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Promoting Women Police Officers: Does Exam Format Matter?

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Abstract

Despite decades of calls to diversify policing, women continue to be underrepresented in the field, and this problem compounds when looking up the ranks. One explanation is that police organizations are “gendered” in that their structures, processes, and cultures support men’s career advancement over women’s. To investigate this possibility, we analyzed survey results from 685 women police officers to examine whether career advancement is influenced by the composition of an agency’s promotional process. Most agencies used a combination of testing components, with written exams being the most common, but also a heavy reliance on interviews, assessment centers, and career portfolios. Exam format had a limited impact on women’s career advancement, while agency type, age, and education level were all significant correlates of women’s interest in promotions and career advancement.

Keywords

police, promotion, supervision, women

Diversity is “one of the oldest and most often proposed police reforms” (Ba et al., 2021, p. 2), yet women’s representation in the field has been stuck at 12% for over two decades (Cordner & Cordner, 2011). This problem compounds when looking up the ranks to supervision (7.29%), management (6.96%), and leadership (2.7%; Shjarback & Todak, 2019). Although evidence of the benefits of gender diversity in policing is mixed (Archbold & Schulz, 2012), there are many reasons to hire and promote more women. These include links with improved police-community relations, enhanced legitimacy, and higher quality services (Barnes et al., 2018; Córdova & Kras, 2020; International Association of Chiefs of Police, 2011; President’s Task Force on 21st Century Policing, 2015; Silvestri, 2015; Spillar, 2015), the use of less aggressive tactics (Rabe-Hemp, 2008a; Schuck & Rabe-Hemp, 2007), reductions in violence against women (Asquith, 2016; Meier & Nicholson-Crotty, 2006; but see Wentz & Archbold, 2012), improved organizational processes (Schuck & Rabe-Hemp, 2016), and decreased perceptions of police corruption (Barnes et al., 2018). Hiring and promoting more women could also help break down the hypermasculine police culture, which is linked to a range of

negative outcomes including misconduct and higher levels of force (Armacost, 2003; Blumenstein et al., 2012; Paoline & Terrill, 2005; Silver et al., 2017; Terrill et al., 2003; Wolfe & Piquero, 2011). Finally, while the impact of successful women police leaders on the recruitment and retention of women has not been studied, there is evidence from the literature on gender and politics to suggest that increasing the representation of women in leadership positions could elevate interest among women to join the field via role modeling (Campbell & Wolbrecht, 2006; Wolbrecht & Campbell, 2017).

However, a glass ceiling exists in policing, stifling efforts to diversify the upper ranks, the promotional prospects of women officers, and police reform more generally (Shelley et al., 2011; Silvestri, 2018; Todak et al., 2021). Policing is considered a “gendered organization” with policies and structures that facilitate men’s successes over women’s (Heidensohn, 1992). Its structures reproduce the status quo by neutralizing the effects of diversity, reinforcing inequalities, and fostering an environment that is less positive for (and sometimes hostile to) women (Dodge et al., 2011; RabeHemp, 2008b; Rief & Clinkinbeard, 2020; Todak et al., 2022). The exclusion of women in higher ranks of law enforcement is especially problematic given the positive impact of women leaders (Beaton et al., online first) and the need for more effective leadership in policing more broadly (Bishopp, 2013).

One example of a gendered structure is a promotions process that systematically preferences men over women. The process could, for example, require applicants to hire a tutor, undergo training outside of work hours, and spend off duty time studying – all of which would disproportionately limit mothers who are usually the primary caregivers in their households (Morabito & Shelley, 2018; Yavorsky et al., 2015). Research also suggests women commonly postpone promotion because, in a male-dominated environment, they do not feel competitive or confident until they have significantly more experience than the men (Archbold & Schulz, 2008; Morabito & Shelley, 2018; Todak et al., 2021). The potential influence of evaluator bias is also concerning. Some agencies, for example, rank applicants according to performance on exams, yet discretionarily select ones who may not have placed at the top, inviting prejudice and opinion to influence these decisions.

While it is generally recognized that police organizational structures are “gendered,” empirical tests of this theory are limited. To contribute to this conversation, we test whether women’s promotional decisions and achievement are influenced by the composition of their agency’s promotions process for the first line supervision position. Drawing on data from a national online survey of women police officers (N = 685), we first report descriptive statistics for the composition of the sergeant (or comparable rank) promotions process across agencies, and examine patterns by agency type, size, and location. We then test for relationships between exam format, the decision to take the exam, and earning a promotion. Using these findings, we offer practical implications for reducing gendered barriers to promotion in policing. Consequently, such evidence provides important insights for improving the delivery of police services to communities

(e.g., through reductions in the use of force), the workplace experiences and satisfaction of police officers (e.g., by neutralizing the negative aspects of the hypermasculine police culture), and the everyday functioning of police departments (e.g., by diversifying the voices making decisions in the upper levels of management).

The Police Promotions Process

While the makeup of the promotions process for first line supervisor (e.g., sergeant) varies across police agencies in the United States, they are usually comprised of some combination of five components: career portfolio, written exam, interview/presentation, assessment center, and probation/field training. Some also incorporate additional physical, psychological, and background examinations. As noted by Hughes (2010), agency size and budget often influence the components used, with smaller agencies relying only on seniority and performance, due to the conservative cost of these components. Aside from budgetary allowances, however, there is little regulation over these processes and “agencies can expand and contract on these steps if they so choose” (pg. 13).

