Emotional Intelligence among Black and White Job Applicants: Examining differences in test performance and test reactions

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The present work examines applicant reactions to a test of emotional intelligence (EI) using an organizational sample of 334 job applicants. Results indicated that Blacks had higher face validity and opportunity to perform perceptions of EI than Whites, but that Whites performed significantly better than Blacks on the EI test. Although exploratory analyses revealed that test performance was positively related to test reactions, we also found that the magnitude of this relationship differed between Blacks and Whites for opportunity to perform perceptions. We discuss our findings by offering practical advice for organizations considering or using a measure of EI for selection and assessment.

1. Introduction

Emotional intelligence (EI) has been popularized in recent years (e.g., Goleman, 1995, 1998) and has been touted as a psychological construct with broad utility (Mayer & Salovey, 1997). Although some have questioned the validity of the construct (e.g., Locke, 2005), scholars who examine emotions in the workplace suggest that when it is properly conceptualized, EI can be a valid predictor of important organizational outcomes such as job performance, teamwork, and leadership (Joseph & Newman, 2010; O'Boyle, Humphrey, Pollack, Hawver, & Story, 2010). EI's popularization, coupled with empirical and theoretical support (e.g., Ashkanasy & Daus, 2005; George, 2000), has resulted in its frequent use as a personnel assessment tool in organizations (Cherniss, 2010; Murphy, 2006).

As organizations increasingly use EI tests as part of the hiring process, it becomes important to examine how job applicants react to assessments of this relatively new construct (Conte, 2005). Of particular concern is the need to study whether reactions to EI differ between Black and White job applicants (Van Rooy, Whitman, & Viswesvaran, 2010). The increasing diversity of the workforce has spurred interest in applicant reactions, with research showing that Blacks and Whites may sometimes have different reactions to the same selection procedures (e.g., Chan, 1997). These demographic changes have also added relevance to the study of applicant reactions in applied settings, as employers are concerned with making their organizations more attractive to qualified minority group members (Ryan & Ployhart, 2000). Although efforts of this nature have been made in the areas of personality and cognitive ability (e.g., Chan, 1997), such work has yet to be presented for EI. Consequently, a primary goal of this article is to assess whether reactions to EI differ for Blacks and Whites.

Applicant reactions research has been informative in showing that perceptions of selection procedures are related to myriad job candidate attitudes, behaviors, and intentions ranging from job satisfaction to litigation decisions (e.g., Bauer et al., 2001; Macan, Avedon, Paese, & Smith, 1994). However, scholars have cautioned against studying applicant reactions as an end goal in itself, suggesting that test performance must also be considered before proper conclusions about attributions can be reached (Ryan & Ployhart, 2000). Past research has

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indicated that there is a positive relationship between applicants' actual performance on a selection test and their perceptions of the test (Chan, 1997). That is, job candidates tend to react favorably to those selection tools on which they perform well and react unfavorably to tools on which they perform poorly. Given that there is often a positive association between test performance and test reactions, we will also examine Black–White differences in EI test performance.

Supporting the notion of the self-serving bias at the ethnic-group level, the applicant reactions literature has tended to show that both Whites and Blacks prefer selection tools in which their respective groups perform best. For instance, Whites tend to score higher on cognitive ability tests than Blacks (Roth, BeVier, Bobko, Switzer, & Tyler, 2001) and also tend to have more positive perceptions of these tests than Blacks (e.g., Chan, 1997). However, previous research has not investigated the extent to which the test reaction–performance relationship differs *between* groups. That is, will Blacks and Whites be equally self-serving concerning the extent to which they prefer EI as a selection tool? In this vein, our final goal is to advance the applicant reactions literature by investigating whether the relationship between test reactions and test performance differs as a function of race.

2. EI

Salovey and Mayer (1990) were some of the first to introduce the term EI into the psychological lexicon, describing it as the human ability to recognize and regulate emotions. Although original conceptualizations of EI were derived from theories of multiple and social intelligences (Gardner, 1983; Thorndike, 1920), what distinguishes EI theory from these earlier theories of social intelligence is the *emotional* component. In this vein, Mayer and Salovey (1997, p. 101) define EI as 'the ability to perceive emotion, integrate emotion to facilitate thought, understand emotions, and regulate emotions to promote personal growth.' In short, they theorized that individuals have varying abilities to recognize, process, and extrapolate emotional information, thus leading to variations in how different individuals react to the same type of emotional stimuli (Mayer, Salovey, & Caruso, 1999).

