Do race and gender matter in police stress? A preliminary assessment of the interactive effects

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Abstract

The interactive effects of race and gender in a multi-dimensional assessment of police occupational stress were examined in this study. The sample from a large urban police department was divided into four subgroups: White males, African-American males, White females, and African-American females. Comparisons were carried out to assess group differences in three major domains of stress process: stressors, coping mechanisms, and multiple psychological manifestations of stress. Specific attentions were paid to observe any similar or dissimilar interactive effects of race and gender on the stress process. The results showed that dynamic factors such as measures of work environment and coping mechanisms contributed more in explaining police stress than static factors such as race and gender. Additionally, destructive coping and work-family conflict (spillover) were the most stable correlates of police stress across all subgroups included in the analysis. The impacts of negative exposure and camaraderie on police stress were conditional on the subgroup statuses. Limitations and implications of the study are discussed.

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Introduction

Although it was argued that racism and sexism remained deeply embedded in police culture (Martin, 2004; Walker, 1985), increased diversity in American police force became one of the most noticeable changes in the past decades. For both minority and female officers, the road leading to their full acceptance in police force seemed long and uncertain (Martin, 1991; Steel & Lovrich, 1987; Warner, Steel, & Lovrich, 1989; Zhao & Lovrich, 1998). The police profession, not unlike other traditional “Anglo male sex-typed occupations” (Haarr & Morash, 1999), presented a rather challenging or even outright hostile work environment for women and minority officers. Martin (2004) succinctly described how White male officers often fit African-American officers into their devalued social status while seeing women officers in gender defined roles. Understandably, a potential outcome of such racial and/or sexual discriminations could be the manifestations of heightened psychological stress on the part of the minority and women officers.

In spite of the plethora of literature on the relationship between police work and job-related stress, there was a paucity of empirical evidence pertaining to the interactive effects of race and gender on the police stress process. Three domains of the stress process included: stressors, stress mediators, and stress outcomes. Researchers argued that social stratifications such as those based on race and gender could provide insights to better understand an individual’s stress process (Pearlin, 1989).
Much of the earlier research used small convenience samples and measured only a limited number of variables (Burke, 1993; He, Zhao, & Archbold, 2002). The numbers of officers in the subgroups were usually insufficient in the samples to allow meaningful inter-group comparisons. Consequently, very little attention was paid to study the interactive effects of race and gender on police stress.

The current study was intended to fill this void. More specifically, it sought to answer the following three questions. First, whether the levels of stress among minority and female officers (i.e., African-American males, White females, and African-American females) were similar compared to White male officers? Second, how did static factors based on racial and gender statuses compare to dynamic factors (e.g., perceptions of work environment and individual coping mechanisms) in predicting the level of psychological stress among police officers? Finally, how did race and gender interact with both stressors and individual coping mechanisms? The data used in this study was derived from a large survey of sworn officers conducted in the Baltimore City Police Department in the late 1990s.

**Police stress: static versus dynamic factors**

A review of literature on the relationship between police work and stress revealed two groups of explanatory factors. The first group concerned the impact of (static) social statuses of race and gender on police stress. Researchers argued that African-American and female officers might demonstrate higher level of stress than White male officers due to the unfavorable traditional police organizational culture (e.g., Martin, 1990, 2004; Walker, 1985). The second group of factors was more dynamic, which included both aspects of police work environment and coping mechanisms adopted in response to work-related stress.

**Static factors and police stress**

Researchers had long argued that many stressful experiences could be traced back to surrounding social structures and people’s locations within them (Brown & Campbell, 1990; Burke, 1988; Deaux & Ullman, 1983; Galinsky, Bond, & Friedman, 1993, 1996). For example, these structures acted as various systems of social stratification such as race and ethnicity, gender, age, and social and economic class (Pearlin, 1989). According to Pearlin (1989, p. 243), “All too often, people’s background and circumstantial attributes are either overlooked in analyses or received scant attention. Thus data that should be at the heart of sociological inquiry are frequently treated only as analytic noise that needs to be controlled statistically.”

Walker (1985) evaluated the historical development and the implications of minority and female employment in American policing. He argued that the process of accepting African-American and female officers in police organizations was long and sometimes confrontational (e.g., lawsuits). Similarly, Martin’s (1980, 2004) seminal works well illustrated the difficult path undertaken by policewomen who were “breaking and entering” one of the most stereotypically masculine occupations in society.

It was understandable that an increasingly more diversified workforce could bring both incentives and problems. Stress management became a critical element in building a healthy, effective, and efficient workforce. The highly stressful nature of police work and its overwhelming impacts on both the well being of officers and the welfares of citizenry they served were well documented (e.g., Violanti & Aron, 1993; Wexler & Logan, 1983). More recently, researchers began to focus more on studying the impact of group status (mainly gender-based) on police stress. Some researchers examined gender, workplace problems, and stress in policing (e.g., Morash & Haarr, 1995) while others explored the different impacts of job-related stressors and coping mechanisms on male and female officer stresses (e.g., He et al., 2002). Expanding beyond the investigation of gender effects, researchers looked further into the interactions of gender and race in search for more tailored strategies to cope with police occupational stress (e.g., Haarr & Morash, 1999).

