of commitment for Western prison staff.

While considerable research exists on commitment for staff in Western prisons, especially in the US, there has been a paucity of research regarding the antecedents and effects of commitment for prison staff in non-Western nations in general, and China in particular (Wong, Ngo, & Wong, 2002). Comparative criminologists have clearly demonstrated the important influence of cultural variations (Jiang, Lambert, & Jenkins, 2010; Liu 2009, 2016). Existing research on commitment in Chinese business organizations suggests that the predictors of commitment may be different for Chinese workers compared to workers in Western countries (Gamble & Huang, 2008). For example, Chinese workers tend to view themselves from a collective perspective—as organizational members—and tend to hold traditional values such as respect for hierarchy, loyalty, duty, and reciprocity (i.e. *pao*), and an emphasis on interpersonal relationships (i.e. 关系, *guanxi*) and reputation (i.e. 面子, *mianzi* or face). These differences in values may relate to differences in the predictors of commitment for Chinese prison staff compared to those for staff in Western prisons. On the other hand, prison staff in both China and the West must deal with inmates being held against their will. The major goal for most prisons, whether in the West or in China, is to operate a secure, humane, and safe facility. As such, regardless of cultural values, the predictors of commitment for Chinese prison staff may be similar to those typically found for staff in Western prisons.

The current study was undertaken to examine (1) the predictors of commitment for Chinese prison staff and (2) how these predictors compare to those typically found for staff in Western prisons. In other words, the main goals of this study were to determine the degree to which the predictors of prison staff commitment from the well-established

Western research apply to staff in Chinese prisons. To accomplish this goal, the current study investigated the relationships of several personal, job, and organizational characteristics with commitment for staff in two Chinese prisons and compared the findings with those typically found for staff in Western, particularly US, prisons.

Literature review

Predictors of prison staff commitment

Based on past studies mainly involving Western prison staff, particularly those in the US, the predictors of commitment can be placed into three general categories—personal characteristics, job characteristics, and organizational characteristics (Lambert, 2004; Lambert & Paoline, 2008). Personal characteristics are factors that are individual to a particular person, such as age, educational level, gender, and tenure in current position. Past studies have typically found these and other personal characteristics to be either weak or insignificant predictors of commitment for US prison staff—particularly when job and/or organizational characteristic variables are included in the analysis (Lambert, 2004; Lambert & Hogan, 2009; Lambert et al., 2008; Lambert & Paoline, 2008; Rogers, 1991; Stohr, Lovrich, Monke, & Zupan, 1994). Similarly, prior studies among staff in Chinese community corrections agencies typically show that personal characteristics fail to predict employee attitudes toward the police, capital punishment, crime control, law and legal system, community corrections, commitment, and job satisfaction (Jiang, 2015; Jiang, Lambert, Xiang, Jin, Shi, & Zhang, forthcoming; Jiang, Lambert, Zhang, Jin, Shi, & Xiang, 2016).

Job characteristics relate to a particular job or position (Lambert & Paoline, 2008). Job characteristics tend to be limited in scope within an organization and may affect some positions or areas more than others. Perceptions of job danger, job variety, and supervision quality are three commonly used job characteristics in the literature.

Perceived job danger refers to employees' perceptions of the risk of injury, death and others forms of victimization while at work (Cullen, Link, Wolfe, & Frank, 1985). Among US prison staff, those who feel in danger at work tend to be less committed (Lambert & Hogan, 2010; Lambert et al., 2013a).

Job variety refers to the degree of variation of job duties (Lambert, 2004). For US prison staff, job variety is generally positively associated with commitment (Lambert & Hogan, 2010). No research on the relationship between job variety and commitment for Chinese prison staff could be located.

Supervision quality refers to an employee's perception of the quality of supervision (e.g. guidance, direction, support) provided by the organization (Lambert, 2004). Quality supervision can provide employees a positive experience that can strengthen their affective bonds with the organization, an outcome typically found in research with US correctional staff (Lambert, 2004). Compared to the West, *guanxi* (interpersonal relationship) appears to be more important in Chinese culture in general and in organizational culture in particular. Employees' trust in their leaders has been found to play an important role in strengthening commitment in existing research in Chinese business organizations (Gamble & Huang, 2008).

Organizational characteristics refer to how an organization arranges, manages, and operates (Lambert, 2004; Oldham & Hackman, 1981). Input into decision-making and instrumental communication are two important organizational characteristics. Input into decision-making refers to the degree to which employees have control and input over the tasks and order of their jobs. Allowing employees a degree of input regarding their jobs sends them a message that they are competent, valued, and trusted. Again, no empirical research on the relationship between input into decision-making and commitment among Chinese prison staff has been found. In the US, most studies report that input into decision-making is associated with higher levels of commitment among prison staff (Lambert & Hogan, 2010; Lambert et al., 2006; Stohr et al., 1994).

Instrumental communication refers to the “degree to which information about the job is formally transmitted by an organization to its members” (Agho, Mueller, & Price, 1993, p. 1009). Employees want and need to know what is expected of them (Berkman & Neider, 1987). Effective downward communication helps employees to be clear about their job duties, the rationale for these duties, the procedures for carrying out these duties, and how their job performance will be measured. Instrumental communication increases the likelihood that an organization will have more satisfied and committed workers (Lambert, Hogan, Barton, & Clarke, 2002; Price & Mueller, 1986). Instrumental communication has been found to have a positive effect on commitment for prison staff in the US (Lambert et al., 2002; Lambert & Paoline, 2008).

