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# The relationships between job and organizational characteristics and role and job stress among Chinese community correctional workers



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## ABSTRACT

Although the past two decades have witnessed a fast growth in studies on occupational attitudes and experiences among correctional officers, such research is rare in China despite the country's strong push for community corrections since 2003. Drawing on interview survey data collected from a province in China, the study assessed the relationships between job and organizational characteristics and job and role stress among Chinese community corrections workers. The results indicated that agency formalization, supervisory support, and coworker integration reduced role ambiguity and/or conflict, whereas job dangerousness, role ambiguity, and role conflict increased job stress among Chinese correctional staff. Workers with stronger punishment orientations also reported higher levels of job stress. Implications for future research and policy are discussed.

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## 1. Introduction

Job stress, which is generally defined as a worker's feeling of job-related hardness, tension, anxiety, frustration and worry arising from his or her job (Cullen et al., 1985; Parker and DeCotiis, 1983), has been widely identified as a common occupational hazard among criminal justice practitioners. A closely related concept is role stress, which refers to the stress that an individual experienced due to his or her occupational role in a workplace (Rizzo et al., 1970). In the arena of corrections, recent studies have shown a consistent linkage between high levels of job stress and problematic behavioral and health issues, such as higher levels of burnout, absenteeism, turnover intention and actual turnover, and premature deaths, and lower degrees of job performance, organizational commitment, and job satisfaction among correctional personnel (Armstrong et al., 2015; Griffin et al., 2010; Hogan et al., 2009; Lambert et al., 2005).

Given the detrimental impact of job stress on correctional staff, a large number of studies have been conducted over the past several decades to uncover the determinants of correctional job stress. This broad line of inquiry has focused on the influences of job and organizational characteristics, such as supervisor and coworker support (Armstrong et al., 2015; Atkin-

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Plunk and Armstrong, 2013; Garland et al., 2013; Liou, 1995; Misis et al., 2013; Paoline et al., 2006), instrumental communication (Garland et al., 2013; Lambert and Paoline, 2008), job dangerousness (Lambert et al., 2007; Lambert and Hogan, 2010; Lambert and Paoline, 2005, 2008; Misis et al., 2013), role conflict and ambiguity (Lambert and Paoline, 2005, 2008; Misis et al., 2013), and organizational satisfaction and commitment (Wells et al., 2009) on job stress. A few other studies investigated the effects of attitudinal orientations toward treatment and punishment on job stress (Atkin-Plunk and Armstrong, 2013; Liou, 1995). Almost all empirical studies also considered or controlled background characteristics, such as race, gender, age, education, supervisor status, and tenure, but their impacts were inconsistent and less than impressive (see, Dowden and Tellier, 2004 for a review).

This study analyzed the effects of job and organizational characteristics on job stress among community corrections (CC) workers in China. Several reasons justified this project. First, a large number of studies have been conducted to assess occupational attitudes among correctional staff who work in traditional institutions, but very few have examined similar issues among community corrections staff. Given that evidence accumulated from studying primarily institutional staff may not be necessarily transferrable to community correction workers, the latter thus deserves more research attention.

Second, the rise of China as a global powerhouse has made the country strategically important in assessing the generalizability of Western-based theories and evidence. A study of correctional job stress and its antecedents in China would not only advance our understanding of vital occupational attitudes and experiences associated with Chinese correctional workers but also promote the internationalization of sociological and criminological knowledge (Sampson, 2006). Findings of this study would also provide useful implications for policy makers and correctional administrators in designing and implementing policies and programs aimed at reducing job stress among correctional workers.

Third, the official adoption of CC by the Chinese government in 2003 has sparked a substantial number of studies on important developments in policy, legislation, and administration in China (Tang, 2013). This broad vein of inquiry has nonetheless paid little attention to individual correctional workers' beliefs, attitudes, skills, and work habits, the micro-level phenomena that could shed light on the possibility of successful correctional reforms. A few recent studies have examined Chinese CC workers' role orientations toward rehabilitation and punishment (Jiang et al., 2016a,b), attitudes toward semi-formal crime control between correctional staff and volunteers (Jiang et al., 2015) and attitudes toward job satisfaction and organizational commitment (Jiang et al., 2016a,b). Given the potential importance of culture, state control, and performance and outcome measures in Chinese corrections, the issue of correctional job and role stress among CC staff and its influencing factors warrants more investigation.

Finally, although past research has consistently identified role stress as one of the major determinants of job stress (e.g., Armstrong and Griffin, 2004; Cullen et al., 1985; Dowden and Tellier, 2004; Parker and DeCotiis, 1983; Tewksbury and Higgins, 2006), only a handful of studies have examined the relationships between role stress and other antecedents of job stress, such as personal, work and organizational characteristics (Garland et al., 2013; Lambert et al., 2009; Lambert et al., 2007; Liou, 1995; Regoli and Poole, 1980). Furthermore, what is missing from the existing literature is an analysis of the potential mediating effect played by role stress. That is, it is possible that a low level of role stress may serve a buffer that lessens the potential impact of negative work environment factors on job stress. In other words, unfavorable job and organizational characteristics could cause a higher degree of role ambiguity and conflict, which, in turn, lead to greater correctional job stress. This study would fill this knowledge gap in the current literature by testing the mediating effect of role stress on the relationships between job and organizational features and job stress.

Drawing on data collected from about 200 CC workers from a Chinese province, this study assessed the relationships between job and organizational characteristics and job stress. Three research questions guided this study:

- (1) Do job and organizational characteristics, such as job autonomy, procedural justice, job dangerousness, agency formalization, supervisory support, and coworker integration affect job stress among Chinese correctional workers?
- (2) Do role stressors, such as role ambiguity and role conflict, influence job stress among Chinese correctional workers?
- (3) Do job and organizational characteristics have a direct effect on job stress or mainly an indirect effect on job stress through role stress?