**African-American officers and stress**

There was indeed very little empirical research available on the stress of African-American police officers. Some theoretical discussions, however, did exist in police literature. Two major views could be identified in the literature. The first suggested that stress experienced by African-American officers could be traced to their social status in a racist society (Dulaney, 1996). The lengthy history of discrimination by the police against minorities was a particular source of stress for minority officers, who were often entangled “between loyalty to the police department and obligation to their race” (Dulaney, 1996, p. 73). More extreme views suggested that African-American officers were protectors of the White society and traitors to their own race (Alex, 1976).
The second view focused more on factors at the individual level. It saw the traditional culture in police departments as a potential stressor (Leinen, 1984). Researchers argued that, for African-American officers, the police work environment was both hostile and alienating (e.g., Walker, 1985). Consequently, African-American officers often perceived racial integration as a major issue that hindered the creation of a healthy and friendly police work environment (Toch, 2002). Therefore, a likely hypothesis could be stated that African-American officers might experience higher level of stress than White officers.

**Female officers and stress**

Researchers have found that gender is a highly relevant factor in examining the sources and coping strategies of stress among police officers (Brown & Campbell, 1990; Haarr & Morash, 1999; He et al., 2002; Pendergrass & Ostrove, 1984). After all, female officers have become a visible token group in policing, easily singled out for pressure (Wherle-Einhorn, 1980). Gender roles and gender-appropriate behavior constitute two major sources of stress for them. Previous literature revealed that female police officers were likely to encounter higher levels of harassment, overt hostility, and other negative social interactions on the job (Balkin, 1988; Deaux & Ullman, 1983; Martin, 1980, 1990, 2004). Similar to the situation of African-American officers, a common explanation for this maltreatment of female officers is that police organizational culture in general is adversarial to them. Both the internal organizational culture and external work environment are often less favorable to female officers, consequently, female police officers are likely to experience more stress than their male counterparts.

**Dual minority status: African-American female officers and stress**

Researchers suggested that the interaction of race and gender has made African-American female officers a “dual minority” in police organizations. White male officers, African-American male officers, as well as White female officers often resent the “dual status” of the African-American female officers when it comes to promotions (Martin, 1994). In a sense, African-American female officers are considered as the truly “protected” minority in a police agency. Martin (2004) provided a timely and comprehensive assessment of the interactive effects of race and gender on women police officers. She described vividly how racism separates White female officers from African-American female officers and how sexism divides African-American male officers from African-American female officers (Martin, 2004). Logically, African-American female officers ought to face greater levels of stress. This contention, although examined in some qualitative studies with limited interviewees, has not been tested in any large-scale quantitative study.

**Dynamic correlates of police stress**

In contrast to the limited discussions on the impact of race and gender on police stress, there was a rich body of literature that focused on a number of dynamic explanatory factors. Police work is often regarded as one of the most stressful occupations (Alkus & Padesky, 1983; Burke, 1993; Dantzer, 1987; Eisenburg, 1975; Goodman, 1990; Kroes, 1985; Loo, 1984; Reese, 1986; Selye, 1978; Violanti, 1985). Based on police stress research conducted in the past three decades, some of the most salient correlates can be identified. They include: various aspects of police work environment, work-family conflict, and individual coping mechanisms (He et al., 2002).

One of the major sources of stress for police officers is related to their unique work environment. The dangers associated with police work are usually highlighted in surveys of police officers wherein they are asked to rank-order a list of possible stressors. Not surprisingly, the violent death of a partner or having to take a life in the line of duty is typically among the top stressors identified by officers (Coman & Evans, 1991; Violanti & Aron, 1993). Other stressors often identified by police officers include making violent arrests, and attending gruesome crime scenes (Violanti & Aron, 1993). Overall, violent and unpredictable incidents involved in police work are commonly considered a leading source of police stress (He et al., 2002).

The perceived (negative) individual experience in a police department was another major source of stress for officers (Violanti & Aron, 1993). Studies often identified the unique characteristics of police agencies as a significant factor predicting stress among police officers (Brown & Campbell, 1990; Martelli, Waters, & Martelli, 1989; Maslach, 1982; Spielberger, Westberry, Grier, & Greenfield, 1981). Organizational stressors could include events precipitated by police administration that were troublesome to members of the organization (e.g., blockage of the flow of information, impersonal rules, and the chain of command). Given the bureaucratic nature of police organizations, individual input at the workplace was often reduced to min-
Biewski and Kim (1990) argued that the quasi-military nature of police organizations led to alienation among police officers. Police officers were, on the one hand, required to exercise considerable discretion while on duty. On the other hand, they were tightly controlled by the plethora of administrative rules surrounding their work. A substantial body of literature was now available addressing the important role of peer support and trust of co-workers and supervisors in buffering the effects of stress stemming from police work (Dignam, Barrera, & West, 1986; Ganster, Fusilier, & Mayes, 1986; House, 1981; House & Wells, 1978; LaRocco, House, & French, 1980; Morris, Marybeth, & DuMont, 1999; Patterson, 2003; Quick, Murphy, Hurrell, & Orman, 1999). Some researchers argued that peer support was especially salient to police officers for two reasons (Ellison & Genz, 1983; Graf, 1986): (1) police officers’ lives literally depend on each other in dangerous situations; and (2) police work-related stress may only be completely comprehensible to fellow police officers. Graf (1986) found that police officers who perceived themselves as having a strong work-related peer support system perceived their jobs as being less stressful (also see LaRocco et al., 1980).