The current study hypothesized that personal characteristics would not be significant predictors of commitment for Chinese prison staff, but job characteristics and organizational characteristics would. Specifically, as perceived, job danger typically makes employees feel less comfortable on the job; this variable was hypothesized to be negatively associated with commitment for Chinese prison staff. This study also hypothesized that the positive relationship between job variety and organizational commitment that is typically found for US prison staff would also exist for their Chinese counterparts. As previously found, quality of supervision was predicted to show a significant positive relationship with commitment for Chinese prison staff. Finally, two organizational characteristics—input into decision-making and instrumental communication—were expected to be positively related to affective commitment for Chinese prison staff.

Prisons in China

In order to place the current study in context, a brief overview of Chinese prisons is needed. Chinese prisons are closed institutions. Until recently, they did not allow outsiders, including both Chinese and foreign scholars, access to them. As in the US, China has both prisons and jails. Chinese jails hold individuals who are awaiting trial, transfer to prison, or have been sentenced to less than one year. Jails (i.e. detention centers) in China are overseen by the Ministry of Public Safety (Hill, 2006; Shao, 2011). Prisons in China hold offenders who have committed serious crimes and have received sentences longer than one year (Wu, 2003). Chinese prisons are under control of the Bureau of Prison Administration in the Ministry of Justice.

Shao (2014) indicated that there are 680 prisons in China, including 35 female prisons and 31 juvenile prisons (i.e. reformatories), holding approximately 1.7 million inmates, including about 90,000 females and 10,000 juveniles. These prisons are operated either by the central

government or the local government. Chinese prisons, except those holding female or juvenile inmates, are typically classified based on length of sentence. Levels of restriction for prisoners are also associated with their sentence lengths (Hill, 2006; Wu, 2003).

China has approximately 300,000 prison staff. China's inmate to staff ratio of 5.7 to 1 is slightly higher than that found in the US (5.1 to 1), England (4 to 1), Japan (3.3 to 1) and Germany (3 to 1) (Hu et al., 2015). While Western prison staff are typically classified based on their positions (e.g. custody, educational, vocational, treatment, support, management/administrative), Chinese prisons do not have such clear division of labor. The job duties of Chinese prison are typically decided and assigned at an individual level rather than by a general position (Hill, 2006; Wu, 2003). Chinese prison staff, therefore, often play multiple roles such as rule enforcers, educators, and factory managers (i.e. overseeing inmate labor) (Jin, 1997). As Hill (2006) noted, "...in China, there is no distinction between custodial staff and other prison staff" (p. 24). Furthermore, all Chinese prison staff are uniformed police officers. As all police officers are part of the Chinese civil service system, so too are all Chinese prison staff. To become a prison staff member, one must first pass a civil service exam and a background check.

Relative to many other occupations in China, prison staff have greater job security. While their pay is higher than some non-governmental occupations, the pay is lower than many other civil servant occupations (Hu et al., 2015; Wang & Kong, 2006). In addition to making less money in general, Chinese prison staff have a more challenging and dangerous work environment than staff in most other occupations. Similar to staff in Western prisons, these staff deal with inmates who, compared to the general population, have lower educational levels, higher rates of mental health and substance abuse problems, and are more likely to be antisocial. Some inmates can be hostile and even violent towards prison staff. According to Sun (2015), over the past decade, 129 Chinese prison staff died and 1160 staff were injured due to prison violence.

Historically, Chinese prisons have been placed far away from highly populated areas. Since 1978, when a new era of economic reforms began, China has gradually built some prisons nearer to cities. Despite this change, most Chinese prisons are still located far from cities, often in desolate areas where inmates, staff, and staff's families are isolated. On the plus side, this isolation likely increases communication and interaction between prison administrators and line staff. On the minus side, because these staff live in such close proximity to inmates' dormitories, they must be ready for any prison emergency that arises at any time during and after their scheduled shifts. Chinese prison staff work approximately 12 hours per day compared to most other Chinese civil servants, who typically work about 8 hours (Hu et al., 2015; Wang & Kong, 2006; Xing, 2014).

What is not known at present is how the personal, job, and organizational characteristics are associated with commitment among Chinese prison staff. The current study was undertaken to help answer this question.

Method

Participants

In 2015, staff at two prisons in southern China were surveyed to measure their perceptions of different aspects of the workplace and their level of commitment. One prison

housed approximately 1500 male inmates and employed 280 staff. The other prison housed about 700 female inmates and employed 160 staff.

Both prisons had similar organizational structure, including seven offices, one service center, and multiple districts. The seven offices are administration, prison management, parole and discipline, budget and accounting, personnel, audit, and labor and production. Each office has its own unique functions, although they are expected to work together. A district is a subunit of the prison that consists of a certain number of inmates. All districts have the same organizational structure and functions. Within each prison, inmates are classified into different levels of supervision, including highly intensive or maximum, intensive, medium, and minimum. The nature of offenses, length of sentence, and performance within the prison are the primary criteria for inmate classification.