At the same time, research suggests that emotions are now understood to be a fundamental aspect of the contemporary workplace (e.g., Barsade, Brief, & Spataro, 2003). As a result, organizational scholars have become interested in the study of EI, and support for its potential practical value has been established. For example, two recent meta-analyses have shown that EI is a valid predictor of job performance and other important work outcomes (Joseph & Newman, 2010; O'Boyle et al., 2010). In addition to showing predictive validity, a number of studies have shown that EI only slightly overlaps with cognitive ability and personality (e.g., Law, Wong, & Song, 2004; Van Rooy & Viswesvaran, 2004; Wong & Law, 2002). For instance, a meta-analysis by Van Rooy and Viswesvaran (2004) revealed that EI correlates only moderately with cognitive ability ($\rho = .22$), extraversion ($\rho = .34$), emotional stability ($\rho = .33$), conscientiousness ($\rho = .31$), openness ($\rho = .23$), and agreeableness ($\rho = .24$), leading the authors to conclude that EI deserves its own space in the nomological network.

2.1. Black–White differences in EI

Although cognitive ability is known to be the best predictor of work performance across all jobs (e.g., Schmidt & Hunter, 1998), research has also established that Whites tend to score about one standard deviation (*SD*) higher than Blacks on cognitive ability tests (Sackett, Borneman, & Connelly, 2008). In an attempt to find alternative selection tools that produce minimal group differences, EI is often mentioned as one possible alternative predictor (e.g., Goleman, 1995). Knowledge that Blacks and Whites score similarly on EI may allow formal selection processes to more effectively shape the diversity of an organization's workforce (Schneider, Smith, & Sipe, 2000). And as more minority group members enter the workforce in the coming years, recruiting and hiring these untapped demographic groups will become increasingly important for organizational survival (Thomas, 2005). As the measurement of EI advances, scientists need to know more about the value of using EI tests as a tool to influence the ethnic diversity of the workplace.

From a theoretical standpoint, social status and stigma are likely to play a role in the accuracy with which ethnic groups recognize emotions. Specifically, because Blacks experience lower social status and more social stigma than Whites, scholars have suggested that Blacks should be motivated to more accurately recognize the emotional displays of ethnic groups (i.e., Whites) with higher status and power (Crocker & Major, 1989; Henley, 1977). Elfenbein and Ambady (2002) offered empirical support for this proposition in a meta-analysis about emotion recognition. Specifically, their results indicated that Whites were less accurate than Blacks at recognizing emotions in minority groups. In turn, Blacks were better able to recognize emotions regardless of whether they were assessing members of their own group or Whites.

Previous research on group differences in EI scores has also tended to support this view by showing that, on average, Blacks have significantly higher EI scores than Whites (e.g., Gignac & Ekermans, 2010; Mayer et al., 1999; Van Rooy, Alonso, & Viswesvaran, 2005). For instance, Van Rooy and colleagues found that Blacks

scored one-third of a *SD* higher than Whites. One limitation of this research, however, lies in the use of undergraduate samples in laboratory settings. In order to arrive at more accurate conclusions about the value of EI to organizations, samples must be drawn from applied settings. In the present study, we examine Black–White differences in a high-stakes, organizational setting. Although contextual differences may exist between lab and real-world environments (Ryan, 2001), we predict that findings will be in line with theoretical expectations and previous empirical findings:

Hypothesis 1: Blacks will score significantly higher on a test of EI than Whites.

In addition to examining Black–White differences in global EI, we will also conduct exploratory analyses and examine differences at the facet-level. As we alluded to earlier, there are four dimensions or facets that are thought to compose the EI construct (e.g., Joseph & Newman, 2010). The first facet is the *expression and appraisal of emotion within the self and others*. Examples of this facet include the empathy we feel toward others, both verbal and nonverbal behaviors in oneself, and perception of others' nonverbal behaviors. A second facet concerns the *ability to address one's own emotional states*. For instance, someone who is able to quickly assess his or her own emotional state would have a high score in this area. The third facet is the *regulation of emotion in oneself and in others*. This encompasses an individual's ability to access the emotions in a previous experience and one's willingness and ability to try and evaluate that experience. The final facet is *assimilation of emotion to facilitate thought*. This addresses an individual's need to harness their intrapersonal emotions to solve problems (e.g., flexible planning, creative thinking, redirecting attention and motivation).

2.2. Applicant reactions to EI

Ryan and Ployhart (2000, p. 566) define applicant reactions to selection procedures as 'any attitudes, affect, or cognitions an individual might have about the hiring process.' In the past two decades, a major stream of research has been directed at understanding applicant reactions to the actual predictors (e.g., tests, interviews, work samples) used in personnel selection (Imus & Ryan, 2005). In general, the heightened interest in applicant reactions has occurred as a result of researchers' concern with how the general public perceives personnel selection tools (Schuler & Fruhner, 1993). Indeed, the public's perceptions of selection procedures have a direct effect on the long-term practicability of test usage, and thus, indirectly affect the utility these tests provide to organizations (Schmitt, Oswald, Kim, Gillespie, & Ramsay, 2004).

