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The Effects of Work Demand and Resource Variables on Indian Prison Staff Job Involvement

Eric G. Lambert[1] · Hanif Qureshi[2] · James Frank[3] · Mia Abboud Holbrook[4] · Chelsea Hines[4] · Vidisha Barua Worley[5]

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Abstract

Prison officers not only affect prison operations, but correctional workplace variables also have effects on officers. Most of the past empirical research on this topic has focused on officers working in Western prisons. This study used the job demands–resources model to examine the effects of workplace variables in terms of job demands (e.g., perceived dangerousness of the job and role overload) and job resources (e.g., job autonomy, job variety, instrumental communication, and quality supervision) on job involvement among Indian prison officers using a sample of 163 prison officers from a prison in the state of Haryana in India. OLS regression indicated role overload, job autonomy, and instrumental communication all had nonsignificant effects, while job variety and quality supervision had positive effects on job involvement, as did the job demand of perceived dangerousness of the job. Similar to past research, the positive effects of job variety and quality supervision appear to be universal across prisons, as are the lack of direct effects for role overload and instrumental communication. Conversely, the effects of perceived dangerousness of the job and job autonomy appear to be contextual, varying across prisons in different nations.

Keywords Job demands–resources model · Prison officers · Job involvement · India · Correctional staff

People are a critical resource for organizations, and prisons are no exception. Staffing is a major expense for prisons (Lambert & Paoline, 2012). The successful operation of a prison is often linked to the attitudes and behaviors of prison officers. A salient work attitude is job involvement, which refers to a person's level of psychological identification with the job (Kanungo, 1982). Job involvement is important, because an officer will likely put forth more effort for something they identify with and care about (Lambert et al., 2018). Conversely, job alienation, which is at the opposite end of the job involvement continuum, refers to having little connection to the job and being detached from the job (Kanungo, 1982). Job involvement has been linked to positive outcomes, such as greater self-confidence, higher levels of motivation, increased work engagement, higher job satisfaction, increased commitment to the organization, higher sense of accomplishment, reduced absenteeism, lower turnover intent, and higher levels of successful work performance (Blau & Boal, 1989; Chen & Chiu, 2009; Lambert & Paoline, 2012). Job involvement is an important work attitude

✉ Eric G. Lambert
erilambe@iu.edu

Hanif Qureshi
hanif.qureshi@gov.in

James Frank
james.frank@uc.edu

Mia Abboud Holbrook
miaholbrook@unr.edu

Chelsea Hines
chelseahines@unr.edu

Vidisha Barua Worley
vworley@lamar.edu

[1] School of Public & Environmental Affairs, Indiana University Northwest, Dunes Medical/Professional Building, Room 2101, 3400 Broadway, Gary, IN 46408, USA

[2] Recruits Training College, Bhondsi, Gurgaon 122011, India

[3] School of Criminal Justice, University of Cincinnati, 665C Dyer Hall, Cincinnati, OH 45221, USA

[4] Department of Criminal Justice, AB601, University of Nevada, Reno, 1664 North Virginia Street, Mail Stop 0214, Reno 89557, USA

[5] Department of Sociology, Social Work, and Criminal Justice, Maes 102, Lamar University, 4400 MLK Blvd, P.O. Box 10009, Beaumont, TX 77710, USA

for prisons, which rely so heavily on staff. Research has been conducted on how workplace variables are associated with job involvement, but much of this past research has not used a theoretical model, and most have involved prison officers from a few nations, with none focusing on Indian prison officers.

The current study used the job demands–resources model to examine the effects of workplace variables on the job involvement of Indian prison officers. This model holds that work demands reduce work attitudes (such as job involvement), and job resources build work attitudes. Further, the current study replicates past job involvement research. As noted by Lindsay and Ehrenberg (1993):

> Replication is little discussed in the statistical literature nor practiced widely by statistically minded researchers. It is needed not merely to validate one's findings, but more importantly, to establish the increasing range of radically different conditions under which the findings hold, and the predictable exceptions. (p. 217)

Only research from a variety of nations can answer the question of whether the effects of job demand and resource variables are universal (i.e., cut across institutions across nations) or contextual/situational (i.e., vary by nation). As Jowell (1998) contended:

> The importance and utility to social science of rigorous cross-national measures is incontestable. They help to reveal not only intriguing differences between countries and cultures, but also aspects of one's own country and culture that would be difficult or impossible to detect from domestic data alone. (p. 168)

India is the world's most populous democracy, and it is a dynamic developing nation taking a more prominent role on the world stage (World Factbook, 2021). Even though India is highly populated with a growing and vibrant economy, little has been published in Western journals concerning Indian correctional officer job involvement. This study was, therefore, undertaken using data from officers at a prison in the Indian State of Haryana. Job demand variables were perceived dangerousness of the job and role overload, and the job resource variables were job autonomy, job variety, instrumental communication, and quality supervision.

Literature Review

Indian Prisons

British colonizers introduced Western-style prisons to India in the 1800s as a way to control the indigenous Indian population (Waits, 2018). After India gained independence from Great Britain in 1947, the use of prisons continued (Bhutta & Akbar, 2012). Prisons and their administrations are controlled by the governments of India's states. According to Section 3 of the Prisons Act of 1894, prison refers to:

> [A]ny jail or place used permanently or temporarily under the general or special orders of a State Government for the detention of prisoners and includes all lands and buildings appurtenant thereto but does not include … any place for the confinement of prisoners who are exclusively in the custody of the police.

The terms prison and jails are therefore used interchangeably in India, as there is no legal distinction between the two. The reference to "State Government" is a reference to the governments of the 28 States and 8 Union territories in India (World Factbook, 2021). The central government of India provides assistance to the states, with regard to prisons.