In order to compare findings from this current study with those found in the US, this study adopted a US survey instrument as its first questionnaire draft. The survey was translated from English to Chinese and retranslated back into English by bilingual scholars who earned doctoral degrees in the US. The questionnaire was then extensively discussed and pretested with the prison human resource department officer and prison staff. These discussions and pretests were used to discover whether there were any issues concerning interpretation of questionnaire items and to obtain comments about the survey, including meaning, context, and wording. The final version of the questionnaire was administered to all available staff in the prisons, except for top administrators.

For both prisons, the staff who worked in different sections of the prison were considered teams. Teams held daily and weekly meetings. Surveys were conducted during the team meetings. Then, all survey participants were informed of the purpose of the study. They were also told that (1) the survey participation was voluntary, (2) all responses would be anonymous, and (3) the data would be used for decision-making but the individual level data would be kept confidential. The demographic characteristics of the all the staff respondents from both prisons are presented in the first part of Table 1.

For the first prison, which employed 280 staff, 205 completed surveys were returned, a response rate of approximately 73%. For this prison, about 67% of respondents were men and 33% had a bachelor's degree or higher. The typical respondent had worked in his or her current position for 6.5 years and was 45 years old. In terms of rank, 7% were a staff member (i.e. similar to a new/probationary person in a US prison), 47% were a senior staff member (i.e. similar to a non-probationary person in a US prison), and 42% were a principal staff member (i.e. similar to a senior person in a US prison), and the remaining 4% held supervisory or other ranks.

For the second prison, which employed 160 staff, 117 completed surveys were returned, a response rate of approximately 73%. For this prison, 10% of respondents were men and 43% had a bachelor's degree or higher. The typical respondent had worked in his or her current position for 6.6 years and was 45 years old. In terms of rank, 13% were a staff member, 44% were a senior staff, and 41% were a principal staff member, and the remaining 3% held supervisory or other ranks.

The survey instrument used in this study was completed by 322 staff in two prisons. For the combined data set, the overall response rate was 73%, about

Table 1. Univariate statistics for study variables (N = 322).

Variable	Description	Mean	Standard deviation
Personal characteristics			
Prison	64% From prison 1 (coded 1) and 26% From prison 2 (coded 0)	0.64	0.48
Gender	46% Male (coded 1) and 54% female (coded 0)	0.46	0.50
Tenure	Tenure in years at current position	6.55	5.38
Age	Age in continuous years	43.94	6.82
Educational level	63% Less than Bachelor degree (coded 0) and 37% Bachelor degree or higher (coded 1)	0.37	.48
Job characteristics			
Dangerousness of job	Three-item additive index $\alpha = .93$	11.73	4.04
Job variety	Three-item additive index, $\alpha = .85$	11.84	3.17
Quality supervision	Five-item additive index, $\alpha = .81$	18.68	4.24
Org characteristics			
Instr communication	Four-item additive index, $\alpha = .88$	15.82	3.27
Input into DM	Three-item additive index, $\alpha = .93$	9.97	3.58
Dependent variable			
Affective commitment	Five-item additive index, $\alpha = .85$	18.13	5.07

Note: The above statistics are for the total group of participants from both prisons and are not broken down for the two prisons.
Instr: instrumental; DM: decision-making; α : Cronbach's alpha value.

46% were men, and 37% had a bachelor's degree or higher. The typical respondent had worked 6.5 years in his or her current position and was 44 years old. In terms of these personal characteristics, the only significant difference between the respondents of the first and second prisons was gender (Chi-square = 103.58, $p \leq .01$). As such, a dichotomous variable representing the prison where the participant worked was included to control for any differences between the two prisons in the multivariate analysis. The first prison employed more staff than the second, but the response rates were similar; 64% of those who responded were from the first prison, and 34% were from the second prison. The participants appeared to be representative to the overall staff population of the two prisons based on personal characteristics. Finally, the high number of female participants was partially the result that one prison housed female adult inmates, and, as such, that prison employed a higher percentage of women. In addition, Chinese prisons tend to employ a greater percentage of female staff than US prisons.

Variables

Dependent variable

The dependent variable in the current study was the affective form of organizational commitment and was measured by five items from Mowday et al. (1982). The items and their response options are presented in Appendix 1. The items had a Cronbach's alpha of .85. Exploratory factor analysis was conducted, and the commitment items loaded on a single factor. The responses to the five items were summed together to form an additive index measuring commitment.

Independent variables

The personal characteristics studied were prison, gender, tenure, age, and educational level. For how these variables were coded, see Table 1. The job characteristic variables studied consisted of summed indexes for perceived dangerousness of the job, job variety, and perceptions of supervision quality. Three items from Cullen et al. (1985) were used to measure perceived dangerousness of the job. Three items adapted from Curry, Wakefield, Price, and Mueller (1986) were used to measure perceived job variety. The variable perceptions of supervision quality were measured by five items that were based on items from Teas (1981). The Cronbach alpha values for the dangerousness, variety, and supervision indexes were .93, .85, and .81, respectively. The two organizational characteristics consisted of summed indexes for instrumental communication and input into decision-making. The items for these two latent variables are also presented in Appendix 1. The four items measuring instrumental communication were adapted from Curry et al. (1986). Input was measured by three items adapted from Curry et al. (1986). The Cronbach alpha values for the communication and input indexes were .88 and .93, respectively. The items and response options for the job and organizational indexes are presented in Appendix 1. Finally, the items for the job and organizational variables were entered into exploratory factor analysis, and the items loaded on the expected factors, indicating unidimensionality of the index measures.