Another major source of stress in police work involves work-family relationships. Research on work-family conflict had long recognized that the personal lives of police officers were often affected by the unique nature of police work which, in turn, made officers perceive their job as more stressful (Galinsky et al., 1993, 1996; Hughes, Galinsky, & Morris, 1992). Work-family conflict was commonly identified as an important predictor of psychological burnout among police officers (Burke, 1988, 1993; Jackson & Maslach, 1982).

Individuals who are exposed to stressful conditions do not necessarily suffer the same outcomes (Pearlin, 1989). Coping and social support are often regarded as among the most significant mediators. Although coping literature was replete with varied definitions of coping, most researchers agreed that only the conscious use of a cognitive or behavioral strategy that was intended to reduce perceived stress or improve a person’s resources to deal with stress reflected the coping process (Anshel, 2000; Evans, Coman, Stanley, & Burrows, 1993; He et al., 2002). A review of the literature on stress revealed that individuals usually take two approaches when attempting to reduce stress (Burke, 1993). The first approach focuses on constructive coping strategies, which are aimed at gaining family and social support from family and friends in order to reduce stress. The second approach involves various destructive coping strategies such as increased drinking, smoking, or staying away from friends and family members.

Haarr and Morash (1999) closely examined the racial and gender patterns in police coping mechanisms. They found significant gender and racial group differences. Haarr and Morash (1999, p. 303) found that “women cope with stress by using escape and by keeping written records more often than men.” The authors also reported that African-American officers rely on strong relationships with fellow minority officers when coping with stress.

Overall, the constructive coping mechanism is considered to be the more appropriate approach to reduce stress. Studies indicated that improper or maladaptive coping often contributed to rather than reduced the intensity of perceived stress (Aldwin, 1994; Lazarus, 1990). Failure to cope effectively with stress can lead to long-term and chronic stress (Loo, 1984).

**Methods**

The data used in these analyses came from Gershon’s (1999) study titled “Police stress and domestic violence in police families in Baltimore, Maryland, 1997–1999.” This data set was acquired from Inter-university Consortium for Political and Social Research’s (ICPSR #2976) website. This study was a survey of 1,106 sworn police officers from each of the nine Baltimore City police precincts and from the Baltimore City police headquarters. Self-administered questionnaires were distributed to police officers who were eligible for the project during roll call at each shift. The purpose of the original study was to investigate police stress and domestic violence among police officers. The instrument included questions in four areas: (1) symptoms of psychological and physical stress and likely stressors; (2) perceived current stress; (3) coping strategies; and (4) health outcomes. The reported response rate was 68 percent in the original study (see Gershon, 1999 for more details).

**Dependent variables**

The instrument developed to measure police stress in Gershon’s (1999) survey was adopted with minor modification from the Brief Symptom Inventory (BSI), a brief form of the Symptom Check List 90 (Derogatis & Melisaratos, 1983). The original BSI instrument was comprised of fifty-three items, which measured nine dimensions of psychological and physical symptoms.
of stress. Each of the items was rated on a five-point scale of distress ranging from not at all (0) to extremely troublesome (4). The BSI was developed in 1975 and designed to assess the psychological symptom patterns of community residents, and psychiatric and medical patients (Derogatis & Savitz, 1999). Its psychometric validity was tested and sustained in numerous empirical studies reported in the U.S. (for a review see Derogatis & Savitz, 1999).

Gershon’s (1999) survey included three of the nine dimensions of stress symptoms and used a four-point scale of distress ranging from never (1) to always (4). The first dimension was somatization, a scale that reflected the psychological distress arising from perception of bodily dysfunction. Complaints typically focused on cardiovascular, gastrointestinal, respiratory, and other systems with strong autonomic mediation. Aches and pains, and discomfort localized in the gross musculature were also frequent manifestations. The second dimension was anxiety, a scale on which general indicators such as restless, nervousness, and panic attacks were represented. The third dimension was depression, a scale that reflected a broad range of the elements constituting the clinical depressive syndrome. Symptoms of dysphoric effect and mood were represented, as were signs of withdrawal of interest in activities, lack of motivation, and loss of vital energy (for a detailed discussion of dimensions see Derogatis, Lipman, & Covi, 1973).

Explanatory variables

Static variables

Three dummy variables were constructed based on race and gender statuses. They were: (1) African-American male officers, (2) White female officers, and (3) African-American female officers. Based on the review of literature, the authors hypothesized that African-American male and female officers and White female officers would demonstrate higher levels of psychological stress than White male officers. In particular, African-American female officers might show the highest level of stress compared to all the other three groups due to their “dual minority” status. The dummy variable representing White male officers served as the reference group.

Dynamic correlates

Six variables were included in three major contexts: work environment, work-family conflict, and coping mechanisms. Three variables were used to measure the unique police work environment characteristics. First, negative exposures to police work was used to measure the dangerous or negative nature of events that police officers experienced at workplace (e.g., making a violent arrest, shooting someone, attending a police funeral, etc.). Second, camaraderie was a measure of peer support and trust within a police officer’s immediate work groups (e.g., cooperation between units and trust between partners). And third, unfairness measured officers’ perceptions of treatment as an officer both within the context of bureaucratic nature of police organization and by the media.

Spillover measured the work-family conflict and its impact on the psychological stress of an individual officer. Unhappiness in personal life and burnout at the workplace are thought to have significant influence on an individual’s levels of stress (e.g., too physically and emotionally exhausted to deal with spouse/significant other, treating family the way as treating suspects, etc.).