The prisons department is a separate state department (distinct from the state's police department) and has its own legal statutes and rules. Both pretrial and sentenced persons can be held at the same facility but must be housed separately without physical contact. In addition, incarcerated persons are separated by age (i.e., juvenile/adult), by gender (i.e., men/women), and length of incarceration. Convicted individuals with longer sentences tend to be held at higher security facilities and those with shorter sentences are generally held at lower security institutions. For instance, the surveyed district jail had 491 convicted detainees and 2300 pretrial detainees, for a total of 2791 inmates (Haryana Prisons, 2022). The state-run facilities somewhat akin to US jails are called police lockups and are located in police stations. Police can hold arrested persons in these lockups for a maximum period of 24 h before they must produce the arrestee and submit grounds for arrest to a judicial magistrate. The judicial magistrate may set the arrestee free, may send the arrestee back into police custody for further investigation, or send the arrestee to judicial custody. Judicial custody implies prisons, which are managed by the prisons department. Inmates in prisons or jails are said to be in judicial custody, as arrested persons can only be sent there after an order from a judicial officer.

In 2019, there were 1350 correctional facilities in India holding more than 140,000 convicted individuals, of which about 77,000 are sentenced to life (i.e., more than 14 years) and 400 are sentenced to death. Approximately 95% of incarcerated individuals in India are men (Prisons Statistics India, 2020). There are slightly more than 290,000 individuals being held in correctional facilities under pretrial detention status (Prisons Statistics India, 2020). While the number of people incarcerated in India has more than doubled in the past 20 years, the overall incarceration rate for India is 35 per 100,000, which is much lower than the incarceration rate of 642 per 100,000 for the US (World Prison Brief, 2021). Overall, Indian correctional facilities are about 14% over

capacity (Prisons Statistics India, 2020). There are 44 central jails (facilities for long term incarceration, similar to maximum security prisons in Western nations), 410 district jails (main correctional facilities for Indian states and territories, similar to medium security prisons in Western nations), 617 sub jails (smaller facilities, similar to low security prisons in Western nations), 31 women's jails (facilities for women), 86 open jails (similar to minimum security facilities in Western nations), 19 Borstal schools (juvenile correctional facilities), 41 special jails (facilities for dangerous and notable offenders), and 3 other jails (facilities which do not fall into any of the above categories) (Namdev, 2019; World Prison Brief, 2021).

In the colonial era in India, the Indian Jails Committee (1919–1920 identified reformation and rehabilitation of offenders as objectives of the prison administration (Santhosh & Mathew, 2021). Rehabilitation and welfare initiatives for prisoners are now pursued by all of India's state governments. Educating inmates is emphasized by the appointment of teachers and several open universities, where education is disseminated through correspondence courses and the availability of library facilities. Measures have been taken to improve healthcare and sanitation among inmates. Several states, including Haryana, have yoga and meditation programs available to inmates for stress relief (NCRB, 2021). Vocational training programs are available for inmates to improve their ability to find employment upon release from prison. As of 2020, inmates received training in various areas such as weaving, tailoring, carpentry, agriculture, handloom, canning, and making of soap (NCRB, 2021).

Besides correctional officers, the Indian prison system employs medical officers, dental officers, pharmacists, teachers, and utility services support staff. The prison staff in India is broadly divided into five categories: executive, medical, correctional, ministerial, and others. According to according to India's National Crime Records Bureau Report (NCRB, 2021), while there are many authorized positions, there are large numbers of unfilled vacancies in several states, lowering the actual number of staff currently working. At the end of 2020, there were a total of 51,797 executive staff members, including 4958 officers and 46,839 subcadre staff who were actually posted in Indian jails, even though the authorized staffing level was almost 73,000. There is a shortage of officers working in Indian correctional facilities (NCRB, 2021). There was a total of 2232 medical staff, 3837 ministerial staff, and 2641 other employees working in Indian jails at the end of 2020 (NCRB, 2021). As of December 31, 2020, there was a national average of seven inmates per staff in the various prisons in India. A total of 8380 women work in various positions across Indian jails, with many assigned to facilities housing female inmates. The NCRB Report (2021) further states that during the period 2015–2020, the actual strength of jail staff increased by 15.6% (increased from 53,009 in 2015 to 61,296 in 2020). The number of vacant posts has decreased from 27,227 on December 31, 2015, to 26,671 on December 31, 2020 (NCRB Report, 2021).

The current study surveyed correctional officers at an Indian prison in the State of Haryana. Haryana is a 17,070 mile^2, northern Indian state with a population of 25.4 million. Haryana is adjacent to the national capital of New Delhi and is considered a relatively well-developed state (Census, 2011.co.in, 2015). The State of Haryana operates 23 correctional institutions, of which 3 are central jails, 16 district jails, and 4 sub jails (Prisons Statistics India, 2020). The number of incarcerated individuals in Haryana has increased by 71% in the past 20 years (Dhanuka & Lamba, 2020). As of April 1, 2020, a total of 18,875 inmates (including 630 women) were confined in the Haryana correctional system, of which 12,404 were pretrial detainees and 6471 were convicted and sentenced (Prisons Statistics India, 2020). As per Haryana Prisons (2022), the surveyed district jail has a total staff strength of 217 personnel in various categories. This number consists of correctional officers and support staff. The correctional staff is supervised by a Jail Superintendent, who is assisted by three Deputy Superintendents, four Assistant Superintendents, and three Sub-Assistant Superintendent. The bulk of the correctional officers consist of 159 male warders, 12 female warders, and 19 Head Warders, for a total of 201 correctional officers. The support staff of 16 personnel consist of medical officers, utilities, and housekeeping services. There are 6 inmates per staff and 3.49 women prisoners per female staff in Haryana (NCRB, 2021); however, no psychiatrists or psychological counselors are posted in the surveyed district jail. The prisoners who require mental health counseling are referred to the government general hospital under the supervision of a prison guard.