Analytic plan

The analysis begins with a presentation of the univariate descriptive statistics. Next, four multivariate regression models are presented. Model 1 examined the effects of personal characteristic variables in an effort to assess how much variance of commitment they explain as a group. Model 2 investigated the effects of the job characteristic variables on commitment so as to determine how much variance they account for in Chinese prison staff commitment. Model 3 analyzed the effects of the organizational variables on commitment so as to determine how much variance they account for of the commitment variable. Model 4 included all the independent variables to determine the effects on commitment when the shared effects of personal, job, and organizational characteristics are taken into account.

Results

The univariate statistics for the variables are reported in Table 1. The mean and median values for the non-dichotomous variables were very close to one another, suggesting that they were normally distributed. Normality was also indicated by the skewness and kurtosis statistics, which were in the acceptable range. For the index variables, the Cronbach alpha values, a measure of internal reliability, were .81 or higher, which is viewed as good.

Four models in Table 2 were estimated using Ordinary Least Squares regression with commitment as the dependent variable. Multicollinearity and other regression-related issues were checked for the four models in Table 2. Multicollinearity did not appear to be a problem in any of the regression equations. The variance inflation factor (VIF) scores ranged from 1.01 to 1.72 across the four models. In addition, the issues of outliers, influential cases, normality, linearity and homoscedasticity of residuals, and independence of errors in the regression models were tested (Tabachnick & Fidell, 2013).

For Model 1, the R-squared value was .04, which means that the personal characteristic variables accounted for only 4% of the observed variance in the commitment variable. Among the personal characteristics, age was the only variable to have a statistically significant effect, with older staff reporting higher commitment. In Model 2, the job characteristic variables accounted for approximately 35% of the variance of the dependent variable. Perceived dangerousness of the job had a significant negative effect, and job variety and perceptions of quality supervision each had a significant positive effect on commitment. In Model 3, the two organizational characteristics explained about 46% of the variance in the dependent variable. Both instrumental communication and input had significant positive effects on commitment. Finally, the entire group of independent variables explained about 55% of the observed variance in the dependent variable in Model 4. None of the personal characteristics in this model had a significant effect. Perceived dangerousness continued to have a significant negative effect on commitment, which means that increases of feeling at risk at work were associated with lower commitment. Job variety continued to have a significant positive effect, which means that higher perceptions of variety of the job were related to greater commitment. In the full model (i.e. Model 4), however, perceptions of supervision quality had a non-significant effect, which means that while controlling for the effects of the other

Table 2. Ordinary least squares regression results with commitment as the dependent variable.

Predictor variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Personal characteristics												
Prison	-.47	.72	-.04							.50	.53	.05
Gender	-1.18	.69	-.12							-.74	.49	-.07
Tenure	.02	.06	.02							.02	.04	.03
Age	.11	.05	.14*							.03	.03	.04
Educational level	.10	.62	.01							.36	.43	.04
Job characteristics												
Dangerousness				-.43	.06	-.35**				-.25	.05	-.20**
Job variety				.59	.08	.36**				.27	.07	.16**
Supervision				.20	.06	.17**				.01	.05	.01
Org characteristics												
Instr communication							.18	.07	.12**	.22	.07	.14**
Input into DM							.90	.06	.64**	.72	.07	.50**
F Value	2.41*			56.11**			136.40**			39.93**		
df	5,316			3,310			2,316			10,303		
R-Squared	.04			.35			.46			.55		
Adjusted R-Squared	.02			.35			.46			.53		

Note: In Model 1, only the personal characteristic variables were included as independent variables. In Model 2, only the perceptions of job characteristic variables were included as independent variables. In Model 3, only the perceptions of organizational characteristic variables were included as independent variables. In Model 4, personal characteristics, job characteristics, and organizational characteristics variables were included as independent variables of commitment. The number of participants was 322.

B: unstandardized regression coefficient; SE B: standard error of the regression slope (B); β: standardized regression coefficient; Dangerousness: perceived dangerousness of the job; Supervision: perceptions of quality supervision; Instr Communication: instrumental communication; DM: decision-making; df: degrees of freedom.

*p ≤ .05; **p ≤ .01

independent variables, the supervision variable had little effect on commitment. Both instrumental communication and input continued to have a significant positive effect on commitment, even when personal and job characteristics were added to the regression analysis. In other words, increases in these two organizational characteristics tended to result in raised commitment to the organization. Based on the standardized regression coefficients (i.e. the β column in Table 2), the magnitude of the effects of the independent variables can be ranked. Among the significant variables of Model 4, input into decision-making had the largest sized effect, more than twice that of the other variables, followed by perceived dangerousness of the job, job variety, and then instrumental communication.