## 2. Community correction in China

Although community correction has become the dominant theme of corrections in Western societies over the past several decades, China did not officially launch its experimentation on CC until 2003. An increase in prison population and incarceration costs and the need for effective offender rehabilitation and reentry have contributed to the adoption of CC in the country (Jiang et al., 2014; Li, 2014). In less than a decade between 2003 and 2011, CC has been exponentially expanded from six experimental provinces and direct municipalities to 94% of counties and 89% of townships in China (Jiang et al., 2014).

CC is defined as the execution of non-imprisonment punishments that enabled government agencies, with the assistance from social groups, civic leagues, and volunteer organizations, to place committed offenders in communities for the purpose of correcting their criminal psychology and bad habits and facilitating their smooth return to society (Li, 2015). In line with community corrections in Western societies, Chinese version of CC furnishes alternative sanctions to convicted offenders that can substantially mitigate negative effects of incarceration and wholly utilize community resources to reeducate offenders (Feng, 2003).

The implementation of CC highlighted some recent important developments in Chinese corrections. The administration of community-based sanctions, such as public surveillance,<sup>1</sup> probation, parole, and the temporary execution of a sentence outside a confinement facility,<sup>2</sup> has been transferred from the police to the local justice offices since 2003 (Jiang et al., 2014). This shift crystallized China's intentions and efforts to reform its correctional system by aligning CC under the direct supervision of the Ministry of Justice, rather than the Ministry of Public Security. Such arrangement is a common practice in Western democracies, but taking away the authority from perhaps the most powerful social control apparatus (i.e., the police) in an authoritarian country was rare. It should be pointed out that the administration of a fifth type of community-based punishment, the deprivation of political rights, stays as the authority of the police. Since 2003, budget and manpower allocations to CC and workers' qualifications, selection, and training have noticeably improved. Finally, China's community correctional programs have been greatly diversified over the past decade. Following correctional innovations and reforms that have taken place worldwide since the 1980s, the country, for example, has introduced some intermediate sanctions between prison and standard probation, such as halfway houses and electronic monitoring, into its correctional system (Jiang et al., 2014).

At the grass-root level, CC is carried mainly by workers at the local justice office, which is also responsible for conducting people's mediation work, providing legal services to local residents, assisting newly released offenders in finding housing and employment, and engaging in legal propaganda. Chinese CC workers can be roughly classified into three groups, with somewhat varying specific tasks and government employee status. First, the director of the local justice office and some staff with the legal educational background are official government employees with full benefits of civic service. Their main tasks, primarily in the area of supervision and management, are to: (1) conduct presentence investigations and prepare presentence reports for the courts; (2) perform risk assessments of offenders and classify them into one of the three categories of supervision (e.g., minimum, regular, and intensive supervision); (3) design specific supervision plans for each offender based on risk assessments; (4) visit offenders regularly and arrange their participation in public benefit activity (e.g., community clean-up and fund-raising events); and (5) initiate and end the required processes and procedures of CC (Jiang et al., 2014).

Second, local CC staff members are social workers, whose main responsibilities are to conduct regular counseling meetings with offenders and use their knowledge, professional contacts, and community resources to assist offenders in addressing their problems. Due to manpower shortage, social workers are frequently required to take up the tasks that are supposed to the responsibilities of the directors of the local justice offices. In almost all jurisdictions, social workers are contractors, who are salaried workers financially supported by local governments and enjoy similar benefits as other staff with the legal background.

Finally, local CC work is carried out with the assistance from volunteers, who are likely to be retired government servants and teachers, college students, and model workers (Jiang et al., 2014). These volunteers provide help in education and rehabilitation by, for instance, engaging in informal conversations with offenders and rendering their care and encouragement to offenders. According to Jiang et al. (2015), there is another group of volunteers, which is comprised of members of urban and rural residents' committees. These volunteers receive stipends offered by local governments, have similar benefits as social workers even though their benefits may not be as great or as secure as social workers, take regular training courses administered by local justice bureaus, and have official responsibilities of assisting local justice officers in performing CC work. While they are called volunteers by local government officials, these individuals are not strictly volunteers by Western standards.

Although the Chinese government has made steady progress in formalizing and professionalizing its correctional system, CC continues to face some challenges. For example, at the national level, the lack of a systematic assessment of the processes and outcomes of CC has made future planning, designing, and implementing difficult. Moreover, relevant articles in the Criminal Law and Criminal Procedural Law fail to specify the exact nature of CC and the division of labor among correctional, judicial (courts and prosecution) and police departments (Qu, 2013; Wu, 2009), leading to great role ambiguity among CC workers. The uncertainty of long-term funding from the central government could also be a major barrier of the future development of CC (Jiang et al., 2014). At the local level, the absence of professionally trained workers and the existence of role ambiguity have resulted in a high degree of workforce turnover and instability (Jiang et al., 2014; Li, 2014).

### 3. Antecedents of correctional job stress

This study tested the impact of job and organizational characteristics on Chinese CC staff stress. Originally proposed by Hackman and Oldham (1975, 1976), the job characteristics model provided a theoretical foundation to explain how job-related factors influenced work outcomes, such as stress, job satisfaction, turnover, burnout, and absenteeism (Fried and Ferris, 1987; Griffin et al., 2010; Saavedra and Kwun, 2000; Tieggs et al., 1992). The model posited that positive job characteristics could cause "positive psychological states, which, in turn, result in positive outcomes for both the employees and the

<sup>1</sup> Public surveillance is a form of CC that allows convicted offenders to live and work in the community while under the close supervision by local justice authorities (used to be the police but now the local justice office). Offenders are prohibited to exercise their rights of speech, publication, assembly, parade and protest without the permission of the surveillance agency. They are also required to report their activities to the authorities and seek approval if they want to leave their residence or move to another place. The time period for public surveillance ranges from 3 months to under 2 years.