There is limited research on the police promotions process, which is problematic given the central importance of effective leaders for the functioning of a police department (Schafer, 2009), their impact on officer behaviors (e.g., Engel, 2000), and inequalities favoring white male officers in upper ranking positions (Morabito & Shelley, 2018; Shjarback & Todak, 2019). In particular, there is little evidence identifying success factors for earning a promotion, despite that many components of these processes are criticized as being informal, unfair, or lacking in predictive validity (see, e.g., Hughes, 2010). Moreover, researchers have not generally sought to identify key skills and traits that are desirable in a potential police leader and thus should be selected upon through the promotions process.

As mentioned, there are five common components of police promotions processes used in the United States. First, a career portfolio is a resume of an officer’s professional and educational achievement, including evaluation metrics to show performance on patrol. To be competitive, Jetmore (2009), a police exam administrator, recommends officers earn at least a Bachelor’s degree and accumulate training to show they are self-motivated to improve. Working on communication skills and developing an expertise in a subfield (e.g., DUI enforcement) is also recommended. In many agencies, participants also earn merit points for certain portfolio items such as seniority, military experience, college degree, or training.

Assessment centers are also frequently used in police promotions exams – one study found 62% of agencies in large cities used them (Lowry, 1997). At this stage, applicants participate in “a series of systematic, job related, real life situations while being observed and evaluated by experts in policing, supervision, and management” (Jetmore, 2011). Ideally, they should be based on a job task analysis to ensure applicants are being tested on the same tasks they will be responsible for in the new

position. The assessment center is intended to supplement the academic portions of the process, such as written tests, which are criticized as unrelated to performance, biased towards good test takers and recent college graduates, and discriminatory (Ricucci & Riccardelli, 2015). Accordingly, assessment centers are designed to simulate how the applicant would perform in real working conditions (Spychalski et al., 1997). The assessment center sometimes includes an “in basket,” which assesses ability to manage day-to-day paperwork.

Most studies on police promotions have examined the effectiveness of the assessment center, a literature that Bishopp (2013) described as in disagreement over its ability to pick good leaders. While some studies have found the assessment center to be more related to job performance than written tests (Ross, 1980), others show that characteristics of the raters, rather than ratees, can be more influential for promotional decisions (Feltham, 1988). For example, Prewett-Livingston and colleagues (1996) found that raters of the same social group (e.g., of the same race) as applicants tended to score them more favorably during a situational panel interview (i.e., a blend of an assessment center and a panel interview). The possibility that rater bias influences participant rankings, and ultimately promotional decisions, is concerning for underrepresented groups, including women and minorities, who may be subjectively perceived as less competent police officers and leaders. This is also problematic for agencies and communities that expect the process will identify the best people for the job.

Next, the written exam is a multiple-choice test, sometimes with an essay component, that asks a range of job-related questions. Jetmore (2009) notes that officers with college degrees likely perform better here, especially compared to officers who have not taken exams since high school. The written exam is the most common component of the promotions process in the United States (Jetmore, 2011; Ricucci & Riccardelli, 2015). Questions are usually based on a reading list compiled by the agency, which may include books, department policies, and state statutes. Bishopp (2013) examined factors associated with promotion to lieutenant. The agency under study used both a written exam and an assessment center, and officers were selected for promotion based on how they ranked on the two components. He found both written exam and assessment scores were significantly related to being promoted to lieutenant. However, factors that may be less indicative of leadership potential, including commendations and complaints, age, and the number of times tested, were also related to exam performance.

The interview is an in-person or videotaped question and answer session between the applicant and a panel of higher-ranking officers. This part of the exam is sometimes regarded as most critical to an officer’s promotional prospects, given the role of communication in policing, and because it shows their ability to receive and process information quickly and deliver directed responses that appropriately answer the

question. Other in-person requirements may include a presentation on a topic either assigned by administrators or selected by the applicant.

Finally, newly selected sergeants may be required to undergo field training as part of a probationary period before they are officially promoted. This may include shadowing a senior sergeant who evaluates performance (e.g., via a checklist of demonstrated skills). New sergeants may also be required to pass a leadership academy or training course before they are officially promoted. This probationary process is similar to field training programs used for new police recruits, although it has been criticized as less well developed, evaluated, and predictive of supervisor potential.

The specific promotions process used by an agency carries important implications for the overall functioning of the organization and the quality of services provided to citizens. Police officers who are thwarted in their attempts to promote tend to become more cynical and are more likely to withdraw from the organization (Scarborough et al., 1999). Alternatively, employees who view the process as fair and transparent tend to show more dedication to their work (Chang, 1999) and increased job satisfaction (Lin & Yang, 2002). Further, police officers, and minorities and women in particular, tend to be dissatisfied with the promotions processes in their agencies (Buzawa et al., 1994; Guajardo, 2014). In a survey of 805 police officers, Constantinou (2021) found high levels dissatisfaction with the process, which in turn lead to animosity towards coworkers, unproductivity, and seeking alternative means to promote (e.g., through political influence).