While not reported in Table 2, a fifth regression model was estimated using only the job characteristics and organizational characteristic variables. The R-Squared for this model was .54. When comparing the R-Squared valued of .54 to the R-squared value of .04 for the model with only the personal characteristics, work environment variables were much stronger predictors of commitment than were the personal characteristics

among the surveyed Chinese prison staff. Finally, as an additional control for the respondents' prison, Model 4 was estimated for staff from the first prison only and then again for only the staff from the second prison. Similar results were observed.

Discussion and conclusion

This study is the first to investigate the antecedents of commitment among Chinese prison staff. Its major contribution was determining whether predictors of affective commitment for staff in Chinese prisons mirrored those typically found for staff in Western or whether cultural differences could trump the effects of the work environment. With one exception, our findings show that the predictors of commitment for Chinese prison staff appear to mirror those found for staff in Western prisons, particularly staff in US prisons. To be more specific, this study found that: (1) Chinese prison staff's perceptions of job variety, instrumental communication and input into decision-making had significant positive associations with commitment; (2) Chinese prison staff's perceptions of job danger had a significant negative association with commitment; (3) the impact of these job and organizational factors differed in the size of their effect on commitment for these staff; (4) the effect size of the job and organizational variables on commitment was far greater than the effect of personal characteristics; and (5) input into decision-making, an organizational variable, had the largest sized effect on commitment. Our only unexpected finding was that the job variable perceived supervision quality had a non-significant association with commitment for these Chinese prison staff.

These findings warrant further discussion. First, in the full multivariate analysis, none of the personal characteristics had a significant effect on commitment. This finding mirrors what typically is found for staff in Western prisons as well as for staff working in Chinese community corrections agencies. Thus, as typically found for US prison staff, for these Chinese prison staff, job, and organizational variables had larger sized effects on commitment than personal characteristics (Jiang et al., forthcoming; Lambert, 2004; Lambert & Hogan, 2009; Lambert & Paoline, 2008; Stohr et al., 1994).

Both organizational variables were significant predictors of commitment with input in decision-making by far having the largest effect on shaping commitment for these Chinese prison staff. In the past, Chinese staff were allowed little input into organizational matters or job duties; however, recent social changes in China and increased educational attainment for many Chinese citizens have increased the likelihood of workers having a voice within their organizations. Employees tend to be more committed when they perceive having a stake in the organization, and input into decision-making can enhance this perception (Lambert et al., 2006). This finding appears to indicate that similar to workers in US prisons (Lambert et al., 2006; Stohr et al., 1994), allowing Chinese prison staff input regarding their job duties and organizational operations increases their level of commitment.

The current finding regarding instrumental communication is also similar to that typically found for US prison staff (Lambert et al., 2002). Instrumental communication had a significant positive association with commitment for these Chinese staff. Providing workers with salient information regarding their job duties, procedures for carrying out these duties, the rationale for these duties, and how their job performance will be measured makes workers' jobs easier and helps them be more successful, which, in

turn, makes them feel more valued and respected, and which, in turn, increases commitment.

Two of the three job characteristics were also significant predictors. Perceptions of job dangerousness showed a significant inverse relationship with commitment for these Chinese prison staff. The perception of working in a dangerous environment likely causes workers to be on edge, apprehensive, even fearful. These stressful feelings can negatively impact workers' attention, concentration, job performance, job satisfaction, and relationships with their co-workers and supervisors. Over time, this can result in negative views of the organization and diminished commitment. This finding again mirrors what has typically been found for US prison staff (Lambert & Hogan, 2010; Lambert et al., 2013a).

Job variety also showed a significant positive association with commitment among these Chinese prison staff, which again mirrors what has typically been reported for US prison staff (Hogan, Lambert, Jenkins, & Hall, 2009; Lambert & Hogan, 2010). A job that requires a variety of skills and components is likely more interesting and challenging for most employees and increases their likelihood of viewing the organization in a more favorable light. Also, feeling capable of performing different jobs may increase Chinese staffs' *mianzi* or reputation. In turn, this may result in enhanced commitment.

Interestingly and unexpectedly, perceptions of supervision quality showed a non-significant effect on commitment. This finding is contrary to what typically has been found in studies of US prison staff (Hogan et al., 2009; Lambert, 2004). Once other variables are taken into account, supervision might not be important in shaping Chinese prison staff commitment. Staff may not view supervisors as direct agents of the organization, and as such, providing quality supervision does not play a direct role in shaping commitment. A comparison of results from Model 2 and Model 4 in Table 2 revealed that the supervision–commitment relationship may be mediated by input into decision-making. This finding suggests that prison staff's views of supervision quality may depend on whether their input regarding job-related matters are taken seriously.

As with many studies, the current study has limitations. The current research was a single study of staff at two prisons located in southern China. Additional studies at other Chinese prisons are necessary to determine if these findings can be replicated. In addition, the current study utilized a cross-sectional design. Longitudinal studies are needed in order to demonstrate causal effects of the independent variables. About half of the observed variance in the commitment measure was accounted for by the personal, job, and organizational variables. This means that other variables accounted for the other half of the variance in the commitment variable. These variables need to be identified. Other job and organizational characteristics should be studied, such job feedback, role conflict, role ambiguity, formalization, and organizational justice. Due to space limitations on the survey and time constraints of the staff, measuring every dimension of the prison work environment was not possible. The job and organizational variables measured in this study were chosen because each has been identified as a salient predictor of commitment in past studies of Western prison staff. Another limitation of this study is that no measures of continuance or normative commitment as dependent variables were included. Future research should examine the nature of the relationship that perceived job dangerousness, job variety, supervision, instrumental communication, and input into decision-making has with continuance and normative commitment. Finally, there is a

need to examine the potential effects or outcomes of affective commitment for Chinese prison staff, such as decreased absenteeism, turnover/turnover intent, and burnout, and increased organizational citizenship and life satisfaction as has been reported for US prison staff (Camp, 1994; Lambert et al., 2008; Lambert & Paoline, 2010).