Research has emerged showing why organizations are increasingly concerned with the way job candidates perceive selection procedures. For instance, an applicant's negative reaction to a selection tool is often cited as a primary reason for litigation against an organization (Cascio, 1991). Studies have also shown that negative reactions to selection procedures may result in reduced job-related motivation or intentions to withdraw from the selection process (Bauer et al., 2001; Heilman, Simon, & Repper, 1987; Macan et al., 1994), both of which may lower test utility and reduce the operational validity of the selection procedure. Furthermore, organizations may see these problems exacerbated if legally protected minority group members (e.g., Blacks) tend to react significantly more negatively than their nonminority counterparts, as this might have a negative impact on organizational staffing and diversity strategies.

Despite an increased interest in applicant reactions, little is known about the way that job candidates perceive EI tests. Yet, available information about EI test performance may be able to shed some light on this issue. For example, research suggests that an individual's performance on a selection instrument is often positively related to his or her reactions to the selection instrument (Chan, 1997). Thus, because Blacks tend to score higher than Whites on EI instruments, it is likely that Blacks will also react more positively to EI tests than Whites.

2.3. Facets of applicant reactions

Thus far, we have referred to applicant reactions as a broad, monolithic term. For the remainder of the article, however, we take a construct-oriented approach to applicant reactions so that greater specificity in levels of evaluation and EI may be gleaned (Chan & Schmitt, 2004). In doing so, we draw on two theoretical frameworks that have guided research in this area. The first framework, *social validity theory* (e.g., Schuler, 1993), focuses on the general public's perception of personnel selection tools and argues that negative lay perceptions will have a detrimental effect on the long-term viability of test usage (Schmitt et al., 2004; Schuler & Fruhner, 1993). According to Schuler (1993), *face validity* perceptions (i.e., the extent to which the content of the test looks like it is related to the job) and *predictive validity* perceptions (i.e., the extent to which the test will predict job performance) are two aspects of selection tests that are important to the general public. For example, if job applicants believe that the content of the EI test is not related to the job or that the EI test will not predict job performance, it may be argued that the utility these tests provide to organizations is diminished (Schmitt et al., 2004). This is especially important in the case of novel selection methods, such as EI, in which the general public's perceptions are still forming. Because previous

research has tended to show that Blacks score higher than Whites on tests of EI, we draw from research that suggests a positive test reaction–performance relationship (e.g., Chan, 1997) to hypothesize that Blacks will also have greater social validity assessments of EI:

Hypothesis 2a: Blacks will have higher *face validity* perceptions of EI than Whites.

Hypothesis 2b: Blacks will have higher *predictive validity* perceptions of EI than Whites.

A second framework, which focuses on theories of justice, provides a fairness heuristic for understanding applicants' reactions to the selection process. These theories contend that applicants' perceptions of fairness in organizational procedures are an important determinant of their work attitudes and behaviors (Gilliland, 1993). In personnel selection, one of the most important streams of justice research has focused on *procedural justice* (Leventhal, 1980). Procedural justice refers to the fairness of the methods used to make organizational decisions (Folger & Greenberg, 1985). Gilliland (1993) suggested that applicants will react unfavorably to selection procedures if they feel they do not have sufficient opportunity to demonstrate their knowledge, skills, and abilities in the testing situation.

In line with this proposal, Helms, Jernigan, and Mascher (2005) have argued that certain tests used for personnel selection purposes are not adequate predictors of performance because they fail to account for the emphasis that Blacks place on social relations and social context. For this reason, Helms and colleagues have called for cognitive ability test developers and users to include more contextual and social assessments of intelligence – features that are common to tests of EI (Mayer & Salovey, 1997). Thus, there may be an inclination for Blacks to react more positively to EI based on its inclusions of contextual and social assessments of intelligence:

Hypothesis 3: Blacks will have higher opportunity to perform perceptions of EI than Whites.

Gilliland (1993) also warned that improper, illegal, or invasive questioning would lead applicants to react unfavorably to a selection procedure. Although relatively little research has been conducted on improper questioning, the relative infancy of the EI construct – as well as the personal nature of questions about one's own emotions – suggests that it would be prudent to examine the extent to which the test questions are deemed improper or invasive. For instance, many EI test manuals explicitly note that they should not be used in high-stakes employment contexts. In considering whether Black–White differences exist in perceptions of question impropriety, we draw from research suggesting that Whites are generally poorer at recognizing emotional displays than Blacks (Elfenbein & Ambady, 2002), as well as research suggesting that Whites may not be as comfortable talking about, exploring, or evaluating their own emotional states (Van Rooy et al., 2005). Thus, Whites may see a test of EI as more of an invasion of privacy. Conversely, Blacks may be more likely to welcome such emotional evaluations. Accordingly, we hypothesize that:

Hypothesis 4: Whites will view an EI test as being more invasive and improper than Blacks.