Two measures of coping mechanisms were also used in the current study: (1) constructive coping was a measure of direct, positive, and active responses to work-related stress (e.g., talk to spouse, relative, and friends about the problem, make a plan of action and follow it, pray for guidance and strength, etc.), and (2) destructive coping measured the negative and avoidance approaches to work-related stress (e.g., stay away from everyone, yell or shout at spouse/significant other, a family member or a professional, smashing things, smoking, drinking, gambling, pretending nothing is bothering them, etc.). See Appendix A for a detailed listing of all the items included for the aforementioned explanatory variables.

Demographic variables

Five demographic variables were used as control measures in this analysis: marital status (1 = married), education status (1 = less than B.A. degree), rank (1 = non-supervisory officers), prior military experience (1 = yes) and years of service. Existing police stress literature tended to suggest that, among police officers, marital status (Horwitz, McLaughlin, & White, 1997), education (Ayres & Flanagan, 1992), rank (Brown & Campbell, 1990; Kaufmann & Beehr, 1989; Robinson, 1981) and years of service on the job (Evans, Coman, & Stanley, 1992; Fielding, 1987; Gudjonsson & Adlam, 1985; Patterson, 1992) were relevant characteristics associated with both exposure to stressors and experiences of stress. Other studies, however, found either inconsistent or weak relationships between police stress and demographic characteristics (e.g., Burke, 1993; Burke & Richardsen, 1993; Maslach, 1982).
Findings

Descriptive statistics are presented in Table 1. A total of 1,104 officers were included in the study. About 14 percent of them were female officers. There were 643 (61.3 percent) Caucasian male officers, 253 (24.1 percent) African-American male officers, 51 (4.9 percent) Caucasian female officers, and 102 (9.7 percent) African-American female officers. The majority of survey respondents were married (60 percent), non-supervisory line-level officers (82 percent). In addition, they tended not to have a college degree (70 percent) or have had prior military experiences (65 percent). The average length of service among them was about twelve years.

Table 2 presents the results of group comparisons concerning the outcomes of police psychological stress, perceived stressors, and coping mechanisms. The authors ran ANOVA test and used post hoc Bonferroni tests to facilitate more in-depth group comparisons. Overall, statistically significant group differences were observed mainly in two of the three stress outcome measures (i.e., somatization and depression). The levels of anxiety were quite similarly distributed across all four groups of officers. The only statistically significant group difference in anxiety existed between White and African-American male officers (1.29, 1.21, respectively). This difference was, however, marginal.

In fact, consistent (statistically) significant differences between White male and African-American male officers could be found in all dimensions of police psychological stress. Contrary to the hypothesis, White male officers reported higher levels of somatization, anxiety, and depression than those reported by their African-American male counterparts, respectively. Consistent with the previous literature, the levels of reported psychological stresses were generally higher among female police officers than male officers. Additionally, there was no statistically significant difference between White and African-American female officers. To summarize, while African-American male officers had the lowest levels of stress, White female officers appeared to be at the other end of the continuum, regardless of the stress measures.

Relatively fewer group differences were observed in the perceived stressors. Generally speaking, White officers (both male and female) reported higher levels of negative exposures than their African-American counterparts. In particular, White male officers reported statistically significant higher level of negative exposure (1.41) than both the African-American male officers (1.22) and the African-American female officers (1.14).

With regard to camaraderie, only one statistically significant difference was found. African-American male officers reported significantly higher level of camaraderie (3.70) than African-American female officers (3.41). In another comparison, interestingly, both White and African-American male officers reported higher levels of unfairness (3.04 and 3.00, respectively) than African-American female officers (2.79). With respect to spillover, no statistically significant group differences were found.

The analysis also suggested that African-American officers (both male and female) were more likely to use constructive coping than their White counterparts. In a continuum from the lowest to the highest rankings on the use of constructive coping, the four groups could be placed in the following order: White male (2.24), White female (2.48), African-American male (2.63), and African-American females (2.79). No statistically significant group differences were found in the measures of destructive coping.

Table 3 includes results from Ordinary Least Square (OLS) regression analyses. After controlling for other explanatory and demographic variables, dummy variables representing African-American males, African-American females and White females were...
Table 2
Stress, stressors, and coping across racial and gender groups among police officers in Baltimore City Police Department (BPD)