Currently, the limited evidence pertaining to the impact of gender on the likelihood of being promoted is mixed. For instance, Dick and Metcalfe (2007) found women were less likely to earn a promotion, but that length of tenure and commitment to the organization could not explain this gender effect. Alternatively, Bishopp (2013) found gender was not a significant factor related to earning a high score on the assessment center, which was in turn related to promotion (and more so than the written exam score). The mixed evidence from these studies speaks to the importance of further research examining the potential for certain components to select on individuals who may not possess the traits of an effective leader. Further, the possibility that certain components may discriminate against some officer groups in light of disparities between men and women in the upper ranks of law enforcement has yet to be examined.

Police Women and Promotions

Women have historically struggled to promote in policing (e.g., Felkenes et al., 1993) and, despite some progress, this remains true today. The 2016 Law Enforcement Management and Statistics Survey (LEMAS) reported the representation of women in the upper ranks of law enforcement to be at 9.7% of sergeants, 7.5% of supervisors, and 2.9% of chiefs (Hyland & Davis, 2019). While research has focused on the role of

the hypermasculine police culture in maintaining the exclusion of women from leadership, preliminary evidence suggests organizational factors may also be at play.

Most research on this glass ceiling has focused on the role of police culture (see also comments from the attendees of the 2019 National Institute of Justice Summit on Women in Policing; NIJ, 2019). Namely, discriminatory practices and personal biases against women within the male-dominated profession have been linked to their exclusion from leadership since their entry into the field, as well as from other areas in law enforcement such as specialty units (Dodge et al., 2010, 2011; Todak et al., online first). In one of the earliest studies, Martin (1989) observed that certain promotional requirements (e.g., seniority) and evaluator prejudice hindered women's promotional prospects at the time. Partially for these reasons, promotional aspirations between men and women tend to vary considerably, with women viewing promotion as less important and projecting that they will retire at lower ranks than men (e.g., Gau et al., 2013).

A common theory for this underrepresentation is that women are self-selecting out of the process for reasons related to tokenism and police culture. For example, Archbold and Schulz (2008) found 79% of 14 police women they interviewed said they felt the need to prove themselves as a result of their underrepresentation, while only 57% believed promotions were available for women in the department (see also Wertsch, 1998). Further, many said they were strongly encouraged to apply, but felt it was because they were female and worried promoting would invite criticism that they had not earned the promotion (see also Archbold & Hassell, 2009). Moreover, although research finds that most police officers feel the promotions processes used in their agencies are fair, men are more likely to believe women are given preferential treatment (see also Drew & Saunders, 2020; Todak et al., 2021). Such beliefs could impede women's ambitions to seek promotions. Similarly, while Archbold et al. (2010) found men and women voiced many of the same reasons for opting out of promotions, only women reported a lack of confidence in the process and fears related to the effects of tokenism. The lack of confidence among women to promote, and beliefs that promotions are not available to women, could be attributable to the lack of senior women role models in many police departments. That is, if women do not see other women attaining and succeeding in these positions, they may be less likely to believe it is possible for them (see Campbell & Wolbrecht, 2006; Wolbrecht & Campbell, 2017). More broadly, gender gaps in self-confidence have been observed in other public service fields (see Fox & Lawless, 2004 discussion on women's decisions to run for office).

According to Haarr and Morash (2013), high ranking police women adopt coping strategies to address individual cases of inappropriate comments, negative treatment, hostility, and harassment from male colleagues. They argued, however, that "with the possible exception that some departments took steps to avoid being sued for failing to abide by EEO legislation, none of these strategies forced permanent or widespread organizational changes" (pg. 412). Nevertheless, there is evidence to suggest police

women believe these issues are improving. For example, all of the women interviewed by Archbold and Schulz (2008) said they would recommend law enforcement as a career for women, though many qualified that only certain women would do well (see also Todak et al., 2022). Additionally, 79% said they did not feel socially isolated, disputing a core tenet of Kanter's (1977) tokenism theory.

Despite the important role played by police culture, evidence also suggests agencies and researchers should pay attention to how organizational factors may inhibit or enhance women's prospects for promotion. For example, using 2013 LEMAS data, Shjarback and Todak (2019) observed significant variations in women's representation among supervisors and middle managers by agency size, type, and region. Professionalism, accreditation, and community-oriented policing activities were also related to increased gender diversity in these positions. They did not, however, observe relationships between organizational factors and the likelihood of having a woman police chief, noting this may be intertwined with local politics rather than organizational structures and culture. Police women who attended the 2019 NIJ Summit on Women in Policing (2019) similarly agreed that understanding how organizational structure and policies affect the number of women granted promotions was a critical first step towards addressing the glass ceiling in the field.

Research has also examined how municipal civil service commissions can impede the entrance of minority groups into law enforcement. Civil service commissions are comprised of civilians who set eligibility standards for hiring police officers, to include factors that disqualify applicants from employment. Kringen (2016, pp. 481–482) argued that "Despite the goal of insulating employees from politics, management of civil service is a highly politicized endeavor. Advocates for strong civil service regulation assert that merit processes exclude favoritism and the legal protections given to civil service employees ensure job stability in times of political upheaval." She further notes that, given the conflicting demands placed on commissions from police administrators, laws, unions, and the public, the processes and decisions set forth are highly politicized, opening the door to unfair hiring and promotions practices. For instance, political groups may advocate for merit-based systems that benefit the majority group, maintain the status quo, and set unreasonable standards for minority groups, including women. Further research into the impact of civil service commissions on the career advancement of women in policing is needed.