With the growth in Indian corrections and the growth in the overall economy, there has been a difficultly in recruiting and retaining correctional officers (Bahl, 2017). As such, this replication study seeks to find out how job demand and resource variables affect correctional officer job involvement in an Indian prison in the state of Haryana.

Job Involvement

Lodahl and Kejner (1965), who are generally given credit for proposing the concept of job involvement, defined it as a psychological connection with the job and having high job performance. Later research demonstrated that involvement increased job performance and job involvement and job performance were separate concepts. Lawler and Hall (1970) refined the conceptualization of job involvement to be the degree of psychological identification with the job and the

importance of the job to the person. Kanungo (1982) built upon this definition by indicating job involvement was a cognitive/psychological identification with the job, and this definition is generally used in the literature. Job involvement was defined as psychological identification with the job and the importance the job plays in an individual's life (Brown & Leigh, 1996). DeCarufel and Schaan (1990) noted that "an individual with a high degree of job involvement would place the job at the center of his/her life's interests. The well-known phrase 'I live, eat, and breathe my job' would describe someone whose job involvement is very high" (p. 86). DeCarufel and Schaan (1990) further pointed out that "persons with low job involvement would place something other than their jobs (e.g., family, hobbies) at the center of their lives" (p. 86). The opposite of job involvement is job alienation, where the person is detached from the job and the job playing less, if any, importance in the person's life (Kanungo, 1982).

Job Demands–Resources Model

The job demands–resources model provides a theoretical foundation for why workplace variables would be related to job involvement (Demerouti et al., 2001). Under this model, workplace variables are placed into the general categories of job demands and job resources (Bakker & Demerouti, 2017). Job demands require a worker to expend extra effort, hindering their job efforts and experiences (Schaufeli & Taris, 2014). Mauno et al. (2006) indicated that job "demands are physical, psychological, social, or organizational features of the job requiring physical and/or psychological costs (i.e., strain)" (p. 212). Job demands often result in a person being less successful at work and having a higher level of psychological strain (Demerouti et al., 2001). Job demands can wear on a worker over time and increase the likelihood of undesirable outcomes, such as reduced job involvement.

Job resources are workplace variables that make the job more pleasurable, increasing the likelihood of success at work, which, in turn, allows people to feel better about themselves and increases their positive psychological feelings (Mauno et al., 2006). In addition, job resources can help reduce the occurrence of job demands, as well as help buffer officers from the negative psychological strain from job demands (Bakker & Demerouti, 2017). As noted by Bakker et al. (2003), "job resources refer to those physical, psychological, social, or organizational aspects of the job that are either/or: (1) functional in achieving work goals; (2) reduce job demands and the physiological and psychological costs; (3) stimulate personal growth and development" (p. 344). Job resources allow a person to be more successful at work, which should increase their level of positive psychological feelings and allow the person to see the job in a more favorable light, ultimately increasing job involvement (Demerouti et al., 2001). The lack of or removal of a job resource can become a job demand in itself (Mauno et al., 2006).

The job demands–resources model does not propose specific workplace job demand or resource variables that result in negative or positive outcomes, but rather that workplace variables fall into the categories of demands and resources (Bakker & Demerouti, 2017). As noted by Schaufeli and Taris (2014), "the job demands–resources model does not restrict itself to specific job demands or job resources. It assumes any demand and any resource may affect employee health and well-being" (p. 44). Basically, there can be a wide array of job demand and resource variables that affect the job involvement of Indian prison officers. The current study examined how the job demands of perceiving the job as dangerousness and role overload and the job resources of job autonomy, job variety, instrumental communication, and supervision were associated with the job involvement of Indian prison officers.

Job Demands–Resources Variables in the Current Study and Hypotheses

Perceived dangerousness of the job and role overload were the two job demands in the current study. Job autonomy, job variety, instrumental communication, and quality of supervision were the job resources. The hypothesized relationships of these job demand and job resource variables with job involvement follow.

Job Demands

Perceived Dangerousness of the Job

Perceived dangerousness of the job is a belief that the job is dangerous and carries an increased chance of being hurt on the job (Otu et al., 2020). Fear of being injured on the job places psychological strain on correctional officers, and as such, is considered a job demand. This strain likely detracts from the job, resulting in lower involvement. The limited research supports that this job demand results in lower involvement. Among US prison staff (Lambert et al., 2013) and Chinese prison officers (Lambert et al., 2018), this demand was related to lower job involvement. Conversely, a nonsignificant association was reported for US jail officers (Lambert & Paoline, 2012; Paoline et al., 2018) and Nigerian officers (Otu et al., 2020).

Hypothesis 1 Even with the mixed past results, for Indian correctional officers, perceived dangerousness of the job was hypothesized to be associated with lower job involvement.

Role Overload

Role overload refers to being required to do too many tasks or not being provided necessary equipment (Lambert et al., 2013). Role overload is a job demand because it places strains on a person, making the job more difficult (Otu et al., 2020). The resulting psychological strain reduces the connection and attachment with the job, resulting in lower job involvement (Lambert et al., 2018). The limited past research, however, has found no association between role overload and involvement among Nigerian officers (Otu et al., 2020), Chinese officers (Lambert et al., 2018), or US prison staff (Lambert et al., 2013).

Hypothesis 2 Role overload was predicted to have a negative effect on job involvement for Indian correctional officers.