<table>
<thead>
<tr>
<th>Stressors</th>
<th>Balt. PD (Mean (S.D.))</th>
<th>W/M (Mean (S.D.))</th>
<th>AA/M (Mean (S.D.))</th>
<th>W/F (Mean (S.D.))</th>
<th>AA/F (Mean (S.D.))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Somatization</td>
<td>1.39 (.38)</td>
<td>1.39 (.36)</td>
<td>1.29 (.32)</td>
<td>1.56 (.37)</td>
<td>1.53 (.50)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.27 (.36)</td>
<td>1.29 (.36)</td>
<td>1.21 (.31)</td>
<td>1.32 (.30)</td>
<td>1.25 (.41)</td>
</tr>
<tr>
<td>Depression</td>
<td>1.47 (.39)</td>
<td>1.47 (.38)</td>
<td>1.37 (.34)</td>
<td>1.64 (.41)</td>
<td>1.55 (.46)</td>
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<tr>
<td>Stressors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Neg. exposures</td>
<td>1.34 (.64)</td>
<td>1.41 (.64)</td>
<td>1.22 (.66)</td>
<td>1.36 (.55)</td>
<td>1.14 (.63)</td>
</tr>
<tr>
<td>Camaraderie</td>
<td>3.60 (.80)</td>
<td>3.59 (.81)</td>
<td>3.70 (.75)</td>
<td>3.55 (.82)</td>
<td>3.41 (.82)</td>
</tr>
<tr>
<td>Unfairness</td>
<td>3.00 (.65)</td>
<td>3.04 (.63)</td>
<td>3.00 (.70)</td>
<td>2.82 (.60)</td>
<td>2.79 (.62)</td>
</tr>
<tr>
<td>Spillover</td>
<td>2.38 (.77)</td>
<td>2.43 (.77)</td>
<td>2.31 (.78)</td>
<td>2.33 (.84)</td>
<td>2.28 (.75)</td>
</tr>
<tr>
<td>Coping</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Constructive coping</td>
<td>2.40 (.60)</td>
<td>2.24 (.56)</td>
<td>2.63 (.62)</td>
<td>2.48 (.56)</td>
<td>2.79 (.53)</td>
</tr>
<tr>
<td>Destructive coping</td>
<td>1.55 (.32)</td>
<td>1.57 (.31)</td>
<td>1.52 (.35)</td>
<td>1.52 (.26)</td>
<td>1.48 (.34)</td>
</tr>
</tbody>
</table>

*p < .05.

ANOVA and post hoc Bonferroni tests (a,b,c,d,e,f are indications of statistically significant group differences).

a W/M-AA/M.

b W/M-W/F.
c W/M-AA/F.
d AA/M-W/F.
e AA/M-AA/F.
f W/F-AA/F.

Table 3
Regression analyses—somatization, anxiety, and depression as the dependent variables (standardized regression coefficients reported for OLS regression)

<table>
<thead>
<tr>
<th>Stressors</th>
<th>Somatization β</th>
<th>s.e.</th>
<th>Anxiety β</th>
<th>s.e.</th>
<th>Depression β</th>
<th>s.e.</th>
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<tr>
<td>Neg. exposures</td>
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<td>.019*</td>
<td>.127</td>
<td>.018*</td>
<td>.113</td>
<td>.019*</td>
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<tr>
<td>Camaraderie</td>
<td>-.161</td>
<td>.013*</td>
<td>-.101</td>
<td>.013*</td>
<td>-.151</td>
<td>.013*</td>
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<td>Unfairness</td>
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<td>.017</td>
<td>-.005</td>
<td>.016</td>
<td>.064</td>
<td>.017*</td>
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<tr>
<td>Spillover</td>
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<td>.015*</td>
<td>.208</td>
<td>.015*</td>
<td>.209</td>
<td>.015*</td>
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<tr>
<td>Coping</td>
<td></td>
<td></td>
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<tr>
<td>Constructive coping</td>
<td>.020</td>
<td>.018</td>
<td>.010</td>
<td>.017</td>
<td>-.035</td>
<td>.018</td>
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<tr>
<td>Destructive coping</td>
<td>.278</td>
<td>.035*</td>
<td>.332</td>
<td>.034*</td>
<td>.311</td>
<td>.035*</td>
</tr>
<tr>
<td>Race/gender</td>
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<tr>
<td>African American male (AA/M)</td>
<td>-.060</td>
<td>.026*</td>
<td>-.045</td>
<td>.024</td>
<td>-.033</td>
<td>.025</td>
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<tr>
<td>White female (W/F)</td>
<td>.104</td>
<td>.048*</td>
<td>.026</td>
<td>.045</td>
<td>.111</td>
<td>.047*</td>
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<tr>
<td>African American female (AA/F)</td>
<td>.162</td>
<td>.038*</td>
<td>.004</td>
<td>.036</td>
<td>.136</td>
<td>.038*</td>
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<td>Demographic variables</td>
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<tr>
<td>Marriage</td>
<td>-.023</td>
<td>.021</td>
<td>-.060</td>
<td>.021*</td>
<td>-.055</td>
<td>.021*</td>
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<tr>
<td>Education</td>
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<td>.022</td>
<td>.016</td>
<td>.021</td>
<td>-.007</td>
<td>.022</td>
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<tr>
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<td>.030</td>
<td>.007</td>
<td>.028</td>
<td>.004</td>
<td>.029</td>
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<tr>
<td>Military experience</td>
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<td>.021</td>
<td>-.004</td>
<td>.020</td>
<td>.004</td>
<td>.021</td>
</tr>
<tr>
<td>Years of service</td>
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<td>.001</td>
<td>-.007</td>
<td>.001</td>
<td>.074</td>
<td>.001*</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>.31*</td>
<td>.29*</td>
<td>.37*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>34.23</td>
<td>31.37</td>
<td>43.50</td>
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</tbody>
</table>

*p < .05.
predictive of two types of police stress (i.e., somatization and depression). In particular, White and African-American female officers had higher levels of somatization and depression than that of the reference group-White male officers. And, African-American male officers had lower levels of somatization than White male officers.

Aside from the contributions of the race and gender based dummy variables, negative (work) exposures, spillover, and destructive coping were statistically significant predictors of all three measures of police psychological stress. Camaraderie appeared to be the lone stress-reducing factor found in the analyses. The R squares of the three regression models were moderate, registering at .31 (somatization as the dependent variable), .29 (anxiety as the dependent variable), and .37 (depression as the dependent variable) in the three models. When the relative importance of the variables (based on the size of the standardized regression coefficients) was compared, stressors and coping measures outweighed dummy variables representing racial and gender statuses.