Finally, Archbold and Hassel (2009) argued that some organizational changes may be more feasible for agencies to address than others. For instance, providing on-site daycare and family friendly scheduling could help mothers who wish to promote but feel they cannot because of their caregiving responsibilities. Other issues, such as the "marriage tax" that affects women married to men in the department due to antinepotism policies (i.e., they cannot promote if their husband will become their superior), are more difficult to address. Our study seeks to contribute to the small body of literature that moves beyond the study of police culture to investigate relationships between

organizational structure and women's representation in police leadership. We do so by taking a specific look at the structure of agencies' promotional processes for first line supervisor positions.

Methods

The current study seeks to understand the composition of police promotions processes for first line supervisors in the United States and whether exam format influences the career advancement of women police officers. In this way, we move research beyond the focus on police culture and its impact on women officers to explore the role of organizational structures. The data come from a larger mixed methods study designed to understand the underrepresentation of women in supervision and leadership. The study also sought to investigate the career trajectories of women serving at all levels of U.S. law enforcement, with a focus on women who achieved promotions, their experiences pursuing promotions, and their experiences in leadership.

The study data included 924 online surveys with women police officers of all ranks working in the U.S., collected using Qualtrics. The survey was informed via input from several women police leaders who reviewed and provided feedback on the questionnaire, as well as from existing research examining the success factors of women who achieved positions of leadership (Montejo, 2007). The questionnaire topics ranged from career, agency, and demographic factors, experiences on patrol, the decision to apply and prepare for a promotion, experiences in the promotions process, experiences in leadership, and challenges including harassment, lack of mentorship, and discrimination.

Snowball sampling was used to recruit respondents with the help of two female police officers.¹ Prospective participants were recruited through direct email, Twitter, and email blasts to the members of the American Society of Evidence-Based Policing (ASEBP), the National Institute of Justice's Law Enforcement Advancing Data and Science (LEADS) Program, the National Association of Women Law Enforcement Executives (NAWLEE), and the National Organization of Black Law Enforcement Executives (NOBLE). All methods were approved by the Office of the Institutional Review Board at the PI's university.

Independent Variable: Sergeant's Exam Format

To create our independent variable, promotional process component(s), respondents were asked "What is the format of your agency's sergeant's exam? Select all that apply." Response options were: Written exam (70.4%); Interview or presentation (in person or online; 60.4%); Assessment center/Role play (59.4%); Career portfolio (40.6%); Probation or field training (20.0%); and Other (with space for written response; 1.8%). Respondents were allowed to select more than one option, and a series of binary variables were created that were coded as yes (1) and no (0) for each component. Respondents who selected "Other" and provided a text response were examined individually. Many of these responses fell into one of the pre-existing

categories – for example, “Sheriff interview” fit into the “Interview or presentation” response. Those were recoded into the appropriate category and those that did not were left as “Other” (e.g., “no real process, Chief picks who he wants”).

As indicated in Table 1, most respondents reported that the promotional process used in their agency included more than one component (mean = 2.7; standard deviation = 1.2; range = 1–5 components). Although it might be informative to examine combinations of these components, such as the use of a written exam and an interview, the sheer number of possible combinations inhibited this type of analysis. Given that respondents could select anywhere from 1 to 6 promotional process components, there were a total of 42 possible combinations that could be selected (based on

$Ck(n) = \frac{n!}{k!(n-k)!}$ with $n=6$ components and $k = 1, 2, 3, 4, 5,$ and 6 potential selections). Further, we were more interested in the unique influence of each component on career advancement.²

Dependent Variables: Career Advancement

For the first dependent variable, *decision to promote*, we asked whether participants had ever taken the sergeant’s exam, with response options yes (1) and no (0). Respondents in agencies that do not have a sergeant position were directed to select the process used for the equivalent rank. A little over 70% of respondents reported taking the promotional exam, which is much higher than rates observed in other studies (e.g., Wertsch, 1998 found 17% of eligible women had applied; see also Archbold et al., 2010; Whetstone & Wilson, 1999). The disproportionately high rate of applying for a promotion may be attributable to the stated focus of the larger study. That is, recruitment announcements reported the study’s purpose as to understand police women’s experiences with promotion and leadership, which may have attracted more women supervisors and leaders.

Our second dependent variable, *promoted*, was measured with the survey question “Have you promoted beyond the rank of patrol officer” with response options yes (1) and no (0), and 60% of respondents reported being promoted. However, it is important to note that women who have not taken the promotional exam did not have the opportunity to be promoted. As a result, the sample for this portion of the analysis is restricted to the 482 women who have taken the promotional exam ($n = 411$; 85.3% of those who tested achieved promotion). Given the significant underrepresentation of women in positions of power in policing (Shjarback & Todak, 2019), combined with evidence that the vast majority of patrol officers never promote (Whetstone, 2001; Whetstone & Wilson, 1999), this number is certainly higher than in the national average.