2.4. Race, test performance, and reactions

Although numerous studies have examined the relationship between test performance and test reactions (Hausknecht, Day, & Thomas, 2004), research has yet to consider whether the strength of this relationship varies as a function of the applicant's race. Existing research, which has typically been collapsed across ethnic and racial groups, has shown that there is a positive correlation between reactions and performance. However, it may be fruitful to examine whether this relationship is consistent across Blacks and Whites. Because test reactions influence applicants' subsequent attitudes and behaviors – including opting out of the selection process – organizational stakeholders should be concerned if certain groups are more sensitive to aspects of the selection process than others. This is especially the case if the top candidates are more likely to be members of a legally protected group (e.g., Blacks).

In particular, studies have shown that, relative to Whites, Blacks experience increased sensitivity to discrimination (Branscombe, Schmitt, & Harvey, 1999). These differences may lead Blacks to respond differently than Whites in certain situations (e.g., Crocker & Major, 1989). In fact, researchers have documented the effects of this sensitivity in some academic testing contexts (e.g., Steele & Aronson, 1995). Considering these findings, it is surprising that no previous research has examined whether race moderates the test reaction–performance relationship in a high-stakes organizational setting. Although we offer no formal hypotheses, we conduct exploratory analyses to examine this research question.

3. Method

3.1. Sample database

The sample consisted of applicants for the job of firefighter in a large Eastern city in the United States. A total of 334 applicants provided data for this study. The final sample was 87% men and 13% women. Blacks accounted for a majority of the sample (63%) with Whites accounting for 37%.

3.2. Design and procedure

All data was collected at the same location of a hotel conference room in the focal city. Data were gathered at 13 sessions over 7 consecutive business days. There were two examination periods per day (7:15 a.m. and 12:30 p.m.) and each applicant was randomly assigned to one of those specific time periods. After completing the civil service exam – which consisted of a situational judgment test and a verbal ability test – applicants took a short break and were then asked to complete an EI test. Applicants were informed that the EI test was being used for developmental purposes only and would not be included in their final civil service exam score. After taking the EI test, they were then asked to provide information and perceptions about the test in order to help the city improve its selection process. Oral and written instructions as well questionnaire items were worded so that applicants would provide reactions and perceptions *only* of the test of EI they had just taken.

3.3. Measures

3.3.1. EI

The 16-item Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002; Law et al., 2004) was used in this study. The WLEIS is a four-dimensional self-report measure of EI, and the full list of items is reported in Wong and Law (2002). The Cronbach's alpha for the entire 16-item WLEIS was .88. For the four different facets – containing four items each – the reliabilities were: appraisal and expression of emotion in oneself (.93), appraisal and recognition of emotion in others (.85), regulation of emotion in oneself (.91), and the use of emotion to facilitate performance (.89).

The WLEIS was used in this study for several reasons. Most importantly, it was developed specifically for use in organizations and was validated using a large sample of supervisors and managers (Wong & Law, 2002). Most other existing measures of EI were developed for general assessment and broad usage (e.g., Bar-On, 1997; Mayer & Salovey, 1997). That is, test developers examined the criterion-related validity of the EI construct with the purpose of accurately describing individual differences in EI that could be used in a whole range of settings. Ones and Viswesvaran (2001) have identified numerous weaknesses in using tools in selection settings that were not developed with an occupational focus; their research suggests that measures intended for organizational usage should be constructed to explicitly maximize overlap with work criterion constructs (job performance, counterproductivity, etc.). Moreover, test publishers and scholars of EI have gone so far as to discourage their usage in high-stakes organizational settings (Matthews, Zeidner & Robert, 2002). This is not the case with the WLEIS.

Another advantage of using the WLEIS is that the measure has shown to be reliable (e.g., $\alpha > .70$) and a good predictor of various work-related outcomes including customer service (Johnson & Spector, 2007), conflict management (Kaushal & Kwantes, 2006), leadership (Wu, Liu, Song, & Liu, 2006), organizational commitment (Güleryüz, Güney, Aydın & Aşan, 2008), and work performance (Kim, Cable, Kim, & Wang, 2009). Furthermore, factor analyses have found the WLEIS to be conceptually distinct from personality as measured by the 5-factor model and cognitive ability (Law et al., 2004; Song, Huang, Peng, Law, Wong & Chen, 2010), with moderate-to-low correlations with the 5-factor model of personality ($r = .33$) and cognitive ability ($r = .14$).

3.4. Applicant reactions

3.4.1. Face validity

To assess applicants' perceptions of face validity, three items were adapted from Smither, Reilly, Millsap, Pearlman, and Stoffey (1993). An example of this type of item is: 'The content of this test is clearly related to the job'. The Cronbach's alpha was .79 for these items.