Based on the findings reported in Table 3, only two dependent variables (somatization and depression) were selected to run partitioned regression analyses. None of the race-gender dummies variables had statistically significant impact on anxiety. Therefore, the variable anxiety was dropped from the subsequent partitioned analysis. Separate OLS regression analyses were run based on each of the three subgroups (i.e., White males, African-American males, and African-American females) with sufficient sample sizes. These analyses provided an assessment of the interactive effects of the race-gender group statuses and the explanatory variables (i.e., stressors and coping mechanisms) included in the regression models. Work-family conflict (spillover) and destructive coping were found to be the most stable stress-inducing factors across all three subgroups under investigation. Negative exposures appeared to be a stress-producing factor for White male officers on both somatization and depression, and for African-American officers on depression only. Camaraderie, a consistent stress-buffering factor for White male officers, did not appear to be a significant factor that would impact either male or female African-American officers. It was worth mentioning that married White male officers tended to have lower level of depression than their unmarried counterparts. It was also found that African-American male officers with longer years of service on the police force tended to have higher level of depression while controlling for all the other variables. The R squares of the partitioned regression analyses remained modest and were generally comparable across the subgroups.

Discussion

This was a rare study that attempted to assess the impacts of race and gender on officer stress, stressors, and coping in a large metropolitan police department. To answer the first research question, this study found that, overall, (1) female officers had higher levels of stress than male officers; (2) White male officers reported significantly higher levels of stress than African-American male officers; and (3) African-American female officers did not show higher levels of stress than White female officers. Although these findings were generally supportive of gender based police stress hypotheses (i.e., female officers may have higher levels of stress than male officers), they were somewhat in contrary to the race-based hypotheses (i.e., minority officers may have higher stress than White officers). It was also worth noting that statistically significant group differences were observed mainly in two of the three stress outcome measures (i.e., somatization and depression). The levels of anxiety were quite similar across subgroups included in the study. No evidence was found to suggest an additive effect of race and gender on the stress level of African-American female officers.

To answer the second research question, this study found that race and gender statuses did matter in assessing police occupational stress. There was statistical evidence to suggest that race and gender statuses contributed independently to two different measures (i.e., somatization and depression) of police occupational stress. In the regression results reported in Table 3, however, the impacts of race-gender dummy variables were much less in magnitude (based on standardized regression coefficients) and in consistency (whether or not the impact was found on all dependent variables) than those of the two explanatory variables, destructive coping and spillover.

The third research objective was to probe for possible interactive effects of race and gender on both stressors and coping mechanisms. There were some interesting patterns of interactions between these variables. First of all, this study found some convergent patterns of interactions. Destructive coping and spillover were the most stable stressors found across all three subgroups of officers: White males, African-American males and females. They were the most important predictors of police stress among all the variables included in the analysis. No observation, however, was made for the White female subgroup.
that was excluded from the partitioned analyses (reported in Table 4) due to limited subsample size.

Secondly, this study found divergent patterns of interactions. The impact of negative exposures on police stress seemed to condition upon racial and gender statuses. For example, for White male officers, negative exposures on the job were positively associated with greater levels of both somatization and depression. For African-American male officers, negative exposures were positively associated only with somatization but not depression. In contrast, negative exposures had no impact on African-American female officers. Similar observations could be made on the variable camaraderie. Higher level of perceived camaraderie reduced somatization and depression, but such impact was only applicable to White male officers. Although an in-depth investigation of the intricate department dynamics was beyond the scope of the current inquiry, it substantially improved the understanding of the convergent and divergent patterns of interactions found in the statistical analysis.

There were multiple implications of this study. First, the findings added confirming evidences to the existing knowledge concerning the impact of gender on police occupational stress. The authors found unambiguous evidence to confirm that gender differences did exist in police stress, and that female officers had higher levels of stress than male officers. This finding was consistent with both the predictions based on the theory of tokenism (Kanter, 1977) and the empirical evidence generated from other fields of study (Yoder, 1994). Kanter’s (1977) study defined that tokens were those clearly definable subgroups that made up less than 15 percent of the whole. Visibility, contrast, and role encapsulation were three major negative processes commonly associated with token representation.5 Explicit testing of Kanter’s (1977) theory of tokenism, however, had never been done in the field of criminal justice.

Secondly, unlike observations based mostly on previous qualitative studies, current quantitative assessment of officer stress based on a large urban police sample suggested a rather different pattern of racial impact. Not only did African-American male officers report less stress than White male officers, African-American female officers also reported less stress than White female officers. An obvious caveat in the current study was that it was based on one sample, from one large urban police department, and measured at one time point only. Therefore, these findings were limited in generalizability. Future research will certainly benefit from multi-site and multi-wave assessment of police stress.