Table I. Descriptive statistics (*n* = 685).

	n	%
Dependent variables		
Taken promotional exam		
Yes	482	70.36
No	203	29.64
Promoted		
Yes	411	60.00
No	274	40.00
Independent variables		
Promotional process component(s)		
Written exam	600	87.59
Interview	414	60.44
Assessment center or role play	407	59.42
Career portfolio/Past performance assessment	278	40.58
Probation or field training	137	20.00
ther	12	1.75
Control variables		
Agency type		
Local	519	75.77
County/Parish	83	12.12
State	64	9.34
Other	19	2.77
Region		
West	275	40.15
South	205	29.93
Midwest	134	19.56
Northeast	71	10.36
<i>n.</i> full-time sworn		
<50	70	10.22
50–99	69	10.07
100–249	81	11.82
250–499	108	15.77
500–999	128	18.69
1000+	229	33.43
Race/ethnicity		
Non-hispanic white	472	68.91
Hispanic white	65	9.49
Black	47	6.86
Other	101	14.74

(continued)

Table 1. (continued)

	n	%
Age		
18–34	145	21.17
35–44	255	37.23
45–54	226	32.99
55+	59	8.61
Highest level of education		
Less than Bachelor's	171	24.96
Bachelor's	334	48.76
Graduate degree	180	26.28

Note. Respondents could select more than one promotional process component so results do not equal 100% (mean = 2.70; SD = 1.19; range = 1–5 component selected).

Control Variables

We controlled for several variables occurring at the agency level, including agency type (Municipal/Local; County/Parish; State; Other), region (East; Northeast; Midwest; South)³, and the number of *full time sworn* officers in the respondent's agency (<50; 50–99; 100–249; 250–499; 500–999; 1000+). Respondents working in local police agencies were overrepresented in the study (75.8%), as were those working in the western U.S. (40.2%) and in agencies with over 1000 full-time sworn officers (33.4%). We also controlled for several variables at the respondent level, which could also influence promotional aspirations and achievement, such as *race/ethnicity* (Non-Hispanic White; Hispanic White; Black; Other), *age* (18–34; 35–44; 45–54; 55+), and *highest level of education* (<Bachelor's Degree; Bachelor's Degree; Graduate Degree). Most respondents identified as non-Hispanic white (68.9%), consistent with statistics showing that white women comprise about 62% of women police officers in the U.S (Todak & Brown, 2019). Respondents between 35 and 44 years of age made up the greatest proportion of the sample, and almost half had earned a Bachelor's as their terminal degree (48.8%). Surveys with missing information on any of our variables of interest were removed prior to analysis, resulting in a final sample of 685 respondents from a diverse range of agency types and demographic backgrounds.

Analysis Plan

Due to the limited research examining the police promotional process, we first examined bivariate relationships among individual exam components, our dependent variables, and our agency-level control variables using a series of chi-square tests. This allowed us to examine basic relationships between career advancement and promotional processes, as well as variation in promotional processes across different types of agencies. We then used multivariate models to examine whether the format of the promotional process influenced respondent willingness to pursue promotion and/or

their promotional attainment. We used two separate logistic regression models to examine the influence of the promotional process components on our dichotomous dependent variables, *decision to promote* and *promoted*, controlling for agency-level characteristics and respondent demographic features. Although the decision to promote model included all 685 survey respondents, the *promoted* model is restricted to the 482 women who reported taking the promotional exam, given that those women who did not pursue promotion were not eligible to be promoted. This approach allowed us to examine trends in police promotional processes generally and determine whether these processes influence women's promotional aspirations and attainment. Variance inflation factors were examined to assess potential multicollinearity among our variables of interest and did not raise any concerns (all below 4).

Results

Beginning with the bivariate results displayed in Table 2, we identified significant relationships between our dependent variables and the promotional components used. Promotional aspiration significantly varied depending on the use of interviews ($p < 0.05$), assessment centers ($p < 0.01$), career portfolios ($p < 0.01$), and probationary periods ($p < 0.01$). For example, only 37% of respondents who reported pursuing promotion indicated that their agency relies on a career portfolio, relative to 49% of respondents who have not pursued promotion. Promotional achievement, however, only significantly differed across the use of assessment centers ($p < 0.01$) during the promotional process. Although 65% of respondents who have been promoted reported that their agency uses an assessment center, only 49% of respondents who have not been promoted reported that their agency uses this component.

There was also substantial variation in the promotional process components used across agency types ($p < 0.01$ for all components except probation and other). Although written examinations are the most reported component in local (91%) and county/parish (78%) agencies, state (81%) and other (95%) agencies rely more heavily on interviews. Promotional components also varied significantly across regions ($p < 0.01$ for all components except for written exams and other). Respondents in Midwestern agencies (72%) were more likely to report the use of interviews, while those in the South (71%) were more likely to report that their agencies use assessment centers. The number of full-time sworn officers was significantly associated with every promotional process component examined ($p < 0.01$). Agencies with fewer than 50 (67%) and between 50 and 100 (86%) full-time sworn officers were most likely to rely on interviews. Agencies in the larger size categories, with 100–249 (86%), 250–499 (90%), 500–999 (92%), and those with over 1000 full-time sworn officers (97%) were most likely to use written exams. This could be due to variation in resources across different size agencies, with larger agencies needing to use low-cost preliminary screening procedures to reduce the initial pool of candidates, compared to smaller agencies which can use more time intensive processes like interviews.

Table 2. Bivariate relationships between promotional process component(s) and agency characteristics ($n = 685$).