3.4.2. Predictive validity

Applicants' perceptions of predictive validity were assessed using four items adapted from Smither et al. (1993). 'Doing well on this test indicates that a person will be successful in a job' is an example of this type of item. The Cronbach's alpha for this measure was .75.

3.4.3. Opportunity to perform

To assess applicants' perceptions of their opportunity to perform, three items (e.g., 'I was able to show what I am capable of on this test') were adapted from Bauer et al. (2001). The Cronbach's alpha was .82 for this set of items.

3.4.4. Propriety of questions

Applicants' perceptions of the propriety of questions were assessed using three items adapted from Bauer et al. (2001). 'The test questions did not seem too personal or private' is an example of this item-type. The Cronbach's alpha for this measure was .70.

3.5. Analyses

Responses to the WLEIS were scored on a Likert-type scale of 1–7, with higher values indicating a higher level of EI. Analyses and effect size differences for Blacks and Whites on EI scores (as well as the four facets) were assessed with independent-samples *t*-tests. Effect sizes (*d*-values) were computed to index differences in EI scores by the groups being compared. The responses of the

applicants to the four different facets of reactions were scored so that high values (on a Likert-type scale of 1–5) indicated a more favorable reaction. We examined Black–White differences in applicant reactions using regression coefficients derived from hierarchical multiple regression analyses; these analyses were also used to investigate our research question concerning moderation.

4. Results

Table 1 provides means, *SD*s, reliabilities, and intercorrelations for race, EI and all applicant reaction variables. Before examining group differences in EI scores and reactions, we examined the factor structure of the EI and applicant reactions constructs and found no significant differences between Blacks and Whites. We report the EI test score differences between the two groups in Table 2. Contrary to previous findings (e.g., Van Rooy et al., 2005; Song et al. 2010), we found that Whites ($M = 6.41$, $SD = .51$) scored significantly higher than Blacks ($M = 6.14$, $SD = .81$) on the EI test ($t = 3.14$, $p < .01$) by approximately one-third of a *SD* ($d = .32$). Thus, we did not find support for Hypothesis 1. To get a better understanding of what was driving the ethnic-group differences in overall EI, we conducted exploratory analyses with the four facets of EI. As can be seen in Table 2, Whites scored significantly higher than Blacks on the *appraisal and expression of emotion in oneself* dimension and the *appraisal and recognition of emotion in others* dimension by .30 and .51 *SD*s, respectively.

We used hierarchical multiple regression analyses to investigate Hypotheses 2–4, as well as the research question concerning the extent to which EI test performance interacted with race to predict reactions. These results are reported in Table 3. To reduce the effect of multicollinearity, the main effects variables were first centered, and the interactions were created from the centered variables (Aiken & West, 1991). For all analyses, Race and EI test score were entered as a single block in Step 1 of the regression and then the Race × EI test score interaction term was entered in Step 2.

Hypotheses 2a and 2b stated that Blacks would have higher face validity perceptions and predictive validity perceptions of the EI test than Whites. Because the regression coefficient for the race variable entered in Step 1 of the equation was significant and positive ($\beta = .17$, $p \leq .01$), Hypothesis 2a was supported. However, contrary to Hypothesis 2b, race was unrelated to predictive validity perceptions ($\beta = .07$, ns). For Hypothesis 3, we predicted that Blacks would have higher opportunity to perform perceptions than Whites. Results indicate support ($\beta = .29$, $p \leq .01$) for this conclusion. However, our predictions about Whites being more sensitive to questioning than Blacks (Hypothesis 4) were not supported ($\beta = .05$, ns).

Next we examined our research question concerning whether race moderated the EI test reaction–performance relationship. For three of the four applicant reaction variables (face validity, predictive

Table 1. Means, standard deviations (*SD*), correlations, and reliabilities

Measure	Mean	*SD*	1	2	3	4	5	6	7
1. Race	0.65	.50	–						
2. EI score	6.25	.77	–.14	(.88)					
3. Face validity	4.25	.81	.11	.32	(.79)				
4. Predictive validity	2.83	.89	.06	.19	.35	(.75)			
5. Opportunity to perform	3.32	.89	.25	.14	.40	.67	(.82)		
6. Propriety of questions	4.56	.59	–.03	.49	.61	.24	.25	(.70)	

Note: $N = 334$; Race was dummy coded as Whites = 0, Blacks = 1. All values above .15 are significant at the $p \leq .01$ level. All values above .09 are significant at the $p \leq .05$ level.