Job Resources

Job Autonomy

Job autonomy is the perceived degree of control of job a person has in terms of how the job is done and in what order tasks are completed (Lambert et al., 2018). Providing greater job autonomy can not only make the job more stimulating and interesting for an officer, but it also sends a message that the officer is trusted and valued by the prison, which is why it is viewed as a job resource (Otu et al., 2020). Low job autonomy can make the job less enjoyable, resulting in lower involvement. There has been very little research on this job resource and the findings are mixed. No association between job autonomy and job involvement among Chinese correctional staff was reported (Lambert et al., 2018), but a positive relationship was found among Nigerian officers (Otu et al., 2020).

Hypothesis 3 Job autonomy was hypothesized to have a positive association with job involvement among Indian correctional officers.

Job Variety

Job variety is the degree of variation found in the position (Otu et al., 2020). Some positions can have a great deal of variation that provides an officer with mental stimulation and growth and other positions are highly repetitive, making the job not only boring but tedious (Lambert & Paoline, 2012). As variety makes the job more enjoyable and pleasurable, as well as allowing officers to expand their skills and grow, it is viewed as a job resource. This should result in seeing the job as more favorable, ultimately raising the level of job involvement (Lambert et al., 2013). "Variety is the spice of life," as the old adage goes. Among Chinese (Lambert et al., 2018) and US correctional staff (Lambert & Paoline, 2012; Lambert et al., 2013; Paoline et al., 2018), this job resource was observed to have positive effects. Conversely, job variety was not a significant predictor of involvement for Nigerian officers (Otu et al., 2020).

Hypothesis 4 Job variety was hypothesized to have a positive association with Indian correctional officer job involvement.

Instrumental Communication

Instrumental communication refers to the perception that salient job information is provided about work tasks, equipment usage, rules, regulations, and policies (Lambert et al., 2018). It is considered a job resource. Providing salient information can make workers more productive, raising the level of success at the job. The resulting positive feelings should increase the connection with the job. Conversely, a lack of instrumental communication can result in an officer feeling left in the dark and unsure what to do on the job, in the end, lowering involvement in the job due to strain (Lambert & Paoline, 2012). Only two published studies could be found, and both reported no significant association between this job resource and involvement for both Chinese officers (Lambert et al., 2018) and US jail officers (Lambert & Paoline, 2012).

Hypothesis 5 Instrumental communication was postulated to have a positive connection with the job involvement for Indian officers.

Quality of Supervision

Quality supervision provides direction, guidance, structure, and support, which can make work easier, more successful, and pleasant (Lambert, 2004). Quality supervision is a job resource. Quality supervisors make work more enjoyable and enable officers to be more successful in their tasks, raising the level of positive psychological feelings about the job. In turn, it is easier for an officer to feel a psychological connection with the job, increasing the level of job involvement (Lambert et al., 2018). Conversely, poor supervision can result in work being not only unpleasant but more difficult. The resulting psychological strain should lower job involvement (Lambert et al., 2018). The single published study found that among Chinese officers, quality supervision was a positive predictor of involvement (Lambert et al., 2018).

Hypothesis 6 Quality of supervision was predicted to have a positive relationship with Indian correctional officer job involvement.

Method

Participants

Human subjects' approval was secured from an Institutional Review Board. A prison in central Haryana was selected because one of the authors had access to this institution. The prison housed 1499 individuals at the time of the study. The prison was a closed facility and included a high-security ward, general housing, kitchen, hospital, library, study rooms, canteen/commissary, and barber shop, hobby shop, and recreation areas. The prison employed 238 correctional officers at the time. All officers were provided with a survey packet, which included a consent form, the questionnaire, and a blank envelope for returning the questionnaire. The officers were informed that the survey was voluntary, that they could skip some questions, or decline to participate entirely. The questionnaire was originally developed in English and translated into Hindi. Before distribution, it was translated back to English by another individual and checked for any errors in translation. After any errors in translation were identified and corrected, the questionnaire was pilot tested with a small group of prison officers. The study packet was distributed to all available officers. A total of 163 completed questionnaires were returned (i.e., response rate of 68%). Approximately 93% of the participants indicated that they were men. The mean age was 40.80, with a standard deviation of 5.71. The mean tenure in the position was 4.89 years, with a standard deviation of 3.07. With respect to the highest educational degree, 69% marked they had no college degree and 31% indicated they had some type of college degree. In terms of gender, age, tenure, and educational level, the participants were very similar to the overall officer complement at the prison.

Variables

Dependent Variable

Job involvement was the dependent variable (DV) and was measured by three items from Kanungo (1982), which are presented in the "Appendix" with the response options. The Cronbach α value was .93. The responses to the items were summed together to form an additive index for job involvement.

Independent Variables

The job demand variables were perceived dangerousness of the job and role overload. The three items from Cullen et al. (1985) were used to measure dangerousness (see "Appendix" for the items and response options). Role overload was measured using three items from Triplett et al. (1996) (see the "Appendix" for the items and their response options). The Cronbach α value for fear of being injured was .92, and the Cronbach α for role overload was .90. Indexes for these two job demands were created by summing the responses of the respective items.

The job resource variables were instrumental communication, job autonomy, job variety, and quality supervision. Using the following five items adapted from Curry et al. (1986), an additive index for instrumental communication was created (see the "Appendix" for the items and the how they could be answered). The Cronbach α for instrumental communication was .82. Using items from Curry et al. (1986), job autonomy was measured using the following two items (see the "Appendix" for the items, along with their response options). Job autonomy had a Cronbach α of .82. Job variety was measured using items adapted from Curry et al. (1986), which are listed in the "Appendix," along with their response options. The job variety items had a Cronbach α of .82. Quality supervision was measured using four items from Griffin et al. (2012) (see the "Appendix" for the items and how they could be answered). The Cronbach α for the supervision items was .92. Additive indexes for job autonomy, job variety, instrumental communication, and quality supervision were created by summing the respective items. Finally, the personal characteristics gender, age, tenure in the position, and educational level were included more as control than explanatory variables. See Table 1 for how these variables were coded.