	Written Exam ($n = 600$)		Interview ($n = 414$)		Assessment Center ($n = 407$)		Career Portfolio ($n = 278$)		Probation ($n = 137$)		Other ($n = 12$)	
	Row %	χ^2	Row %	χ^2	Row %	χ^2	Row %	χ^2	Row %	χ^2	Row %	χ^2
Ever taken exam		0.66		4.44*		8.01**		8.01**		6.73**		2.66
Yes	86.93		57.88		62.86		37.14		17.43		2.28	
No	89.16		66.50		51.23		48.77		26.11		0.49	
Ever promoted ^a		2.66		0.30		6.57**		0.01		0.05		1.94
Yes	85.89		58.39		65.21		37.23		17.27		2.68	
No	92.96		54.93		49.30		36.62		18.31		0.00	
Agency type		28.42**		32.91**		29.89**		17.20**		0.33		3.15
Local	91.33		54.72		64.93		36.42		20.42		1.73	
County/Parish	78.31		72.29		48.19		57.83		18.07		3.61	
State	73.44		81.25		34.38		51.56		18.75		0.00	
Other	73.68		94.74		42.11		42.11		21.05		0.00	
Region		6.21		79.48**		68.39**		55.14**		47.82**		3.96
Northeast	90.14		38.03		29.58		14.08		12.68		1.41	
Midwest	81.34		72.39		39.55		52.24		14.18		3.73	
South	88.29		40.98		71.22		27.80		9.27		0.98	
West	89.45		74.91		68.00		51.27		32.73		1.45	
n , full-time sworn		82.41**		116.41**		27.66**		50.04**		37.68**		37.21**
<50	60.00		67.14		42.86		41.43		14.29		10.00	
50-99	73.91		85.51		44.93		52.17		17.39		4.35	
100-249	86.42		82.72		54.32		48.15		23.46		1.23	
250-499	89.81		68.52		58.33		63.89		28.70		0.00	
500-999	92.19		71.09		74.22		33.59		33.59		0.78	
1000+	96.94		33.19		62.88		27.07		9.61		0.00	

^aNote, the promoted results reflect only those 482 respondents who reported taking the promotional exam.

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

Logistic regression was used to assess whether the promotional process components used within an agency influenced career advancement (Table 3). Our results indicate that none of the individual promotional process components significantly impacted willingness to pursue promotion or promotional achievement once organizational and respondent characteristics were accounted for. As such, our results suggest that exam components do not substantially influence women's decisions to pursue promotion or their promotional attainment. We additionally examined whether the number of promotional components used in an agency influenced our outcomes of interest and did not find any significant relationship between promotional pursuit or attainment (results available upon request). This variable could not be used as a control due to its collinear relationship with the individual promotional component variables.

Several of our agency-level control variables were significantly related to the dependent variables. Relative to local agencies, respondents in county/parish agencies (OR = 2.49; $p < 0.05$) and state agencies (OR = 3.08; $p < 0.01$) were significantly more likely to pursue promotion. These are substantial effects and suggest that respondents in county agencies were 149% more likely to pursue promotion than their counterparts in local agencies. There limited significant differences in promotional pursuit and attainment across region and most of the agency size categories, although respondents in Northeastern (OR = 0.18; $p < 0.01$) and Midwest (OR = 0.40; $p < 0.05$) agencies were significantly less likely to promote relative to those on the West coast. Women in agencies with 250–499 sworn officers were significantly less likely to be promoted than those in agencies with 1000+ full-time sworn officers (OR = 0.30; $p < 0.05$).

We identified more notable differences in promotional aspiration and achievement by individual-level control variables. Hispanic respondents were 52% less likely to report pursuing a promotion, a significant difference relative to their non-Hispanic white counterparts (OR = 0.48; $p < 0.05$). However, there were no differences in promotional attainment across any racial/ethnic category examined. Unsurprisingly, older respondents were significantly more likely to report pursuing promotion than their younger counterparts ($p < 0.01$ for all age categories), although they were also more likely to achieve promotion, none of the effects were statistically significant ($p < 0.05$ for all age categories in the promotional attainment models). Education was also related to career advancement, with respondents who had Bachelor's and graduate degrees being significantly more likely to seek promotions, relative to those with less education ($p < 0.01$ for all categories). Women with graduate degrees were also significantly more likely to be promoted than women who reported high school as their highest level of education (OR = 2.52; $p < 0.05$). The magnitude of the effects indicates a steady increase in the likelihood of pursuing promotion as respondent age and educational attainment increase. For example, respondents who attained a Bachelor's degree were 187% more likely and those with a graduate degree were 287% more likely to report taking the promotional exam, compared to respondents with less education. These patterns were also found for promotional achievement, as those with a Bachelor's

degree were 79% more likely to be promoted and those with a graduate degree were 152% more likely to be promoted than respondents with less than a Bachelor's degree.

Table 3. Logistic regression predicting promotional aspirations and attainment.