Despite these limitations, the current findings suggest areas of intervention for Chinese prison administrators. As previously noted, in the model containing all the independent variables (i.e. Model 4 on Table 2), none of the personal characteristics were significant predictors of commitment; however, four of the five of the organizational and job characteristics had significant effects. This is good news for prison administrators. Personal characteristics are not easy to change. On the other hand, administrators usually have the ability to alter organizational and job characteristics. Based on the current results, efforts should be undertaken to seek input from staff on job duties and organizational policies and procedures. Focus groups with staff should be held to see how staff input can be increased and how barriers to such input can be eliminated. Input into decision-making does not bind correctional administrators to institute the suggestions of staff. Correctional administrators may have more information than staff regarding why a particular suggested change is not possible; however, prison administrators need to have a dialogue with staff, especially when recommendations are not made. Also, Chinese prison administrators should focus on enhancing instrumental communication for staff. Instrumental communication is crucial for staff to be effective in their jobs. Prison managers and supervisors need to be made aware of the importance of communication flow and the importance of encouraging the exchange of information. In addition, seeking feedback from staff on the barriers to instrumental communication could be undertaken to determine possible areas for improvement (Lambert et al., 2002; Lambert & Paoline, 2012). Finally, instrumental communication also increases job clarity, which has been found to be a significant predictor of commitment and job satisfaction among staff in Chinese community corrections agencies (Jiang et al., 2016; Jiang et al., forthcoming).

Efforts should also be undertaken to reduce perceptions of job danger. Working with convicted offenders carries risks, but there are likely changes which could improve employees' perceptions of safety and well-being at work. Additionally, staff should be asked what job duties and prison areas make them feel at risk. For example, there could be blind corners or poorly lighted areas which could contribute to feeling at risk. Furthermore, training should be provided for staff to develop and enhance their job skills and improve their confidence in being able to handle potentially dangerous situations (Lambert et al., 2005). Again, focus groups with staff from various posts should be asked for their input regarding measures to make their jobs more stimulating. Furthermore, efforts need to be undertaken to increase job variety, such as job enlargement (i.e. increasing the number of job tasks), job enrichment (i.e. increasing job responsibility and job autonomy), and cross-training for a variety of prison posts (Lambert, 2004; Lambert & Paoline, 2012).

In closing, correctional staff are the most important resource for all correctional facilities, including those in China. There is a vacuum waiting to be filled with studies regarding the possible predictors and effects of commitment—in all of its forms—among correctional staff in Asian countries and worldwide. Most commitment research to date is limited to staff working in correctional facilities in Western nations, particularly in the US. The current study is the first to examine the antecedents of commitment for staff in

two Chinese prisons. With one notable exception, our findings appear to mirror those typically found for staff in Western prisons. Job characteristics and organizational characteristics were significant predictors of commitment for these Chinese prison staff and personal characteristics were either weak or non-significant predictors. Unexpectedly, perception of supervision quality was not a significant predictor. Clearly, additional research must be undertaken with staff in other Chinese prisons in order to replicate our findings.

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References

- Agho, A. O., Mueller, C. W., & Price, J. L. (1993). Determinants of employee job satisfaction: An empirical test of a causal model. *Human Relations*, 46, 1007–1027.
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1–18.
- Berkman, H. W., & Neider, L. L. (1987). *The human relations of organizations*. Boston: Kent Publishing Company.
- Camp, S. D. (1994). Assessing the effects of organizational commitment and job satisfaction on turnover: An event history approach. *The Prison Journal*, 74, 279–305.
- Cullen, F. T., Link, B. G., Wolfe, N. T., & Frank, J. (1985). The social dimensions of correctional officer stress. *Justice Quarterly*, 2, 505–533.
- Curry, J. P., Wakefield, D. S., Price, J. L., & Mueller, C. W. (1986). On the causal ordering of job satisfaction and organizational commitment. *Academy of Management Journal*, 29, 847–858.
- Gamble, J., & Huang, Q. (2008). Organizational commitment of Chinese employees in foreign investment firms. *The International Journal of Human Resource Management*, 19, 896–915.
- Garland, B. E., McCarty, W. P., & Zhao, R. (2009). Job satisfaction and organizational commitment in prisons: An examination of psychological staff, teachers, and unit management staff. *Criminal Justice & Behavior*, 36, 163–183.
- Griffin, M. L., Armstrong, G. S., & Hepburn, J. R. (2005). Correctional officers' perceptions of equitable treatment in the 'masculinized' prison environment. *Criminal Justice Review*, 30, 189–206.
- Griffin, M. L., & Hepburn, J. R. (2005). Side-bets and reciprocity as determinants of organizational commitment among correctional officers. *Journal of Criminal Justice*, 33, 611–625.
- Hill, G. (2006). Chinese and Western prisons: Similarities and differences. *Corrections Compendium*, 31(6), 24–26.
- Hogan, N. L., Lambert, E. G., & Griffin, M. L. (2013). Loyalty, love, and investments: The impact of job outcomes on the organizational commitment of correctional staff. *Criminal Justice and Behavior*, 40, 355–375.