<sup>2</sup> Similar to public surveillance, the temporary execution of a sentence outside a confinement facility is another type of CC that diverts offenders from prison to community. Unlike public surveillance, such punishment is normally given to convicted offenders who (1) have serious health problems that need medical care, (2) are pregnant or breastfeeding their babies, and (3) are unable to take care of their own.

employing organization”, while negative job characteristics could lead to “strain and other negative psychological states and, in the end, increase the chances of negative outcomes” (Griffin et al., 2012, p. 1134). Similar to job characteristics, positive organizational characteristics, such as supervisor and coworker support (Armstrong et al., 2015; Atkin-Plunk and Armstrong, 2013), instrumental communication (Garland et al., 2013), and organizational satisfaction and commitment (Wells et al., 2009), could cause favorable psychological states, including lower levels of role and job stress.

This study focused on the influences of both positive and negative job and organizational characteristics on job stress. The former included job autonomy, procedural justice, agency formalization, supervisory support and coworker integration, whereas the latter consisted of role stress and job dangerousness. In this review, we briefly defined each of these job and organizational characteristics and reviewed past studies that have assessed their effects on job stress.

In the field of corrections, job stress involves the emotional and behavioral reactions that correctional staff may have when their knowledge and abilities fail to match or cope with work demands and pressures. A closely related but conceptually different term to job stress is job burnout, which is the end result of prolonged exposure to job stress (Griffin et al., 2010). Similarly, job stress and role stress are conceptually and empirically distinct (Garland et al., 2013). In fact, research has indicated that role stress is a salient antecedent of job stress (Armstrong and Griffin, 2004; Cullen et al., 1985; Lambert and Paoline, 2005).

Role stress can be defined as the stress that a worker experienced due to his or her occupational role on the job (Rizzo et al., 1970). Past studies on correctional officers have identified two primary types of role stress, role ambiguity and role conflict. Role ambiguity and role conflict are linked to each other and have been viewed as part of a larger concept called role strain or stress in the literature (see, for example, Lambert and Paoline, 2008; Liou, 1995). Role ambiguity is the level of ambiguity in information about what is expected to be done for a job. It indicates correctional workers' feelings of uncertainty regarding goals, authority, responsibilities, and expectations embedded in their job (Lambert et al., 2013). Role ambiguity tended to cause high levels of frustration and strain, which could result in reduced worker effectiveness and satisfaction with their job.<sup>3</sup> Role stress has been found to be one of the major factors of job stress (Garland et al., 2013; Parker and DeCotiis, 1983). Previous studies (Lambert and Paoline, 2005, 2008; Misis et al., 2013; Whitehead and Lindquist, 1985) focused more on the impact of role conflict than role ambiguity on job stress. The only exception is Lambert and Paoline (2008) study, which found that role ambiguity was positively related to job stress among correctional staff.

A second form of role strain is *role conflict*, which refers to “the simultaneous occurrence of two or more incompatible sets of pressures regarding the role occupant's expected behavior” (Shamir and Drory, 1982, p. 81). Like role ambiguity, role conflict is also a source of work stressor. An organization, such as an institutional correctional facility or community correctional agency, often has multiple goals. When job instructions are not clear or job expectations are not congruent, employees often do not know what they need to do at work, which, in turn, results in frustration and dissatisfaction with their work. A few prior studies have reported a positive connection between role conflict and job stress (Lambert and Paoline, 2005, 2008; Misis et al., 2013; Whitehead and Lindquist, 1986). Studies on workers of traditional correctional institutions and CC also showed similar findings in terms of the association between role conflict/clarity and job satisfaction (Jiang et al., 2016a,b; Misis et al., 2013) and burnout (Cullen et al., 1985; Jin et al., 2016). Even so, both measures of role stress, particularly role ambiguity, remained relatively under-studied.

Similar to role ambiguity and role conflict, *job dangerousness* is another form of negative job characteristics. It can be defined as the risk and harm associated with one's immediate work environment. For correctional officers, job dangerousness was a serious stressor (Lambert et al., 2010). They might frequently face or worry about oral and physical attacks from offenders. Community correctional officers might even worry about their supervised offenders attacking their family members since they often lived in the same or a nearby community. If correctional officers worked in an environment that made them often concerned about their job safety, they would feel stressful. If this situation lasted, it might produce job stress. Despite its apparent relevance, job dangerousness has only been investigated by a small number of studies, showing that job dangerousness promoted stronger feelings of job stress among correctional officers (Lambert and Paoline, 2005, 2008; Lambert and Hogan, 2010; Misis et al., 2013).