Results

The descriptive statistics for the variables can be found in Table 1. There was significant variation in the dependent and independent variables (IVs, i.e., none were constants). The variables conformed to a near normal distribution-based statistical tests. Likewise, the median and mean values for the variables are similar to one another, also suggesting a normal distribution. As previously indicated, all the variables measuring latent concepts (e.g., organizational commitment) had Cronbach α values of .80 or higher, which is viewed as good. Factor analysis using principal axis factoring was done and the items loaded on the expected latent factors, suggesting unidimensionality of the items (Gorsuch, 1983). Pairwise deletion was used for the bivariate analysis and listwise deletion was used for the multivariate regression analysis. With pairwise deletion, the number of participants ranged from 156 to 163. With listwise deletion, the number of participants was 153. A power analysis indicated a minimum of 121 cases for regression analysis to be able to measure medium and large effect size. In addition, a rule of

Table 1 Descriptive statistics for study variables

Variable	Description	Min	Max	Md	Mn	SDev
Gender	7% Female (coded 0) 93% Male (coded 1)	0	1	1	0.93	0.26
Age	Measured in years	22	56	41	40.80	5.71
Tenure	In position in years	0	24	4.5	4.89	3.07
Educ Lev	68% No college degree (coded 0) 32% College degree (coded 1)	0	1	0	0.32	0.46
Danger	3 Item index, $\alpha = .92$	− 3.12	0.86	0.00	0.00	0.96
Overload	3 Item index, $\alpha = .90$	− 2.69	1.38	0.36	0.00	0.95
Job Auto	2 Item index, $\alpha = .82$	− 1.89	1.47	− 0.12	0.00	0.90
Job Variety	3 Item index, $\alpha = .82$	− 3.20	1.08	0.01	0.00	0.92
Inst Comm	4 Item index, $\alpha = .82$	− 2.52	1.11	0.14	0.00	0.92
Supervision	4 Item index, $\alpha = .91$	− 2.39	1.06	0.20	0.00	0.96
Job Involv	3 Item index, $\alpha = .77$	− 3.13	0.96	-0.06	0.00	0.89

The factor analysis-saved variables were used for the latent measures of perceived dangerousness of the job, role overload, job autonomy, job variety, instrumental communication, quality supervision, and job involvement. These variables created using factor analysis results have been mean centered, which means the mean of each of these variables is 0. The number of participants was 163

Min minimum value, *Max* maximum value, *Md* median value, *Mn* mean value, *SDev* standard deviation value, *Educ Lev* educational level, *Danger* perceptions of working a dangerous job, *Overload* role overload, *Job Auto* job autonomy, *Inst Comm* instrumental communication, *Supervision* quality of supervision, *Job Involv* job involvement, α Cronbach's alpha, a measure of internal reliability

Table 2 Correlation matrix of study variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Gender	1.00										
2. Age	.08	1.00									
3. Tenure	− .05	− .12	1.00								
4. Educ Level	.04	− .22**	.16*	1.00							
5. Danger	− .02	.01	.06	.03	1.00						
6. Overload	.07	− .06	.08	− .11	.37**	1.00					
7. Job Auto	.22**	.05	− .09	− .17*	− .02	.01	1.00				
8. Job Variety	.07	.08	.02	.11	.10	.22**	.32**	1.00			
9. Inst Comm	.03	− .07	− .06	− .17*	− .01	.12	.19*	.35**	1.00		
10. Supervision	− .03	− .02	− .02	− .10	− .19*	.03	.27**	.40**	.40**	1.00	
11. Job Involv	.11	.00	− .02	− .24**	.18*	.27**	.29**	.60**	.18*	.36**	1.00

Note that the factor analysis-saved variables were used for the latent measures of perceived dangerousness of the job, role overload, job autonomy, job variety, instrumental communication, quality supervision, and job involvement. See Table 1 for a description and statistics for the variables. The number of cases for the bivariate analysis ranged from 163 to 156

Educ Lev educational level, *Danger* perceptions of working a dangerous job, *Overload* role overload, *Job Auto* job autonomy, *Inst Comm* instrumental communication, *Supervision* quality of supervision, *Job Involv* job involvement

thumb is the number of cases must be at least 10 times the number IVs. There were 11 IVs in the current study, which means at least 110 cases or more were needed.

The correlations are presented in Table 2. Gender, age, and tenure each had a nonsignificant correlation with involvement. College educated officers on average reported lower job involvement. Increases in role overload were associated with lower involvement. Interestingly, perceived dangerousness of the job had a positive correlation, which means increases in this variable were associated with greater involvement in the job. All four job resource variables had significant positive correlations, which means increases in each of these resources were associated with greater job involvement. The size of significant associations can be determined by the absolute size of the correlation coefficients (Ellis, 2010). The two smallest-sized significant correlations with job involvement in Table 2 were perceived dangerousness of the job and instrumental communication, both

of which had correlations of .18. Next in terms of the size of the correlation coefficient among the significant bivariate associations was educational level ($r = -.24$), followed closely by role overload ($r = .27$), and then job autonomy ($r = .29$). Based on Cohen (1988), the associations of these five IVs with the DVs were small (i.e., between .10 and .29 is viewed as small). Quality of supervision ($r = .36$) had a moderate-sized correlation with job involvement (i.e., correlations between .30 and .49). The correlation for supervision was twice the size of the correlation for perceived dangerousness of the job and instrumental communication, the two significant IVs with the lowest-sized correlations. This indicates that supervision may play a greater role in job involvement than do dangerous and communication. Job variety had the largest-sized correlation with job involvement ($r = .60$) and this correlation is viewed as large or strong. Job variety had a correlation at twice or more the size of the other significant variables except supervision. The correlation for job variety was more than 80% larger than that of supervision. Overall, the bivariate analysis suggests that job variety is strongly and positively associated with job involvement of Indian prison officers.