	Sought Promotion		Promoted	
	b	OR	b	OR
<i>Exam component</i>				
Written exam	-0.17 (0.36)	0.84 (0.30)	-1.03 (0.56)	0.36 (0.20)
Interview	-0.06 (0.29)	0.94 (0.28)	0.23 (0.39)	1.26 (0.49)
Assessment center	0.44 (0.24)	1.56 (0.38)	0.30 (0.34)	1.35 (0.45)
Career portfolio	-0.22 (0.25)	0.80 (0.20)	0.00 (0.36)	1.00 (0.36)
Probation or field training	-0.14 (0.29)	0.87 (0.25)	-0.16 (0.41)	0.85 (0.35)
Other component	2.24 (1.16)	9.44 (10.94)	— —	— —
<i>Agency type (municipal ref.)</i>				
County/parish	0.91* (0.36)	2.49* (0.90)	0.10 (0.51)	1.10 (0.56)
State agency	1.12** (0.43)	3.08** (1.32)	-0.50 (0.49)	0.61 (0.29)
Other agency type	1.40 (0.75)	4.04 (3.02)	-0.89 (0.67)	0.41 (0.28)
<i>Agency region (West ref.)</i>				
Northeast	0.55 (0.42)	1.73 (0.72)	-1.72** (0.51)	0.18** (0.09)
Midwest	0.06 (0.31)	1.06 (0.33)	-0.91* (0.43)	0.40* (0.17)
South	0.23 (0.28)	1.25 (0.35)	0.28 (0.42)	1.32 (0.56)
<i>Agency size (1000+ ref.)</i>				
<50 full-time sworn	-0.16 (0.40)	0.85 (0.34)	-0.21 (0.60)	0.81 (0.49)
50-99 full-time sworn	0.39 (0.48)	1.48 (0.70)	0.21 (0.59)	1.23 (0.72)
100-249 full-time sworn	-0.49 (0.37)	0.61 (0.22)	-0.74 (0.54)	0.48 (0.26)
250-499 full-time sworn	-0.46 (0.33)	0.63 (0.21)	-1.19* (0.47)	0.30* (0.14)
500-999 full-time sworn	-0.14 (0.33)	0.87 (0.29)	-0.67 (0.45)	0.51 (0.23)
<i>Respondent race/ethnicity (non-Hispanic white ref.)</i>				

(continued)

Table 3. (continued)

	Sought Promotion		Promoted	
	<i>b</i>	OR	<i>b</i>	OR
Hispanic white respondent	−0.73* (0.33)	0.48* (0.16)	−0.10 (0.57)	0.91 (0.51)
Black respondent	0.34 (0.50)	1.41 (0.70)	−0.39 (0.51)	0.67 (0.35)
Other race/ethnicity respondent	0.03 (0.30)	1.03 (0.31)	−0.15 (0.43)	0.86 (0.37)
<i>Respondent age (<35 ref.)</i>				
35–44 years old	2.21** (0.27)	9.09** (2.47)	0.20 (0.45)	1.22 (0.55)
45–54 years old	3.14** (0.32)	23.07** (7.42)	0.85 (0.48)	2.35 (1.12)
55+ years old	3.50** (0.54)	33.02** (17.91)	1.20 (0.69)	3.31 (2.28)
<i>Respondent education (high school ref.)</i>				
Bachelor's degree	1.05** (0.26)	2.87** (0.73)	0.58 (0.35)	1.79 (0.62)
Graduate degree	1.35** (0.31)	3.87** (1.19)	0.92* (0.41)	2.52* (1.04)
Constant	−2.06** (0.57)	0.13** (0.07)	2.31** (0.86)	10.12** (8.72)
Nagelkerke <i>R</i> ²	0.41		0.20	
Observations	685	685	482	482

***p* < 0.01, **p* < 0.05.

Note. Standard errors in parentheses; other promotional component types excluded from promoted model because all respondents who selected an 'other' category and took the exam were promoted.

Discussion

This study examined trends in the promotional processes used in U.S. police agencies and whether exam format influences women's career advancement. We first examined the components used in promotional processes across agency variables and identified notable differences across agency types and sizes. We then examined whether exam format influenced willingness to pursue promotion and/or promotional achievement. We found limited effects across components when controlling for agency and respondent characteristics.

Beginning with general trends, our results indicate that most agencies use a combination of components in their promotional processes. Although written examinations were the most common, consistent with Jetmore's (2011) assessments, there is also a heavy reliance on interviews, assessment centers, and reviews of prior performance (i.e., career portfolios). Similar to a prior study reporting that 62% of large

agencies used assessment centers (Lowry, 1997), 59% of our respondents indicated that this was a part of their agency's process. This could suggest that use of assessment centers is not increasing, despite arguments that they more comprehensively assess applicant ability to perform central job tasks (Spsychalski et al., 1997). One potential barrier to the use of assessment centers is cost (Hughes, 2010), although research using utility estimates indicate that these financial costs translate into important payoffs that justify the continued use and expansion of these processes (Thornton III & Potemra, 2010). Future research should investigate the predictive power of assessment center performance on leadership skills.

Although our multivariate analyses generally indicated that the type of components used have limited influence on promotional aspirations or achievement, we did identify important agency and respondent level effects. Namely, women working in county/parish agencies were significantly more likely to pursue promotions relative to officers in local agencies. These findings confirm those of Shjarback and Todak (2019), who found that women supervisors and middle managers (but not chiefs) were more prevalent in sheriff's offices. This could indicate that the promotional processes used in county agencies are more inclusive of women applicants. As such, additional research should examine the mechanisms used within county agencies to encourage promotional pursuit among women. Some researchers argue that recruitment, retention, and promotion of women in policing depends on cultural changes within organizations that empower women and ensure continued participation in the law enforcement profession (Clary, 2020). Better understanding as to whether cultural differences within organizations are driving these findings could guide future efforts to increase the representation of women among police supervisors and leaders.