In addition to job dangerousness, other job characteristics, such as job autonomy, and organizational characteristics, such as procedural justice, agency formalization, and supervisory and peer support, are expected to have a stress-reducing effect. *Job autonomy* refers to correctional workers' ability to control their work situation and degree of freedom in making job-related decisions (Griffin et al., 2012). Most people desire to have a certain degree of control in what they do and how they do it (Bruce and Blackburn, 1992; Lambert et al., 2012). Thus, job autonomy is an important factor for many people to look for a job, keep it, and feel happy about it. A high level of job autonomy means that workers are highly trusted by their supervisors or organizations. It also indicates that their input is respected or valued by supervisors and institutions (Griffin et al., 2012). A high level of job autonomy allows an employee to feel self-directed and then proud of his/her job (Griffin et al., 2012; Lambert et al., 2012), which could lead to lower role strain and job stress. Regoli and Poole (1980) early study found that job autonomy was negatively associated with role conflict. Garland et al., (2013) study showed an inverse relationship between job autonomy and role stress. Using a similar scale closely related to job autonomy, Lambert et al. (2009) found that input into decision making was negatively associated with role stress. With respect to job stress, a study found that greater input into

<sup>3</sup> Although role ambiguity is proposed to create job stress and lower job satisfaction, it is possible that role ambiguity may actually enhance job satisfaction by allowing correctional officers a higher degree of discretion and control in performing their job.

decision making tended to reduce job stress (Lambert and Paoline, 2008), but three other studies reported no such connection (Lambert and Hogan, 2010; Lambert et al., 2006; Whitehead and Lindquist, 1985). Job autonomy was also found to be weakly related to burnout among traditional correctional and community corrections staff (Jin et al., 2016; Lambert and Hogan, 2010).

*Procedural justice* reflects workers' perceptions of the fairness in promotion and performance evaluations in work places (Lambert et al., 2010). Past studies revealed a weak linkage between procedural justice and job burnout among traditional correctional workers (Lambert et al., 2007) and CC staff (Jin et al., 2016). Little literature has given attention to the relationship between procedural justice and correctional officer stress. One study found that such linkage did not exist (Lambert et al., 2007), whereas another study reported that procedural justice was negatively associated with job stress (Lambert et al., 2006). There are some possible explanations for a negative relationship between procedural justice and job stress. Trust between an employee and employer is crucial to organizational success. Fair and transparent policies and practice in an organization could increase employees' trust in their supervisors and organizations, which likely leads to lower role strain and job stress from work. On the other hand, unfair work policies and managerial style could hurt employees' confidence and trust in their supervisors and consequently yield greater role and job stress. Indeed, the connection between managerial style and subordinate compliance and role satisfaction in organizations has long been acknowledged (see, for example, Etzioni, 1961). The impact of procedural justice clearly deserves more attention in research of correctional stress.

A second positive organizational characteristic is *agency formalization*, which refers to the degree to which written rules, regulations, and standards of behavior are available for jobs and roles in an organization (Price and Mueller, 1986). Formalization serves some benefits for the organization, including permitting employees to conduct quality work and perform their tasks with greater confidence and restraining harmful arbitrary behaviors and decisions of both supervisors and employees (Adler and Borys, 1996; Marsden et al., 1994). Although formalization has the potential of reducing job stress, such a connection has yet to be confirmed. One study actually found a weak association between agency formalization and job stress (Lambert and Paoline, 2008), but two other studies revealed a significant negative connection between formalization and role stress (Garland et al., 2013; Lambert and Paoline, 2008; Lambert et al., 2009), implying that the impact of formalization on job stress could be indirect through role stress (Lambert and Paoline, 2008).

Like agency formalization, *supervisory support*, which signals the extent to which a correctional worker feels that he or she is supported by supervisors, is expected to be inversely related to role strain and job stress. Unlike formalization, which involves mainly agency rules or regulations, supervisory support touches on leadership or management styles and interpersonal relationships among members within the same organization. Such support is likely to lessen the job demands imposed on employees and enhance their motivation to overcome job difficulties and self-perceived values and importance to the organization (Garland et al., 2013), all of which have the potential of reducing role and job stress among correctional workers. A closely related term to supervisory support is administrative support, which reflects the similar feelings of being supported toward the administration or organization. Past studies found that administrative or supervisory support decreased job stress of correctional staff (Armstrong et al., 2015; Liou, 1995; Paoline and Lambert, 2012; Misis et al., 2013; but see Wells et al., 2009). Others showed supervisory support or trust was linked to lower correctional role stress (Garland et al., 2013; Liou, 1995), but administrative support has a weak connection to role stress (Garland et al., 2013).

Another organizational characteristic involving interpersonal relationships among the same work group is *coworker integration*, which indicates coworker cohesion within an organization. Strong bonds and collaboration among employees are critically important for correctional institutions as agency staff have to work closely together to fulfill organizational objectives and goals (Halepota and Shah, 2011). Positive support from and interactions with coworkers is inclined to cultivate a more productive and pleasant working environment, resulting in favorable psychological feelings (Lambert et al., 2002). Furthermore, greater integration can generate support and guidance for workers to deal with problematic and difficult situations (Lambert et al., 2015). A few studies have included coworker integration in their analysis but the results were far from conclusive. For example, one study found that perceived support from coworkers reduced job stress (Paoline et al., 2006), whereas a second study showed a weak linkage between the two (Misis et al., 2013). Similar patterns were found for role stress, with one study reporting a negative relationship between coworker integration and role stress (Lambert et al., 2009), while another demonstrating a weak association (Garland et al., 2013). More studies are clearly needed to assess the impact of coworker integration on role and job stress.

Based on the above review, it is hypothesized that job autonomy, procedural justice, agency formalization, supervisory support, and coworker integration are inversely related to role stress and job stress, whereas job dangerousness is positively connected to role stress and job stress. It is also expected that role ambiguity and role conflict have a positive effect on job stress.

## 4. Methodology

### 4.1. Research sites

This study used data collected from 15 counties in the province of Hubei in central China over the summer and fall of 2013. Hubei initiated its pilot project on CC in a few selected localities in 2005. By 2012, under the direct leadership and supervision of the provincial-level *Community Corrections Administration Bureau*, community correctional agencies were largely in place across 14 cities and 80 counties in the province, with a workforce of 1974 correctional officers, 1520 social workers, and 11,657 volunteers (Hubei Provincial People's Government, 2012). A total of 76,386 offenders had been placed under CC between 2005 and 2014. Among them, 50,072 had been released from CC.