Table 4
Partitioned regression analyses using somatization and depression as the dependent variables (standardized regression coefficients reported; standard errors in parentheses)\(^a\)

<table>
<thead>
<tr>
<th>Stressors</th>
<th>W/M</th>
<th>AA/M</th>
<th>AA/F</th>
<th>W/M</th>
<th>AA/M</th>
<th>AA/F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
</tr>
<tr>
<td>Neg. exposures</td>
<td>.153* (.024)</td>
<td>.150* (.034)</td>
<td>.065 (.094)</td>
<td>.113* (.025)</td>
<td>.108 (.033)</td>
<td>.093 (.087)</td>
</tr>
<tr>
<td>Camaraderie</td>
<td>.233* (.016)</td>
<td>.011 (.027)</td>
<td>.047 (.053)</td>
<td>.182* (.017)</td>
<td>.105 (.026)</td>
<td>.120 (.049)</td>
</tr>
<tr>
<td>Unfairness</td>
<td>.009 (.022)</td>
<td>.014 (.032)</td>
<td>.037 (.082)</td>
<td>.071 (.023)</td>
<td>.013 (.030)</td>
<td>.030 (.076)</td>
</tr>
<tr>
<td>Spillover</td>
<td>.214* (.019)</td>
<td>.274* (.031)</td>
<td>.345* (.068)</td>
<td>.163* (.020)</td>
<td>.369* (.029)</td>
<td>.207* (.063)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coping</th>
<th>W/M</th>
<th>AA/M</th>
<th>AA/F</th>
<th>W/M</th>
<th>AA/M</th>
<th>AA/F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
</tr>
<tr>
<td>Constructive coping</td>
<td>.019 (.024)</td>
<td>.010 (.033)</td>
<td>.097 (.087)</td>
<td>.038 (.025)</td>
<td>.074 (.031)</td>
<td>.135 (.080)</td>
</tr>
<tr>
<td>Destructive coping</td>
<td>.233* (.046)</td>
<td>.276* (.063)</td>
<td>.339* (.157)</td>
<td>.313* (.047)</td>
<td>.270* (.060)</td>
<td>.416* (.145)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demographic</th>
<th>W/M</th>
<th>AA/M</th>
<th>AA/F</th>
<th>W/M</th>
<th>AA/M</th>
<th>AA/F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
<td>β</td>
</tr>
<tr>
<td>Marriage</td>
<td>.010 (.027)</td>
<td>.006 (.048)</td>
<td>.048 (.111)</td>
<td>.012 (.028)</td>
<td>.026 (.045)</td>
<td>.121 (.102)</td>
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<tr>
<td>Education</td>
<td>.038 (.034)</td>
<td>.030 (.071)</td>
<td>.085 (.164)</td>
<td>.011 (.034)</td>
<td>.065 (.068)</td>
<td>.148 (.151)</td>
</tr>
<tr>
<td>Rank</td>
<td>.015 (.026)</td>
<td>.057 (.039)</td>
<td>.005 (.123)</td>
<td>.004 (.027)</td>
<td>.098 (.037)</td>
<td>.041 (.113)</td>
</tr>
<tr>
<td>Years of service</td>
<td>.014 (.002)</td>
<td>.073 (.003)</td>
<td>.077 (.10)</td>
<td>.048 (.002)</td>
<td>.152* (.003)</td>
<td>.012 (.009)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adj. R²</th>
<th>W/M</th>
<th>AA/M</th>
<th>AA/F</th>
<th>W/M</th>
<th>AA/M</th>
<th>AA/F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.28*</td>
<td>.25*</td>
<td>.35*</td>
<td>.32*</td>
<td>.40*</td>
<td>.37*</td>
</tr>
<tr>
<td>F</td>
<td>21.81</td>
<td>8.04</td>
<td>5.36</td>
<td>26.65</td>
<td>14.87</td>
<td>5.77</td>
</tr>
<tr>
<td>n</td>
<td>604</td>
<td>230</td>
<td>91</td>
<td>604</td>
<td>230</td>
<td>91</td>
</tr>
</tbody>
</table>

\(^a\) Regression analysis based on W/F (White female) subsample was not performed due to limited number of valid cases (n = 49). *p < .05.
There is no denial that the organizational culture of police across the country has traditionally been adverse to minority and female officers (Alex, 1976; Haarr, 1997; Martin, 1994; Steel & Lovrich, 1987). Researchers argued that the increased presence of minority and female officers posed a serious challenge to the traditional culture of policing (e.g., Walker, 1985). Although it remained premature to draw an all-encompassing conclusion, the current study on the impacts of gender and race on police stress indicated a complicated process of change. In sum, it was found that the most important and most stable predictors of police stress in this study were destructive coping and work-family conflict (spillover). Their impacts transcended all the subgroups under study. Therefore, police stress management should focus more on these known stressors.

On the other hand, the race and gender compositions in American police organizations have indeed changed significantly. Today, female officers alone comprise over 12 percent of sworn employees in large police departments employing over one hundred sworn officers (Law Enforcement Management and Administrative Statistics, 2000). In the Baltimore City Police Department, the site of this study, African-American officers and White female officers comprised 38.7 percent of the total sworn department personnel. Collectively, this may suggest that they were no longer the token employees in the department. Whether or not an officer’s racial or gender status continues to be predictive of his/her stress remains a valid question for future endeavor. Since there was very limited research on the impacts of race and gender on police stress, the findings reported here should be considered as preliminary. More research is certainly needed to further explore the relationship between changes in police organizational culture and the occupational stress of police officers.

Appendix A. Composite index construction for the current study

Response categories are rated from 1 (never) to 4 (always).