- Hogan, N. L., Lambert, E. G., Jenkins, M., & Hall, D. E. (2009). The impact of job characteristics on private prison staff: Why management should care. *American Journal of Criminal Justice*, 34, 151–165.
- Hu, S., Wang, J. N., Liu, L., Wu, H., Yang, X., Wang, Y., & Wang, L. (2015). The association between work-related characteristic and job burnout among Chinese correctional officers: A cross-sectional survey. *Public Health*, 129, 1172–1178.
- Jaros, S. J., Jermier, J. M., Koehler, J. M., & Sincich, T. (1993). Effects of continuance, affective, and moral commitment on the withdrawal process: An evaluation of eight structural equation models. *Academy of Management Journal*, 36, 951–995.
- Jiang, S. (2015). Public opinion and the death penalty. In Liang, & Lu (Eds.), *The death penalty in China: Policy, practice and reform* (pp. 247–273). New York, NY: Columbia University Press.
- Jiang, S., Lambert, E., & Jenkins, M. (2010). East meets west: Chinese and US college students' views on formal and informal crime control. *International Journal of Offender Therapy and Comparative Criminology*, 54, 264–284.
- Jiang, S., Lambert, E. G., Zhang, D., Jin, X., Shi, M., & Xiang, D. (2016). Effects of work environment variables on job satisfaction among community correctional staff in China. *Criminal Justice and Behavior*, 43, 1450–1471.
- Jiang, S., Lambert, E., Xiang, D., Jin, X., Shi, M., & Zhang, D. (forthcoming). Correlates of organizational commitment among community correctional officers in China. *Prison Journal*.
- Jin, J. (1997). *On prisons*. Beijing, China: Law Press.
- Lambert, E. G. (2004). The impact of job characteristics on correctional staff members. *Prison Journal*, 84, 208–227.
- Lambert, E. G., Edwards, C., Camp, S. D., & Saylor, W. G. (2005). Here today, gone tomorrow, back again the next day: Antecedents of correctional absenteeism. *Journal of Criminal Justice*, 33, 165–175.
- Lambert, E., & Hogan, N. (2009). The importance of job satisfaction and organizational commitment in shaping turnover intent: A test of a causal model. *Criminal Justice Review*, 34, 96–118.
- Lambert, E. G., & Hogan, N. L. (2010). Wanting change: The relationship of perceptions of organizational innovation with correctional staff job stress, job satisfaction, and organizational commitment. *Criminal Justice Police Review*, 21, 160–184.
- Lambert, E., Hogan, N. L., Barton, S., & Clarke, A. (2002). The impact of instrumental communication and integration on correctional staff. *The Justice Professional*, 15, 181–193.
- Lambert, E. G., Hogan, N. L., & Griffin, M. L. (2008). Being the good soldier: Organizational citizenship behavior and commitment among correctional staff. *Criminal Justice and Behavior*, 35, 56–68.
- Lambert, E. G., Hogan, N. L., & Jiang, S. (2008). Exploring the antecedents of five types of organizational commitment among correctional staff: It matters what you measure. *Criminal Justice Policy Review*, 19, 466–490.
- Lambert, E., Kelley, T., & Hogan, N. (2013a). The association of occupational stressors with different forms of organizational commitment among correctional staff. *American Journal of Criminal Justice*, 38, 480–501.
- Lambert, E. G., Kelley, T., & Hogan, N. L. (2013b). Hanging on too long: The relationship between different forms of organizational commitment and emotional burnout among correctional staff. *American Journal of Criminal Justice*, 38, 51–66.
- Lambert, E. G., & Paoline, E. A. (2008). The influence of individual, job, and organizational characteristics on correctional staff job stress, job satisfaction, and organizational commitment. *Criminal Justice Review*, 33, 541–564.
- Lambert, E., & Paoline, E. A. (2010). Take this job and shove it: An exploratory study of turnover intent among jail staff. *Journal of Criminal Justice*, 38, 139–148.