According to China's official policies and regulations, researchers must obtain permission from higher levels of governmental authorities to conduct research on local correctional staff. The 15 sample localities were chosen because of the researchers' familiarity with and connections to local correctional authorities, the willingness of local officials to participate in the research project, and the permissions from provincial levels of governmental agencies to conduct the study. The sample localities consisted of a combination of rural and urban settings, with *justice field stations* being set up in villages and small towns and *justice bureaus* being established at city of county neighborhoods. Normally a rural justice station is staffed by 1–3 CC workers and an urban justice field station is manned by 2–4 workers.

#### 4.2. Data collection and sample

Data collection was completed by a research team comprised of several professors and graduate students. Team leaders first contacted the *Community Corrections Administration Bureau* for permission to conduct field research with frontline correctional workers. Some connections were made via the authority at the provincial level, while others were made via personal connections with county-level leaders. With the approval and assistance from the provincial-level authority, team members were introduced to directors of justice field stations and bureaus, who were informed about the project and agreed to help recruiting CC workers in their units.

Drawing chiefly on past research on correctional officers, the team developed a survey questionnaire, which consisted of approximately 200 items that tapped into various aspects of CC workers' occupational attitudes and conditions. To make this study comparable to those conducted in the West especially in the United States, most items in the questionnaire were adopted from Western studies (e.g., Crank et al., 1995; Cullen et al., 1985; Curry et al., 1986; Garland et al., 2013; Ivancevich and Matteson, 1980; Lambert et al., 2007, 2010; Lindquist and Whitehead, 1986; Neveu, 2007). Questions were translated back and forth by Chinese and American professors and thoroughly discussed by the research team to make sure that each scale had enough operational questions and each question had appropriate answer categories and wording. Three steps of pre-test were then taken to polish the survey instrument, including question selection, word choice, and the order of questions. A first round of pre-test was carried out on a small group of students and faculty at a local university and minor revisions were made based on participants' suggestions. The questionnaire was then sent to a few CC officials for their comments and further revision was conducted. A final round of pre-test was executed on members of the research team and the instrument was finalized in the spring of 2013.

During the second half of 2013, the research staff visited a number of local justice stations or bureaus and performed survey interviews with CC workers who were available at the offices and agreed to be interviewed. On average, 1 or 2 workers from each rural station and 2 or 3 staff members from each urban station were surveyed. Interviewees were clearly informed about the purpose of the project and the principles of voluntariness and anonymity for participation were particularly emphasized by researchers. Interviews were conducted in an office within field stations without any supervisors and other coworkers presenting. It took an average of 45 min to complete an interview.

A total of 235 CC workers were presented during the research team's visits to their offices. Among them, 225 agreed to participate in the project, including 113 in rural areas and 112 in urban areas. Sample respondents represented approximately 6.5% of the total CC workers in the province. With respects to their key demographics, 66% respondents were male and 34% were female. Their ages varied from 20 to 58, with an average of 39 years old. Less than 6% had a high school or lower background, 40.9% had an associate degree, and 53.3% had a college degree or higher. Their year of correctional experience ranged from less than one year to 10, with an average of 4 years. The representation of sample staff was unknown because of the lack of official demographic data on correctional workers in sample sites. The researchers' own knowledge about CC workers, however, suggested that there was a reasonable degree of similarity between the study sample and the population of CC staff.

#### 4.3. Variables

Key variables used in this study included one dependent variable of *job stress*, two mediating variables of *role ambiguity* and *role conflict*, and six independent variables of *job autonomy*, *procedural justice*, *job dangerousness*, *agency formalization*, *supervisory support*, and *coworker integration*. Factor analysis was conducted to confirm the appropriateness of variable construction. As shown in Table 1, all items within each of the scales were loaded onto a single factor that accounted for at least 60% of the variance. Factor loadings for items ranged from 0.58 to 0.93. The Cronbach's alpha associated with each scale (reported in Table 1) was greater than 0.74, suggesting at least acceptable internal reliability. Factor scores were used as dependent, mediating, and independent variables in regression analysis.

Five additional variables were also controlled in the analysis, including three background characteristics and two attitudinal orientations. Sex was coded as a dummy variable with 1 representing male. Age was measured in years. Educational attainment was a categorical variable ranging from 1 (=elementary school and below) to 7 (=graduate school and above). The rehabilitation orientation was measured by the four items asking the respondents whether they agree that the criminal justice system should: (1) provide counseling or therapy to offenders with mental health problems, (2) provide treatment to offenders with substance abuse problems, (3) improve the educational involvement and attainment of offenders, and (4) promote employment opportunities for offenders (Miller, 2014). Response categories varied from strongly disagree (=1) to strongly agree (=5). Factor analysis revealed that all four items loaded onto a single factor and the Cronbach's alpha (=0.75) indicated acceptable internal reliability. Factor scores were used variables in analysis. The punishment orientation was