An Ordinary Least Squares (OLS) regression equation was estimated with job involvement as the DV and the personal characteristics, the job demands, and the job resources as the IVs. The results are reported in Table 3. Multicollinearity is seen as a problem when Variance Inflation Factor scores (VIF) exceed 5 (Tabachnick & Fidell, 2019). As shown in Table 3, none of the VIF scores were higher than 1.45 (i.e., multicollinearity was not seen as a problem). The issues of outliers, influential cases, normality, linearity and homoscedasticity of residuals, and independence of errors (all of which can affect the regression results) were tested and addressed (Berry, 1993; Tabachnick & Fidell, 2019). Based on the F value statistics (13.33**), the model fit was significant. The R^2 value was .47, which means the IVs as a group accounted for approximately 47% of the observed variance in the job involvement.

The unstandardized regression coefficient (B), also known as the partial regression coefficient, represents the slope weight for each variable in the model (Mertler & Vannatta, 2005). B weights indicate how much the value of the DV (here, job involvement) changes when the IV increases by 1 when the other IVs remain the same. If B is positive, when the IV increases, the change in the DV is also increases, whereas a negative B indicates a negative change in the DV when the IV increases. As it is difficult to interpret the relative importance of the predictors when the slope weights are not standardized, beta weights (β) or standardized regression coefficients are often utilized. The standardized regression coefficient (β) represents the predicted change in stand units of the DV for a one standard unit increase in the particular IV (Berry, 1993). As all the effects for the standardized regression coefficients are in the same metric (i.e., standard units) as is the case for the DVs, the effects of the different IVs on the DV can be compared to one another (Mertler & Vannatta, 2005).

Table 3 OLS regression results of the effects of job demand strain and job resource variables on the job involvement of Indian correctional staff

Variable	*B*	SE	*β*	VIF
Personal characteristics				
Gender	.27	.21	.08	1.09
Age	−.01	.01	−.09	1.11
Tenure in Position	−.003	.02	−.01	1.06
Educational Level	−.37	.12	−.19**	1.17
Job Demand Strains				
Dangerousness of the Job	.13	.06	.14*	1.26
Role Overload	.08	.06	.09	1.27
Job Resources				
Job Autonomy	.06	.06	.06	1.24
Job Variety	.48	.07	.50**	1.43
Instrumental Communication	−.13	.07	−.13	1.30
Quality of Supervision	.19	.07	.20**	1.44
F value	13.33**			
R^2	.47			

Note that the factor analysis-saved variables were used for the latent measures of perceived dangerousness of the job, role overload, job autonomy, job variety, instrumental communication, quality supervision, and job involvement. See Table 1 for how the variables were measure and their descriptive statistics. Listwise deletion was used, and the number of cases was 153

B unstandardized regression coefficient, *SE* standard error, *β* standardized regression coefficient, *VIF* variance inflation factor score

*$p \leq .05$, **$p \leq .01$

Educational level was the only personal characteristic to have a significant effect. The negative effect ($\beta = -.19$; $p < .01$) for educational level indicates that officers with a college degree, on average, reported less job involvement as compared to officers without a college degree. Job dangerousness ($\beta = .14$, $p < .05$) was significant and had a positive effect, which means it was related to higher job involvement. Job variety ($\beta = .50$, $p < .01$) and quality supervision ($\beta = .20$, $p < .01$) had positive effects, which means increases in either of these variables were related to increased self-reported job involvement. The magnitude of effect can be ranked from smallest to largest by taking the absolute values of the significant predictor variables. Dangerousness had the smallest-sized effect. Educational level had the second smallest effect, followed closely by quality of supervision. Overall, the size of the effects of these three variables on job involvement were similar to one another. Job variety, however, had the largest-sized effect and was more than twice that of any of the other significant

IVs. This suggests that job variety plays a major role in shaping the job involvement among the surveyed Indian prison officers.[1]

Discussion and Conclusion

In general, the current study supports the job demands–resources model in explaining job involvement among Indian prison officers. The results, however, varied by the variable. As hypothesized, job variety and quality supervision were significant predictors. Job variety likely stimulates officers mentally and results in greater enjoyment from the job. Making the job more interesting and stimulating results in greater involvement in the job, which makes sense. The current findings are consistent with that observed among Chinese officers (Lambert et al., 2018) and US correctional staff (Lambert & Paoline, 2012; Lambert et al., 2013; Paoline et al., 2018). While job variety was not a significant predictor of involvement for Nigerian officers (Otu et al., 2020), the bulk of research suggests that job variety may be universal in raising job involvement. As noted previously, quality supervision likely makes the job more pleasant and increases the likelihood of productivity and success on the job. This, in turn, allows officers to feel more accomplished and recognized. This finding is consistent with what was found with Chinese officers (Lambert et al., 2018), the only prior study to examine the connection between supervision and involvement. Even though research is limited, quality supervision is postulated to be positively related to job involvement in studies done among correctional officers in other nations.