Table 2. White–Black differences in emotional intelligence (EI) and facets

	Mean (standard deviation)		Effect sizes for mean scores	
Test performance	White	Black	*d*-value	Direction
EI	6.41 (.51)	6.14 (.81)	.32**	W > B
Self-emotion	6.55 (.57)	6.32 (.93)	.30*	W > B
Other emotion	6.04 (.75)	5.60 (.97)	.51**	W > B
Emotion regulation	6.60 (.65)	6.42 (.98)	.22	W > B
Use of emotion	6.46 (.57)	6.27 (.98)	.24	W > B

* = $p < .05$. ** = $p < .01$.
$N = 125$ (Whites), 209 (Blacks). B, Blacks; W, Whites.

Table 3. Hierarchical regression analysis for applicant reactions

Variable	Step 1 (β)	Step 1 (β)
Face validity		
Race	.17**	.18**
EI	.34**	.35**
Race × EI		.01
R^2	.13**	.13**
ΔR^2		.00
Predictive validity		
Race	.07	.07
EI	.21**	.10
Race × EI		.16
R^2	.05**	.05**
ΔR^2		.00
Opportunity to perform		
Race	.29**	.32**
EI	.18**	.45**
Race × EI		.62**
R^2	.09**	.12**
ΔR^2		.03**
Improper questioning		
Race	.05	.05
EI	.50**	.50**
Race × EI		.02
R^2	.24**	.24**
ΔR^2		.00

Note: $N = 334$.
* = $p \leq .05$. ** = $p \leq .01$.
EI, emotional intelligence.

validity, and improper questioning), the Race × EI interaction term in Step 2 did not predict a significant amount of incremental variance above that of the Race and EI score variables entered together in Step 1. However, a significant interaction term was found for the opportunity to perform variable. As shown in the lower half of Table 3, Race and EI test scores were entered as a single block in Step 1 of the regression and accounted for 9% of the variance in opportunity to perform perceptions ($p < .01$). Entering the Race × EI interaction term in Step 2 of the regression resulted in a significant increase in variance accounted for ($\Delta R^2 = .03$, $p < .01$). A plot of the interaction (Jaccard & Turrisi, 2003) as depicted in Figure 1 showed that the opportunity to perform and EI test score relationship was much stronger for Blacks than Whites. Moreover, this figure shows that the major differences in perceptions occurred when both Blacks and Whites had high scores on the test of EI. When both races scored poorly on the test, their reactions were more similar.

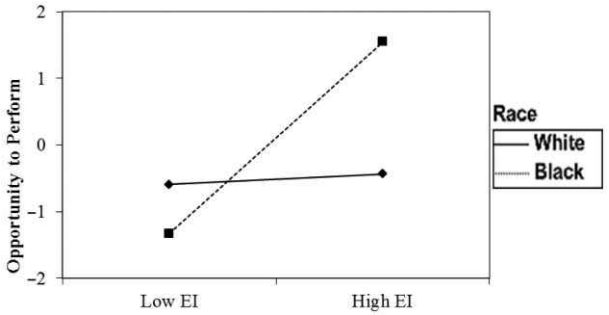

Figure 1. Interaction between EI and race on opportunity to perform perception.

5. Discussion

Over the past decade there has been a sharp rise in the frequency with which organizations use EI as a screening method (Cherniss, 2010; Murphy, 2006; Van Rooy et al., 2010). Despite its widespread application, however, there has been a relative dearth of studies examining EI in applied settings. Rather, most EI research have either been theoretical (e.g., George, 2000) or conducted using undergraduates in laboratory studies (e.g., Van Rooy et al., 2005). Accordingly, the goal of this study was to investigate several applied issues that previous EI research has not addressed. Using an ethnically diverse sample in a high-stakes organizational setting, we examined Black–White differences in EI test scores as well as Black–White differences in reactions to the test itself.

Although there are several factors that may cause adverse impact, group differences in average predictor scores is a key cause (Sackett & Roth, 1996). Thus, one of the most important – but also most troubling – findings concerns the fact that Blacks tended to score significantly *lower* on the test of EI than Whites. Specifically, EI score differences were moderate in size and favored the majority group by one-third of a *SD* ($d = .32$). Although the Black–White difference in EI seems less pronounced than the gap generally found for tests of GMA ($d = 1.10$; Roth et al., 2001), our findings suggest that there are greater ethnic-group differences in EI test scores than for those of many other selection procedures, including structured interviews, which tend to show only about one-quarter of a *SD* favoring Whites (Huffcutt & Roth, 1998). Also striking is the fact that the measure of EI used in this study employs a self-report scoring format, suggesting that it should function more similarly to self-report personality tests than cognitive ability tests. Yet, research has revealed few differences between Whites and Blacks on work-related personality constructs such as conscientiousness (Schmitt, Clause, & Pulakos, 1996), dependability (Hough, 1998), and integrity (Ones & Viswesvaran, 1998). In short, our findings challenge the notion that using EI in organizational settings will result in a more diverse workplace (Goleman, 1995).