**Table 1**  
Construction of dependent, mediating and independent variables.

Variables and items	Factor Loading	Eigenvalue	% Variance explained
<b>Job stress</b>			
There are a lot of aspects of my job that make me upset	0.72	2.47	61.86
When I'm at work I often feel tense or uptight	0.86		
I am usually under a lot of pressure when I am at work	0.80		
A lot of time my job makes me very frustrated or angry	0.76		
<b>Role ambiguity</b>			
Clear and planned goals and objectives exist for my job (reverse coded)	0.82	3.05	60.93
I know that I have divided my time properly (reverse coded)	0.67		
I feel certain how much authority I have (reverse coded)	0.68		
I know what my responsibilities are (reverse coded)	0.86		
I know what is expected of me (reverse coded)	0.85		
<b>Role conflict</b>			
The rules that community correctional workers have to follow are never clear to me	0.90	2.43	80.96
I regularly receive conflicting requests at work from two or more people	0.91		
When a problem comes up here, people seldom agree on how it should be handled	0.89		
<b>Job autonomy</b>			
How freedom do you have as to how to do your job	0.82	2.34	77.95
How much does your job allow you to make decisions on your own	0.93		
How much say do you have over what happens on your job	0.90		
<b>Procedural justice</b>			
There is a fair opportunity to be promoted	0.74	2.97	74.14
My own hard work will lead to recognition as a good performer	0.89		
The standards used to evaluate my performance have been fair and objective	0.93		
My supervisor is familiar enough with my job to fairly evaluate me	0.87		
<b>Job dangerousness</b>			
In my job, a person stands a good chance of getting hurt	0.81	2.50	62.38
The chance of community correctional workers to get hurt is not high (reverse coded)	0.58		
My job is not safe	0.90		
Community correction job is a lot more dangerous than other job	0.83		
<b>Agency formalization</b>			
Whatever situation arises, we have procedures to follow in dealing with it	0.72	2.74	68.57
A "rules and procedures" manual exists and is readily available within this agency	0.85		
My agency keeps a written record of everyone's job performance	0.87		
Job guidance is readily available	0.86		
<b>Supervisory support</b>			
Generally speaking, supervisors support decisions made by subordinates	0.70	2.49	62.35
Our agency administrators handle internal problems promptly	0.86		
We have a coherent style of management	0.85		
Agency leaders are generally very supportive for workers' decisions	0.75		
<b>Coworker integration</b>			
To what extent are the people in your immediate work group friendly?	0.83	2.12	70.66
When you need help, are your coworkers willing to help you?	0.86		
To what extent do you look forward to being with people in your work group each day	0.83		

measured by a single item asking the respondents about their degree of agreement with the statement: "The criminal justice system should make punishment its main goal (strongly disagree = 1; strongly agree = 5)". These attitudinal variables were controlled as previous studies suggested a link between orientations toward treatment and punishment and job stress (Atkin-Plunk and Armstrong, 2013; Liou, 1995). It should also be noted that the preliminary analysis indicated that CC worker role and job stress did not differ across areas (rural v. urban). Area thus was not controlled in the analysis.

Table 2 reports the correlation matrix of explanatory variables and Table 3 displays the descriptive statistics for all variables used in regression analysis. The matrix of two-variable correlations among all predicting variables was checked (results not shown) to detect possible multicollinearity problems. The highest correlation was 0.57 (between role ambiguity and agency formalization), which was acceptable. The variance inflation factors (VIFs) were also examined. All of them were much lower than the generally accepted limit of 10 (Neter et al., 1996), suggesting that multicollinearity was not a concern in this study. In addition, the histogram of standardized residuals and the normal probability test (graphs not shown) indicated that the normality of residual errors was very good, with no extreme residuals. When we plotted studentized residuals against each independent variable, no problems of heterogeneity or nonlinearity were found.

#### 4.4. Analysis plan

To adequately address our research questions, we conducted three steps of regression analysis to test both the direct and indirect effects (through role stress) of job and organizational characteristics on job stress. We first assessed the influences of job and organizational characteristics on role stress (i.e., role ambiguity and role conflict). We then examined the impact of job

**Table 2**  
Correlation matrix for explanatory variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Role ambiguity	1.00	-0.37***	0.27***	0.32***	-0.04	0.57***	0.54***	0.37***	0.00	0.05	0.07	0.33***	0.06
2. Role conflict	-0.37***	1.00	-0.21***	-0.30***	0.16***	-0.34***	-0.19***	-0.32***	0.03	0.00	0.02	-0.12**	0.03
3. Job autonomy	0.27***	-0.21***	1.00	0.25***	-0.01	0.24***	0.24***	0.27***	0.13**	0.19***	-0.03	0.13**	0.01
4. Procedural justice	0.32***	-0.30***	0.25***	1.00	-0.06	0.41***	0.35***	0.40***	0.02	0.01	0.02	0.27***	0.10*
5. Job dangerousness	-0.04	0.16***	-0.01	-0.06	1.00	-0.10*	0.03	-0.13**	-0.09**	0.06	0.03	-0.17***	0.05
6. Agency formalization	0.57***	-0.34***	0.24***	0.41***	-0.10*	1.00	0.55***	0.32***	-0.10*	-0.02	-0.05	0.30***	0.10*
7. Supervisory support	0.54***	-0.19***	0.24***	0.35***	0.03	0.55***	1.00	0.40***	-0.01	-0.02	-0.03	0.23***	0.11*
8. Coworker integration	0.37***	-0.32***	0.27***	0.40***	-0.13**	0.32***	0.40***	1.00	0.00	0.09*	0.03	0.21***	0.01
9. Male	0.00	0.03	0.13**	0.02	-0.09**	-0.10*	-0.01	0.00	1.00	0.28***	-0.14**	-0.03	0.04
10. Age	0.05	0.00	0.19***	0.01	0.06	-0.02	-0.02	0.09*	0.28***	1.00	-0.26***	-0.10*	-0.14**
11. Educational attainment	0.07	0.02	-0.03	0.02	0.03	-0.05	-0.03	0.03	-0.14**	-0.26***	1.00	-0.03	0.06
12. Rehabilitative orientation	0.33***	-0.12**	0.13**	0.27***	-0.17***	0.30***	0.23***	0.21***	-0.03	-0.10*	-0.03	1.00	-0.01
13. Punishment orientation	0.06	0.03	0.01	0.10*	0.05	0.10*	0.11*	0.01	0.04	-0.14**	0.06	-0.01	1.00