- Lambert, E., & Paoline, E. (2012). Exploring potential antecedents of job involvement: An exploratory study among jail staff. *Criminal Justice and Behavior*, 39, 264–286.
- Lambert, E. G., Paoline, E. A. III, & Hogan, N. L. (2006). The impact of centralization and formalization on correctional staff job satisfaction and organizational commitment: An exploratory study. *Criminal Justice Studies: A Critical Journal of Crime, Law, and Society*, 19, 23–44.
- Lincoln, J. R., & Kalleberg, A. L. (1990). *Culture, control and commitment: A study of work organization and work attitudes in the United States and Japan*. Cambridge, UK: Cambridge University Press.
- Liu, J. (2009). Asian criminology – Challenges, opportunities, and directions. *Asian Journal of Criminology*, 4, 1–9.
- Liu, J. (2016). Asian paradigm and access to justice. *The Journal of Contemporary Criminal Justice*, 32, 205–224.
- Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108, 171–194.
- Mercurio, Z. A. (2015). Affective commitment as a core essence of organizational commitment: An integrative literature review. *Human Resource Development Review*, 14, 389–414.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1, 61–89.
- Meyer, J. P., Stanley, D. J., Jackson, T. A., McInnis, K. J., Maltin, E. R., & Sheppard, L. (2012). Affective, normative, and continuance commitment levels across cultures: A meta-analysis. *Journal of Vocational Behavior*, 80, 225–245.
- Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee–organization linkages: The psychology of commitment, absenteeism, and turnover*. New York, NY: Academic Press.
- Oldham, G. R., & Hackman, J. R. (1981). Relationships between organizational structure and employee reactions: Comparing alternative frameworks. *Administrative Science Quarterly*, 26, 66–83.
- Price, J. L., & Mueller, C. W. (1986). *Absenteeism and turnover among hospital employees*. Greenwich, CT: JAI Press.
- Rogers, R. (1991). The effect of educational level on correctional officer job satisfaction. *Journal of Criminal Justice*, 19, 123–137.
- Shao, L. (2011). The problems and implications of prison-enterprise system in China. *Hebei Law Sciences*, 29(4), 193–197.
- Shao, L. (2014). *Education and reform among Chinese inmates*. Retrieved from http://www.moj.gov.cn/jyglj/content/2014-03/25/content_5393650.htm?node=253
- Solinger, O. N., van Olffen, W., & Roe, R. A. (2008). Beyond the three-component model of organizational commitment. *Journal of Applied Psychology*, 93, 70–83.
- Stohr, M. K., Lovrich, N. P., Monke, B. A., & Zupan, L. L. (1994). Staff management in correctional institutions: Comparing DiIulio's "control model" and "employee investment model" outcomes in five jails. *Justice Quarterly*, 11, 471–497.
- Stohr, M. K., Self, R. L., & Lovrich, N. P. (1992). Staff turnover in new generation jails: An investigation of its causes and prevention. *Journal of Criminal Justice*, 20, 455–478.
- Sun, C. (2015). *Most former inmates successfully reentered society*. Retrieved from http://news.xinhuanet.com/legal/2015-07/17/c_128028711.htm
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.
- Teas, R. K. (1981). A test of a model of department store salespeople's job satisfaction. *Journal of Retailing*, 57, 3–35.
- Wang, B., & Kong, Y. (2006). Psychological health among Chinese correctional officers. *Justice of China*, 25(5), 38–41.

- Wiener, Y. (1982). Commitment in organizations: A normative view. *Academy of Management Review*, 7, 418–428.
- Wong, Y. T., Ngo, H. Y., & Wang, C. S. (2002). Affective organizational commitment of workers in Chinese joint ventures. *Journal of Managerial Psychology*, 17, 580–598.
- Wu, Z. (2003). Western prisons and Chinese prisons: Focusing on differences. *European Journal of Crime, Criminal Law and Criminal Justice*, 11(1), 93–113.
- Xing, W. (2014). *Current status of Chinese correctional officers*. Retrieved from http://weibo.com/p/1001603783059722893985?pid=Pl_Official_CardMixFeed__5&feed_filter=1

Appendix I

Affective organizational commitment (Cronbach's $\alpha = .85$): (1) I am proud to tell people that I work for the (name of the prison system—not provided here at the request of the prison system); (2) I find that my values and the (name of the prison system) values are very similar; (3) I really care about the fate of the (name of the prison system); (4) The (name of the prison system) really inspires the best in me in the way of job performance; and (5) I tell my friends that this is a great organization to work for.

Perceived dangerousness of the job (Cronbach's $\alpha = .93$): (1) I work at a dangerous job; (2) My job is a lot more dangerous than most jobs in the community; and (3) At my job, there is a real risk of being hurt or injured.

Job variety (Cronbach's $\alpha = .85$): (1) My job requires that I must constantly learn new things; (2) My job requires that I be very creative; and (3) My job has a lot of variety in it.

Supervision (Cronbach's $\alpha = .81$): (1) My supervisor tends to talk down to employees; (2) My supervisor gives me advance notice of changes; (3) My supervisor looks out for my personal welfare; (4) My supervisor is considerate of those supervised by asking for their ideas; and (5) My supervisor is friendly and approachable.

Instrumental communication (Cronbach's $\alpha = .88$): How informed are you about the following aspects of your job—(1) What you need to know to do the job correctly; (2) What is most important about the job; (3) How the equipment is used; and (4) Rules and regulations.

Input into decision-making (Cronbach's $\alpha = .93$): (1) When there is a problem, management frequently consults with employees on possible solutions; (2) I am frequently asked my input into about organizational issues; and (3) Management around here allows significant employee input into decision-making.

Except for instrumental communication, the above items were answered using a 6-point Likert scale of strongly disagree (coded 1), disagree (coded 2), somewhat disagree (coded 3), somewhat agree (coded 4), agree (coded 5), and strongly agree (coded 6). The instrumental communication items were answered using the following scale: not informed at all (coded 1), informed very little (coded 2), informed somewhat (coded 3), informed (coded 4), and very well informed (coded 5).