These findings conflict with other EI research that shows that legally protected minority group members

score significantly higher than majority groups (e.g., Van Rooy et al., 2005). However, many of the studies examining Black–White differences were conducted in laboratory settings, whereas this is the first known EI study to be administered in a high-stakes organizational setting with real job applicants. Ryan (2001) has noted that differences exist between hypothetical testing conditions (e.g., testing undergraduates in a lab) and real-world settings (e.g., actual job applicants) and found that samples consisting of applicants applying for real jobs tend to report higher levels of test-taker motivation and test-taker anxiety. Therefore, it is possible that the results of previous studies using student and laboratory samples were limited because they failed to elicit the high levels of test-taker motivation and anxiety that are commonly experienced in high-stakes testing.

A second novel aspect of this article was our examination of ethnic-group differences in reactions to an EI test. Results indicated that Blacks had a stronger belief that the test 'looked like' it would measure EI (i.e., face validity), and that Blacks also had a stronger belief that they were able to show their true skills and abilities (i.e., opportunity to perform) when completing the test. These findings offer support for the argument that Blacks might prefer a test that places more emphasis on emotional and social relations (Helms et al., 2005). Notwithstanding the fact that Whites tended to score higher, knowledge that Blacks have more favorable reactions to EI tests may enable pathways for organizations and recruiters to attract this important ethnic minority group (Rynes & Barber, 1990) and ultimately gain a sustained advantage throughout the recruitment process (Ryan & Ployhart, 2000).

Perhaps the most surprising finding was that although Blacks tended to score significantly lower on the EI test than Whites, they actually perceived the test in a significantly more favorable light. This kind of incongruity in scores and reactions has not been seen in past selection research. For instance, Chan, Schmitt, DeShon, Clause, and Delbridge (1997) found that Blacks had significantly lower face validity perceptions of GMA tests than Whites (–.28 *SD*s), and, likewise, that Blacks tended to perform more poorly on these tests. Conversely, Blacks tended to react approximately similarly to Whites concerning tests of personality (.10 *SD*s) and also performed about the same on personality tests. In fact, we are aware of no study in the entire stream of applicant reactions research that reports a protected minority group favoring a selection tool in which they perform significantly worse.

We can offer several explanations for these contradictory findings. One possibility is that contrast effects played a role in Blacks favoring the EI test more. Compared to tests of *emotional* intelligence, tests of *cognitive* intelligence have been used in the selection process for a substantially longer period of time. In fact, because of their extensive use in occupational and educational settings, reactions to measures of cognitive ability may reflect applicants' previous experiences with these types of tests (Arvey, Strickland, Drauden, & Martin, 1990). Because Blacks tend to score significantly lower on cognitive ability tests, they may perceive an alternative type of intelligence test in a more favorable way – especially when this type of test measures intelligence in a social context (e.g., Helms et al., 2005).

At the same time, these potentially 'self-injurious' perceptions may be due in part to EI's recent proliferation. EI has become a popular topic within the mainstream media, and there are consequences associated with the enormous amount of lay interest that the construct has generated. One such consequence involves widely circulated assertions about the usefulness of EI that are not based on science. For example, in his popular book on the subject, Goleman (1995) theorized – but offered no empirical evidence – that Blacks will score higher on EI than Whites. These claims may have played a role in the perceptions that the different ethnic groups had about their performance on the test.

We should also note that reactions were based on *perceived* test performance, not *actual* test performance. There are robust findings in the psychological literature to support the notion that perceptions of performance are strongly related to attitudinal evaluations/reactions (Bandura, 1997). It is possible that Blacks' actual performance on the test was worse than they thought (i.e., positive performance bias), and that they would have had less favorable reactions to EI if they had learned of their true scores. Nonetheless, our findings that Whites score significantly higher on this particular measure of EI provide evidence against some of the previously unsupported claims attributed to EI. Dissemination of the findings presented here (e.g., significant group differences favoring Whites) may help to shift public discourse and perceptions in a meaningful way.

In our final research question, we examined whether ethnic-group differences exist in the EI test reaction–performance relationship. Although our approach to this question was initially exploratory in nature, it took on additional meaning in light of our finding that Blacks reacted more positively, but scored lower on EI. We conducted exploratory comparisons of the test reaction–performance relationship between Blacks and Whites and found that the correlations were positive in all cases. That is, both Blacks and Whites tended to prefer the EI test more when they performed better on it. However, race *does* moderate the relationship between test score and opportunity to perform perceptions, as can be seen in Figure 1.