Surprisingly, perceived dangerousness had a positive effect, rather than the predicted negative effect, on job involvement among Indian prison officers. Working a job that is perceived to be dangerous could give officers a sense of pride in protecting their community. Indian prison officers who see the job as dangerous could feel a greater sense of accomplishment of working a job to protect others. In other words, feeling at risk from the job could give Indian prison officers a sense of pride. This, in turn, results in greater involvement in the job. Others have reported a positive relationship between perceived dangerousness and other positive outcomes. In a study of US correctional staff, Lambert et al. (2005) found a positive association between perceived dangerousness of the job and life satisfaction. Lambert et al. (2005) postulated that this positive relationship was due to staff feeling proud of performing a dangerousness job to protect society. Similarly, among US prison staff, Lambert et al. (2012) reported a positive link between perceived dangerousness of the job and organizational citizenship behaviors (i.e., prosocial behaviors of going beyond what was expected at work), and they postulated that this possible association may be due to feeling that doing such a job protects the community. It is important to note that the explanation for the positive connection between dangerousness and job involvement provided for this study is untested and needs further study to indicate whether this postulation has sufficient support.

Another explanation is that this variable, created for Western criminal justice employees, did not accurately measure perceived dangerousness among Indian officers. This explanation may explain the difference of the current findings with those reported by Lambert et al. (2013) who reported a negative association between perceived dangerousness of the job and job involvement among US prison staff. Future research should explore whether measuring perceived dangerousness of the job differently changes the findings. A third explanation is that feeling at risk does have a significant association with involvement among Indian officers but was not observed in the current study due to random error. A fourth explanation is that the effect of perceived dangerousness varies by the location (nation) of the correctional institution. This is why future replication research is so critical. It is important to note that the current finding is not consistent with the past results, where the job demand of dangerousness was negatively associated with involvement for US prison staff (Lambert et al., 2013) and Chinese prison officers (Lambert et al., 2018). Also, this demand was not a significant predictor for Nigerian officers (Otu et al., 2020) nor US staff (Lambert & Paoline, 2012; Paoline et al., 2018). Based on the current study and past studies, the effect of perceived dangerousness on job involvement may be contextual, varying by the nation of the correctional facility.

Contrary to Hypotheses 2, 3, and 5, role overload, job autonomy, and instrumental communication did not have a significant relationship with involvement in the multivariate analysis. It is possible that these variables are related to Indian officer involvement, but their effects were not observed due to random chance. Alternatively, role overload may not play a direct effect on job involvement for Indian officers. This explanation is consistent with the past studies that reported no direct effects on involvement for Chinese

[1] It was noted during the review process that as only 7% of the participants were women and that, therefore, gender could be dropped from the regression analysis. The OLS regression equation was re-estimated without the gender variable. The results were similar in terms of the amount of variance explained, the significant predictors, and the ranking of the significant variables in terms of the size of their standardized regression coefficients. The R^2 for this new regression model was .47 ($p \leq .01$), and the significant predictors were educational level ($\beta = -.20$, $p \leq .01$), perceived dangerousness of the job ($\beta = .17$, $p \leq .01$), quality supervision ($\beta = .19$, $p \leq .01$), and job variety ($\beta = .49$, $p \leq .01$). Job variety continued to have the largest-sized effect, more than twice that of any other significant independent variable.

officers (Lambert et al., 2018), Nigerian officers (Otu et al., 2020), and US officers (Lambert et al., 2013). Based on the current and past findings, the lack of a direct relationship between role overload and job involvement may be universal. This is not to say that role overload does not have negative effects of officers. Role overload could result in other negative outcomes, such as job stress or job burnout.

Job autonomy does not appear to play a direct role in shaping the job involvement of Indian prison officers. It could be that once job variety and supervision are taken into account, this job resource does not have a direct effect on involvement. In other words, job autonomy raised the level of job variety, resulting in greater involvement in the job. There is a positive significant correlation between these two variables as indicated in Table 2. Likewise, job autonomy could be a product of quality supervision, and supervision was important in shaping Indian officer involvement. There is also a significant correlation between autonomy and supervision reported in Table 2. The results of past research are mixed. No association between job autonomy and job involvement was reported for Chinese officers (Lambert et al., 2018) but a positive relationship was found among Nigerian officers (Otu et al., 2020). Based on the limited past research and the current findings, the effects of job autonomy may be contextual, varying across nations. More research will either support or refute this postulation. This is why replication studies are important.

Further, the current findings suggest instrumental communication may not be a significant direct predictor of Indian officer involvement. This is consistent with the limited past research where this job resource had no significant relationship with job involvement in multivariate regression analysis for Chinese officers (Lambert et al., 2018) and US jail officers (Lambert & Paoline, 2012). This indicates that the lack of direct effects of instrumental communication on job involvement for prison officers may be universal, cutting across nations. This is not to say that instrumental communication is not important and does not have indirect effects on job involvement. Among Indian officers, this resource variable had strong positive correlations with job variety and quality supervision.

Educational level was the only personal characteristic to have a significant association with job involvement. On average, officers with a college degree reported lower job involvement as compared to officers without a college degree. Prison jobs may fail to utilize fully the skills of college-educated officers, resulting in status inconsistency, which, in turn, reduces the connection with the job (Jurik et al., 1987). The other personal characteristics did not have significant relationships with involvement, which is consistent with the past studies.

Indian prison administrators interested in raising the job involvement of officers should focus on job variety and quality supervision. Moreover, the effects of variety and supervision appear to be universal in their positive effects on involvement and likely apply to prisons in other nations. Officers need to be asked how they experience variety on the job and what can realistically be done to increase it across the prison. Additionally, officers could be rotated between positions, such as every 6 months, so they experience job variety and are challenged to learn new information and skills. Supervisors need to be made aware of job variety and how to increase it for the officers that they supervise. Supervisors need to be evaluated on providing variety for officers and rewarded for their effective efforts. Officers need to be asked for their input on what makes quality supervision and why. Training needs to be provided to help current supervisors become better at their jobs and provide even more quality supervision. Supervisors need to be aware that their position entails providing structure, guidance, training, support, and consideration for those they supervise. As with job variety, supervisors need to be evaluated and rewarded for their engagement in quality supervisory practices.