We additionally found that respondent characteristics influenced promotional aspirations, albeit in unsurprising ways. Older and more educated respondents were more likely to pursue promotions than their younger and less educated counterparts. This could be due to promotional criteria that reward applicants based on seniority, experience, or higher education, which could increase the likelihood of career advancement among these candidates. This could also be because officers who are older have likely served as police officers for longer periods of time and could view themselves as more qualified for promotion than those with less experience. This is consistent with prior research suggesting that women are likely to wait until they are sure they meet all of the criteria for promotion (Archbold & Schulz, 2008; Todak et al., 2021).

The results of this study should be interpreted within the context of its limitations. The first is the question of the representativeness of the sample. Despite having a diverse sample with some demographic variables matching the characteristics of the national population (e.g., race), women who had taken steps to promote and those who had successfully promoted were overrepresented. Although the decision was made to target women who had promoted, given their rarity and the focus of the larger study, the

findings should be interpreted within the context of the lack of representativeness to the larger population of women police officers. We also used a women only sample to examine the influence of promotional exam format on career advancement, precluding an evaluation of whether the promotional process has different influences on career advancement by gender. Additional research assessing whether promotional processes differentially impact promotional aspirations and success among men and women is needed to ensure the components used effectively select the best applicants for promotion, regardless of gender. This study is also based on self-report data, which might not accurately reflect the actual promotional processes used in participants' agencies. Almost half of the Canadian police officers from 22 separate agencies surveyed in a prior study disagreed with the statement that "the promotional process in your service is fair and well understood," relative to 18% who were neutral and 33% who agreed (Hogan et al., 2011). Nevertheless, given our interest in understanding the individual decisions of women to pursue promotions, basing our study on women's perceptions of the promotions process is not viewed as a major limitation.

This study is one of few assessments of police promotional processes in general, and the results point to several avenues for future research. For instance, future research should examine whether certain promotional process components influence other outcomes, such as the selection of good leaders, leadership behaviors, and leadership performance. Although this study was limited to an examination of the influence of agency characteristics and respondent demographic features on career advancement, additional research should examine the role of respondent attitudes and perceptions on career advancement. This is particularly important given some identified hesitation among female officers to promote for fear of negative reactions from their peers (Archbold & Schulz, 2008) and concerns among male officers that promotional processes unfairly benefit female applicants (Drew & Saunders, 2020). Better understanding of the perceptions of women who pursue promotions within police agencies could further guide the development of promotional processes that identify the most effective leaders, rather than simply reinforcing the status quo. Research has also not investigated women's experiences in navigating the police promotions process, an avenue of research that would benefit from a qualitative approach.

Conclusion

Achieving gender diversity in policing has been advocated for decades, yet progress towards that end has been slow. This challenge is particularly evident in leadership positions. Our findings indicate that the individual components included in the promotional process exert limited influence over women's willingness to pursue promotion or success in achieving promotions in police agencies. Nevertheless, we did find some indication that working for a sheriff's office is linked to a greater likelihood that a woman pursued a promotion. Additional research is needed to better understand how these and other organizational factors may contribute to police women's promotional aspirations and attainment. This information would help to improve the fairness and

quality of police promotional processes for the field in general and help to increase female representation among police leaders specifically.

There are numerous benefits of increasing gender diversity in policing, including potentially the neutralization of the negative effects of hypermasculine police culture, reductions in aggressive force (e.g., Rabe-Hemp, 2008a), improved police-community relationships (Barnes et al., 2018; Córdova & Kras, 2020; e.g., President's Task Force on 21st Century Policing, 2015), improved police services (e.g., Meier & NicholsonCrotty, 2006), improved organizational processes within agencies (e.g., Schuck & Rabe-Hemp, 2016), and better recruitment and retention of women police officers at all levels of agencies (Campbell & Wolbrecht, 2006; Wolbrecht & Campbell, 2017). These benefits may be especially pronounced if women are granted positions of power where they carry an active influence on structures, culture, and decision-making activities. In this way, improving the representation of women among police supervisors and leaders could help to maximize the positive influence of women in the police profession above and beyond simply recruiting more women into the field. While most research in this area has focused on the role of police culture for shaping the representation and experiences of women police officers, further exploration into the impact of organizational processes and structures may be equally as important.

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Notes

1. A Sergeant and a Commander working in police agencies in California, who also assisted with survey development, including identifying response options for the independent variable (i.e., sergeant's exam types).

2. We conducted supplemental analyses examining the influence of the total number of components used and did not identify a significant relationship between this variable and either of our dependent variables. Those results are available on request.
3. Self-reported agency state was recoded into regions based on definitions in the U.S. Census.

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Natalie Todak is an Assistant Professor of Criminal Justice at the University of Alabama at Birmingham. She uses qualitative and mixed research methods to study critical issues in policing. Her work is currently focused on police diversity, culture, misconduct, and whistleblowing. She is a National Institute of Justice LEADS Academic, in recognition of her collaborative work with agencies to further evidence-based policing