A detailed observation of this interaction shows that the results are being driven by the reactions of Black applicants. Specifically, Blacks with higher EI scores tended

to feel that the test gave them a much better opportunity to perform than low-scoring Blacks. In turn, there appear to be no differences in opportunity to perform perceptions between high- and low-performing White applicants. The nature of this moderation may also serve to explain the incongruous finding that Blacks generally performed worse, but favored the test. It should be noted that high-scoring Blacks had much higher test reactions than all other applicants, who tended to have similar reactions. Therefore, it may be that Blacks' greater average reaction scores were inflated by the very positive reactions of high-performing Blacks.

These findings should spur applicant reaction research in a new direction regarding the function of race, as most studies (e.g., Chan, 1997) have examined Black–White reactions from a group differences perspective (i.e., the difference between the average Black applicant's reactions and the average White applicant's reaction). This avenue of research has concluded that, on average, Blacks and Whites differ relatively little in their perceptions of selection techniques (e.g., Hausknecht et al., 2004). However, our results suggest that researchers should look beyond average differences and also examine how race may interact with reactions to selection methods. Future research should also determine if race moderates the relationship between reactions and 'hard' outcomes such as job performance, job satisfaction, and opting out of the screening process. It would also be fruitful to examine these outcomes in the areas of personality, cognitive ability, interviews, and other frequently administered selection tools.

5.1. Limitations

As mentioned earlier, the pattern of group differences found in the current work is somewhat different than results found in the stream of studies using undergraduate samples (e.g., Van Rooy et al., 2005). Because the major difference between our research and previous research is the use of a high-stakes testing condition, there is a possibility that socially desirable responding or applicant faking may have influenced results. Although faking may have accounted for the high mean scores of all the groups, there is little reason to believe that faking accounted for the significant group differences in scores (e.g., Hough & Ones, 2001). That is, no research suggests that Whites can fake a test more effectively than Blacks. At the same time, we recognize that contrast effects may have played a role in our findings as applicants had just finished taking a battery of cognitive and situational judgment tests right before they took the EI test. Thus, it is possible that applicants would have reacted to the EI test differently if it was the only test they took that day. Also, different officials administered the test to different applicants. Replications of this research should control for both contrast effects as well as administrator effects.

Another potential limitation is our use of a single occupation to test group differences. Although this was a large and diverse sample, we cannot rule out that firefighters (and those who want to be firefighters) are attracted to the occupation because they share similar levels of EI (e.g., Schneider, 1987). Despite the possibility of range restriction in EI, the specific occupation we examined is one that is extremely important to the general population. Indeed, firefighters serve a role designed to protect the lives of all citizens, and the importance of this job is one that transcends all countries and cultures. Additionally, the public service sector accounts for a substantial percentage of occupational testing, and the results presented here are useful for a number of stakeholders. In a similar vein, some may argue that – because of the proportion of Blacks (63%) in the study – our sample is not representative of the US population. Although it is true that Blacks make up less than 20% of the population, there are a number of large cities in the United States – including Detroit, Baltimore, and New Orleans – where Blacks make up the majority. Nevertheless, future research needs to be conducted in cities that are more representative of the US population.

Some researchers may also see the use of a single measure of EI to examine group differences in reactions and test scores as a limitation. Although such a critique may be warranted for a laboratory study, previous research suggests that using multiple measures of the same construct in applied settings is extremely difficult (e.g., Wanous, Reichers, & Hudy, 1997). Because of the high-stakes nature of applicant testing, organizational stakeholders are often unwilling to allow researchers to manipulate and lengthen selection tests associated with these samples. Some reasons include: (a) limited space on applicant surveys (Wanous et al., 1997); (b) the cost of using multiple measures (Wanous et al., 1997); (c) increased applicant fatigue (Ryan, 2001); and (d) negative applicant reactions resulting from completing repetitive measures (Ryan & Ployhart, 2000). We recommend that this research be replicated using a different measure of EI in an actual high-stakes assessment setting. Moreover, some of the intercorrelations between the applicant reactions constructs were high (above .60). Future research that examines applicant reactions to EI should examine dimensions that are spaced further apart in the nomological network.

Finally, the cross-sectional nature of our data does not allow us to infer causal relationships between reactions and test performance. Although the results of the regression analyses are consistent with the notion that race interacts with EI test performance to influence subsequent reactions, these data are only correlational in

nature. Future research should consider experimental designs in which causality may be inferred.

6. Conclusion

To our knowledge, the current study is the first to examine Black–White differences in test scores and applicant reactions to EI in a high-stakes organizational setting. Consistent with expectations, Blacks responded more favorably than Whites regarding EI's face validity and opportunity to perform perceptions. However, Blacks scored significantly lower than Whites on the EI test. Finally, we showed that the relationship between opportunity to perform perceptions and EI scores was stronger for Blacks than for Whites. It is hoped that these findings will contribute to theoretical and practical advancement in the areas of ethnic-group differences, applicant reactions, and EI.

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