As with many studies, the current research had limitations. It was a single study of officers at one Indian correctional facility in the State of Haryana. Research at other Indian correctional institutions should be undertaken to determine whether the results can be replicated. Further, research in other nations should be conducted to help answer the question of which job demand and resource variables are universal or contextual in their effects. The current study examined two specific job demand and four job resource variables. Future research should include more role demand variables. Further, new studies should include other job demand and resource variables, such as role conflict, role ambiguity, work–family conflict, organizational support, formalization, and organizational justice. Research is needed on the effects of job involvement among correctional officers in a variety of nations, such as prosocial work behaviors (going beyond what is expected), absenteeism, and turnover intent/turnover. In the current study, job autonomy was measured with two items. Future research should measure this latent concept with more items. Likewise, job involvement, perceived dangerousness of the job, role overload, and job variety were each measured with three items and should be measured using more items. Research is needed on the effectiveness of interventions designed to raise job variety and quality of supervision. Research is needed on why the effects of perceived dangerousness of the job on involvement in the job vary across different studies. Another limitation is some surveyed officers declined to participate by taking the survey. As previously indicated, the prison employed 238, but only 163 returned the survey. Seventy-five participants (32%) declined to be part of the study. There was no apparent pattern for the nonresponding cases, and no bias based on the demographic characteristics of gender, position, and

age, as the responding participants were similar to the prison complement in terms of these characteristics. Nonetheless, it cannot be empirically demonstrated that there was no difference in the study variables or the observed relationships for those who declined to participant in the study. This limitation needs to be taken into account when considering the current findings.

Another limitation is that the current study was cross-sectional. While the causal process concerning how the job demand and resource variables affect job involvement is based on a well-accepted theoretical model and past research, the causal order cannot be empirically demonstrated in the current study, which would require longitudinal research. The order of the effects could be the reverse order of what was hypothesized. In other words, officers' job involvement could have influenced supervisors, resulting in supervisors being more supportive of officers, providing greater instrumental communication, granting more job autonomy, and allowing for greater job variety. In other words, more officer job involvement resulted in changes by supervisors, which, in turn, raised the other job resources.[2] It is also possible that there is a positive reciprocal relationship between the variables over time. For example, the job resource variables result in greater involvement, and greater involvement results in more opportunities for officers, resulting in increases in these job resource variables. While these are plausible alternative explanations for the findings, it is untestable with the current data. Only longitudinal research can empirically confirm the causal relationships occurring between workplace variables with job involvement. While the current study provided some interesting results, it is clear more studies are needed, especially among correctional officers across the globe.

In closing, prisons are found across the planet, and correctional officers are an important, valuable, and expensive resource. Protecting and investing in this resource is vital. Not only do officers have significant impacts on the operation of prisons, but the work environment also affects officers. The literature indicates that the work attitude of officers is important, and job involvement is a salient work attitude for correctional officers and prisons. The current study used the job demands–resources model to examine how the job demands of dangerousness of the job and role overload and the job resources of autonomy, variety, instrumental communication, and supervisions were linked to Indian correctional officer job involvement. Based on survey responses of 163 prison officers from a correctional institution in Haryana, India, perceived dangerousness of the job, job variety, and quality supervision each had significant positive effects on job involvement in a multivariate OLS regression analysis. Unlike Hypothesis 1, the resulted indicated perceived dangerousness of the job increased rather than reduced involvement in the job. This finding and past studies suggest that the effects of dangerousness may be contextual, varying across prisons. The current and past research indicate, however, that the positive effects of job variety and quality supervision may be universal across prisons in different nations. Nevertheless, more studies are need on how job demand and job resource variables are related to prison officer job involvement across a myriad of nations. This research will not only add valuable information for the particular prison and correctional agency studied but will contribute to the literature to answer the question of which workplace effects more fully are universal on correctional officers and which are contextual/situational. It is hoped that the current study will spark interest in studying of correctional staff in various nations, particularly those in Nonwestern nations.

Appendix

Below are the items used to measure the latent variables in this study. Except for instrumental communication, the items were answered using a six-point Likert scale of 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = somewhat agree, 5 = agree, and 6 = strongly agree. The response options for the instrumental communication items were 1 = not informed, 2 = informed very little, 3 = informed somewhat, 4 = informed, and 5 = very well informed.

Job Involvement (1) I live, eat, and breathe my job (i.e., my job is very important to me; (2) The major satisfaction in my life comes from work; and (3) The most important things that happen to me in my life usually occur at work.

Perceived Dangerousness of the Job (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.

Role Overload (1) I often receive an assignment without adequate resources and materials to get it done; (2) I am responsible for almost an unmanageable number of assignments and job duties; and (3) I consider myself overworked on my job.

Instrumental Communication How informed are you by the correctional organization about the following aspects of your job: (1) What is to be done; (2) What is most important about the job; (3) How the equipment is used; (4) Rules and regulations; and (5) What you need to know to do the job correctly.

Job Autonomy (1) I have flexibility in how and when to do my job duties; and (2) I have a great deal of say in how my job is done.

[2] This point was raised by a reviewer. We thank both reviewers for reviewing the manuscript. Their insightful comments and suggestions improved the manuscript.

Job Variety (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.

Quality of Supervision (1) My supervisor gives me advance notice of changes; (2) My supervisor looks out for my personal welfare; (3) When decisions are made by my supervisor, persons affected are asked for their ideas; and (4) My supervisor is friendly and approachable.

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Declarations

Conflict of interest The authors had no conflict of interest with this study.

Ethical Approval The study had human subjects approval and followed ethical guidelines.

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