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

**Table 3**  
Descriptive statistics for variables in regression analysis.

Variables	M	SD	Min	Max	$\alpha$
<i>Dependent variable</i>					
Job stress	0.00	1.00	-2.50	3.54	0.79
<i>Mediating variables</i>					
Role ambiguity	0.00	1.00	-2.58	3.22	0.82
Role conflict	0.00	1.00	-1.88	3.36	0.88
<i>Independent variables</i>					
Job autonomy	0.00	1.00	-2.40	1.75	0.86
Procedural justice	0.00	1.00	-4.26	2.04	0.87
Job dangerousness	0.00	1.00	-2.31	2.77	0.79
Agency formalization	0.00	1.00	-4.46	1.96	0.85
Supervisory support	0.00	1.00	-3.66	2.12	0.78
Coworker integration	0.00	1.00	-2.89	1.49	0.79
<i>Control variables</i>					
Male	0.66	0.48	0.00	1.00	–
Age	38.84	9.80	20.00	58.00	–
Educational attainment	5.44	0.78	1.00	7.00	–
Rehabilitative orientation	0.00	1.00	-2.94	1.73	0.75
Punishment orientation	2.60	0.95	1.00	5.00	–

Note: M = mean; SD = standard deviation; Min = minimum; Max = maximum;  $\alpha$  = Cronbach's alpha.

and organizational characteristics on job stress. Finally, we tested the effects of job and organizational characteristics and role stress on job stress. Four conditions have to be met to establish mediation, including (1) job and organizational characteristics are directly related to role stress, (2) job and organizational characteristics are directly associated with job stress, (3) role stress is connected to job stress, and the significant relationships between job and organizational characteristics and job stress should disappear when controlling for role stress (see Baron and Kenny, 1986).

## 5. Results

Table 4 reports the results from multivariate regression analysis. Model 1 and 2 assessed the direct relationships between job and organizational characteristics and role stress. In Model 1, two of the organizational factors exerted a significant effect on role ambiguity. Consistent with our hypotheses, greater agency formalization and stronger supervisory support tended to reduce role ambiguity among CC workers. Among background characteristics, educational attainment was significantly related to role ambiguity, with better educated Chinese staff expressing lower levels of role ambiguity. Workers with stronger goal orientations toward rehabilitation were likely to have lower degrees of role ambiguity. All explanatory variables together accounted for 46% of the variation in role ambiguity.

In Model 2, two organizational features were significantly associated with role conflict. Similar to its impact in Model 1, higher degrees of formalization were inclined to lower workers' perceived role conflict. Likewise, higher degrees of integration among coworkers were accompanied by lower levels of perceived role conflict. The independent and control variables explained 21% of the variation in role conflict.

Among job and organizational characteristics, job dangerousness surfaced as the only significant predictor of job stress in Model 3. Not surprisingly, higher degrees of perceived job dangerousness were linked to greater job stress among correctional staff in China. Among control variables, the only significant predictor was the punishment orientation variable. Chinese CC



**Table 4**  
Summary of multivariate regression<sup>a</sup> (N = 225).

Variables	Model 1 (Role ambiguity)		Model 2 (Role conflict)		Model 3 (Job stress)		Model 4 (Job stress)	
	B	SE	B	SE	B	SE	B	SE
<i>Independent variables</i>								
Job autonomy	-0.07	0.06	-0.10	0.07	-0.00	0.07	0.04	0.06
Procedural justice	0.02	0.06	-0.14	0.07	-0.06	0.07	-0.02	0.07
Job dangerousness	-0.02	0.05	0.11	0.06	0.29***	0.07	0.27***	0.06
Agency formalization	-0.35***	0.07	-0.25**	0.08	-0.03	0.08	0.12	0.08
Supervisory support	-0.26***	0.06	0.08	0.08	-0.06	0.08	-0.03	0.08
Coworker integration	-0.11	0.06	-0.20**	0.07	-0.08	0.07	0.00	0.07
<i>Control variables</i>								
Male	-0.03	0.11	0.02	0.14	0.04	0.14	0.04	0.13
Age	-0.07	0.01	0.04	0.01	0.10	0.01	0.10	0.01
Educational attainment	-0.11*	0.07	0.03	0.08	0.06	0.08	0.08	0.08
Rehabilitative orientation	-0.16**	0.06	0.05	0.07	0.03	0.07	0.05	0.07
Punishment orientation	0.01	0.06	0.06	0.07	0.17**	0.07	0.15*	0.06
<i>Mediating variables</i>								
Role ambiguity	–	–	–	–	–	–	0.21**	0.08
Role conflict	–	–	–	–	–	–	0.30***	0.07
F-test	16.13***		5.02***		3.70***		6.12***	
R <sup>2</sup>	0.46		0.21		0.16		0.27	
Adjusted R <sup>2</sup>	0.43		0.17		0.12		0.23	

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

<sup>a</sup> Entries are standardized coefficients and standard errors from OLS regression.

workers who agreed with the punishment goal of the criminal justice were more likely to report higher degrees of job stress. The model is less successful in terms of explanatory power, registering a  $R^2$  of 0.16.

Model 4, which is the full model, showed some interesting results. When both role ambiguity and role conflict were added into the regression model, the two significant relationships found in Model 3 (i.e., job dangerousness and the punishment orientation) remained, suggesting their effects on job stress were largely unaffected (or unmediated) by role ambiguity and role conflict. Both the role stress variables (ambiguity and conflict) were positively related to job stress, which is consistent with our expectations. Adding the two role stress variables into the analysis improved the explanatory power by nearly 70%, raising the  $R^2$  from 0.16 to 0.27.