Somatization (alpha = 0.76):
Questions: In the past six months, how often did you have

- Pains or pounding in your heart and chest
- Faintness or dizziness
- Headaches or pressure in your head
- Nausea, upset stomach, stomach pains
- Trouble getting your breath
- A lump in your throat

Anxiety (alpha = 0.85):
Questions: In the past six months, how often did you have

- Suddenly scared for no reason
- Feeling that something bad was going to happen to you at work
- Spells of terror or panic
- Feeling so restless you could not sit still

Depression (alpha = 0.67):
Questions: In the past six months, how often did you have

- Loss of sexual interest or pleasure
- Feelings of low energy or slowed down
- Feelings of being trapped or caught
- Blame yourself for things
- Feeling blue
- Feeling no interest in things
- Feeling hopeless about the future
- Thoughts of ending your life
- Crying easily

Negative exposures (alpha = 0.79):
Questions: If you have ever experienced any of the following, please indicate how much it emotionally affects you. Please check n/a if you have not experienced it.

- Making a violent arrest
- Shooting someone
- Being the subject of an IID investigation
- Responding to a call related to a chemical spill
- Responding to a bloody crime scene
- Personally knowing the victim
- Being involved in a hostage situation
- Attending a police funeral
- Experiencing a needle stick injury or other exposure to blood and body fluids

Response categories are: 0 (n/a), 1 (not at all), 2 (a little), and 3 (very much).

Camaraderie (alpha = 0.53):
Questions: Please check the box that best describes how much you agree with the following statements:

- There is good and effective cooperation between units
- I can trust my work partner

Original response categories are from 1 (strongly agree) to 5 (strongly disagree). Categories have been reversed coded in current study.
Unfairness (alpha = 0.60):
Questions: Please check the box that best describes how much you agree with the following statements:

– Compared to my peers (same rank), I find that I am likely to be more criticized for my mistakes
– I feel that I am less likely to get chosen for certain assignment because of “who I am” (e.g., race, gender, sexual orientation, physical characteristics)
– Within the department, gender related jokes are often made in my presence
– When I am assertive or question the way things are done, I am considered militant
– Media reports of alleged police wrong-doing are biased against us
– The department tends to be more lenient in enforcing rules and regulations for female officers

Original response categories are from 1 (strongly agree) to 5 (strongly disagree). Categories have been reversed coded in current study.

Spillover (alpha = 0.65):
Questions: Please check the box that best describes how much you agree with the following statements:

– I often get home too physically and emotionally exhausted to deal with my spouse/significant other
– I catch myself treating my family the way I treat suspects
– At home, I can never shake off the feeling of being a police officer
– I expect to have the final say on how things are done in my household

Original response categories are from 1 (strongly agree) to 5 (strongly disagree). Categories have been reversed coded in current study.

Constructive coping (alpha = 0.66):
Questions: When dealing with stressful events at work, how often do you:

– Talk with your spouse, relative or friend about the problem
– Pray for guidance and strength
– Make a plan of action and follow it
– Exercise regularly to reduce tension
– Rely on your faith in God to see you through this rough time

Response categories are from 1 (never) to 4 (always).

Destructive coping (alpha = 0.57):
Questions: When dealing with stressful events at work, how often do you:

– Stay away from everyone, you want to be alone
– Smoke more to help you relax
– Yell or shout at your spouse/significant other, a family member, or a professional
– Let your feelings out by smashing things
– Hang out more with your fellow officers at a bar
– Gamble
– Increase your sexual activity
– Try to act as if nothing is brothing you

Response categories are from 1 (never) to 4 (always).

Notes

1. Although the sample was not selected randomly, the race-gender distributions of the sample and the population were comparable. The sample size was also large (n = 1,104). The impact of sample selection bias may be negligible.

Percentage

<table>
<thead>
<tr>
<th></th>
<th>White males</th>
<th>African-American males</th>
<th>White females</th>
<th>African-American females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>61.3</td>
<td>24.1</td>
<td>4.9</td>
<td>9.7</td>
</tr>
<tr>
<td>Population</td>
<td>55.5</td>
<td>28.8</td>
<td>5.0</td>
<td>10.8</td>
</tr>
</tbody>
</table>

2. It was unknown the rationales for Gershon’s (1999) survey to adopt a four-point response scale of stress measurement (scores from 1–4) instead of using the five-point response scale (0–4) in the original Brief Symptom Inventory (BSI). Therefore, direct comparisons of the mean scores using different response scales should not be made without proper caution. Gershon’s modifications should not have detrimental impact on the validity of the measurement because all the original questionnaire items on stress were retained. The reliability measures were comparable as well. The internal consistency reliability measures for depression, somatization, and anxiety in this study varied from .67 to .85. It is also worth mentioning that the stress scales included in BSI were well established in the field of psychological medicine and they were receiving increased attention in the study of stress in the criminal justice field.

3. The reviewer correctly pointed out that shift assignment might affect exposure to stress and consequently influence the present findings. Unfortunately, this variable was not available in the data set.

4. Multicollinearity was not a problem in the regression analysis. The variance inflation factor (VIF) was well below a score of 4 (Fisher & Mason, 1981; Judge, Hill, Griffiths, Lutkepohl, & Lee, 1988).

5. According to Kanter (1977), visibility attracts the heightened attention toward token individuals who are under exacerbated pressures to perform. Contrast exaggerates the differences between tokens and the numeric majority, and thus increases the social isolation of tokens. Role encapsulation occurs when activities assigned to the tokens are based on stereotyped roles rather than based on those compatible with the more comprehensive, work-related roles.
References