## 6. Discussion

Although community-based sanctions have become the dominant theme in recent correctional reforms in China, studies on the occupational attitudes and experience of street-level workers remain sporadic. Drawing on the job and organizational characteristics model, this study assessed the influences of positive and negative features of work environment on job stress. The possible mediating effect of role stress on the relationships between job and organizational characteristics and job stress was also tested. Our major findings are discussed along the three research questions.

First, among the six job and organizational characteristics, job dangerousness surfaced as the only job stressor for Chinese CC staff. Although it is somewhat surprisingly to know the weak connections between other job and organizational characteristics, our findings confirm the results from previous studies showing that dangerousness is one of the strong antecedents of job stress (Lambert and Hogan, 2010; Lambert and Paoline, 2005, 2008; Lambert et al., 2007; Misis et al., 2013). It is reasonable to expect that when CC workers perceive their work environment as dangerous to their safety and health, they are more likely to report high levels of job stress. Given its high relevance but under-investigated status in the existing literature, job dangerousness has to be included in future research of correctional staff stress. Future studies should contain measures reflecting not only physical risks or threats but also psychological or mental threats to correctional workers.

Second, as expected role ambiguity and role conflict are strong predictors of job stress. Among the four variables significantly related to job stress, role conflict exerted the strongest effect, followed by job dangerousness, role ambiguity, and punishment orientation. One may suspect that the relatively newness of CC in China probably has contributed to a widespread role stress among correctional workers (Jiang et al., 2014; Li, 2014). When CC workers lack a clear definition of their role but are required to perform a wide array of tasks, a higher level of stress among them is anticipated. Our findings, which echo the results from Western-based studies (Lambert and Paoline, 2005, 2008; Misis et al., 2013; Whitehead and Lindquist, 1986), highlight the intertwined nature of role strain and job stress. The potential detrimental impact of role stress on job stress thus is not limited to the Western correctional settings, but can be extended to the Chinese context. Our results call for greater attention to the connection between role stress and job stress given a relatively thin line of past research. Future studies should continue to refine measures of role stress and place more attention to the effect of role ambiguity on job stress, which has been severely under-researched. Scholars should also consider conducting in-depth interviews with CC workers to uncover their sources of role stress.

Finally, it appears that role stress mediates very little the effects of job and organizational characteristics on job stress, particularly as the impact of job dangerousness stayed largely unchanged when role stress variables were included in the analysis simultaneously. Although agency formalization, supervisory support and coworker integration significantly influenced role ambiguity or role conflict or both, these factors failed to have a significant effect on job stress. Perhaps China's traditional tight control of work force discretion has made CC workers become more aware of organizational features related to their role and responsibility. It is possible that some job and organizational characteristics relate more to role stress than job stress, whereas others connect stronger to job stress than role stress. Our findings suggest the need to conceptually and analytically separate role stress away from job and organizational characteristics by considering it as an outcome or consequence of job and organizational characteristics and continually testing whether role stress serves as a mediator or perhaps moderator of the relationships between job and organizational features and job stress.

Before discussing policy implications of our findings, several limitations related to the generalizability of this study should be noted. First, data used in this study were collected from a small number of CC workers from a single Chinese province. Though the central government has issued several key administrative orders to clarify and standardize CC operations in the whole country, significant variations exist in regulations, resources, measures, and training across provinces, which could influence correctional staff's work environment and subsequently their experiences with role strain and job stress. Our findings thus may not be generalized to CC workers in other provinces and regions. Answering the call for more scientific and comprehensive assessments of CC in China (Jiang et al., 2014), researchers should continue to utilize survey and interview data collected from different provinces and regions (e.g., coastal v. inland) to assess correctional workers' occupational outlooks and operational behavior.

Second, our data focused on stress among community-based correctional workers. It is unclear whether our findings can be extended to officers in traditional correctional facilities (e.g., prisons and detention centers), who arguably may be subjected to an even more complicated work environment with greater risk and job stress. Future research should gather data from both community- and institutional-based correctional workers to compare and contrast their sources and experiences of occupational stress.

Third, due to the cross-sectional nature of our data, we were unable to draw inferences from our findings about the causal relationship between job and organizational characteristics and stress. Future studies should consider collecting longitudinal information to assess the possible causal effects between the variables. Finally, given that only four independent variables were found to be significantly related to job stress in our final model, some theoretical relevant variables, such as work-family conflict and resiliency, were absent in our analysis and should be incorporated into future research.

Our findings carry some implications for Chinese policy makers and correctional administrators. Our findings suggest that both role ambiguity and role conflict are major sources of job stress for Chinese CC workers. The local government thus must seek ways to build a healthy work environment for correctional workers by providing clear information regarding the structure, purpose and practices of the agency, clarifying legal requirements associated with the roles and functions of CC staff, offering appropriate pre- and in-service training to CC officers and social workers, and rendering adequate budget support to front-line justice offices. Our findings also indicate that efforts should be made to mitigate work-related dangerousness by observing employee difficulties or listening to their complaints of difficulties, discussing the problems and possible solutions with individual workers, and implementing and evaluating proper intervention programs. Administrators and immediate supervisors should strive to swiftly remove any harmful aspects of CC work environments. Stress-reduction programs and interventions should be targeted at CC workers with a strong punishment orientation. Occupational stress has to be addressed promptly and effectively as it is undoubtedly a serious challenge to correctional workers and institutions. A healthy workplace will benefit not only correctional workers but also their clients and organizations.

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