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# A time-lagged study of emotional intelligence and salary

Joseph C. Rode[a,*], Marne Arthaud-Day[b], Aarti Ramaswami[c], Satoris Howes[d]

[a] Department of Management, Miami (OH) University, United States
[b] Department of Management, Kansas State University, United States
[c] Department of Management, ESSEC Business School, France
[d] Department of Management, Oregon State University, United States

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ABSTRACT

Despite strong claims for the importance of emotional intelligence (EI) in the workplace, few studies have empirically examined the influence of emotional intelligence on career success. Theoretically, emotional intelligence should help employees to develop stronger interpersonal relationships and leadership skills, leading to higher financial compensation. To test this proposed relationship, we examine whether an ability-based measure of emotional intelligence in 126 college students predicts their salaries 10 to 12 years post workforce entry, controlling for personality, general mental ability, gender, and college GPA. We find that emotional intelligence has a significant, positive effect on subsequent salary levels, and that this effect is: 1) mediated by having a mentor and 2) stronger at higher organizational levels than at lower levels. Our results suggest that emotional intelligence helps individuals to acquire the social capital needed to be successful in their careers. Implications for theory and practice are discussed.

Emotional intelligence (EI) has been characterized as a set of skills "relevant to the accurate appraisal and expression of emotion in oneself and in others, the effective regulation of emotion in self and in others, and the use of feeling to motivate, plan, and achieve in one's life" (Salovey & Mayer, 1990: 185). As such, emotional intelligence has been linked to a wide range of individual and group outcomes, including academic success, leadership effectiveness, life satisfaction, and subjective well-being (Cartwright & Pappas, 2008; Ciarrochi, Chan, & Caputi, 2000; Fiori & Antonakis, 2011). In the workplace, emotional intelligence is considered an important predictor of career success, in part due to its role in building interpersonal relationships and developing effective coping strategies (Armstrong, Galligan, & Critchley, 2011; Lopes et al., 2004).

An extensive body of research indicates that career success is a function of ability (Ng, Eby, Sorensen, & Feldman, 2005), personality (Ng et al., 2005), opportunity (Cokley, Dreher, & Stockdale, 2004; Dreher & Ash, 1990), and their interactions. Yet there are few systematic examinations of the relationship between emotional intelligence and career success, despite strong interest in the popular press (e.g., Bradberry, 2014; Oaklander, 2014). Most of the extant literature has focused on short-term work outcomes such as job performance and job satisfaction, with disappointing findings (Semadar, Robins, & Ferris, 2006; van Rooy & Viswesvaran, 2004). These results have called into question the importance of emotional intelligence for longer-term measures of career success (e.g., Landy, 2005).

The few studies that have examined the link between emotional abilities and career success have been limited in terms of design. One investigation reported no significant relationship between emotional intelligence and career success after just two years of work experience (Rode, Arthaud-Day, Mooney, Near, & Baldwin, 2008). Amdurer and colleagues found that emotional intelligence was

* Corresponding author.
*E-mail addresses:* rodejc@miamioh.edu (J.C. Rode), marthaud@ksu.edu (M. Arthaud-Day), ramaswami@essec.edu (A. Ramaswami), howess@oregonstate.edu (S. Howes).

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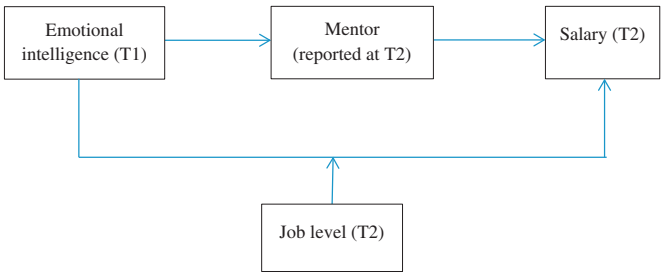


**Fig. 1.** Conceptual model.

related to self-reported career success over a 5- to 19-year time period in a sample of MBA graduates (Amdurer, Boyatzis, Saatcioglu, Smith, & Taylor, 2014). However, they utilized an observation-based measure of emotional intelligence that is difficult to replicate. The few other studies examining the EI-career success relationship are cross-sectional in nature (e.g., Momm et al., 2015), which precludes any definitive conclusions regarding causality.

To address these shortcomings in the literature, we develop a model that proposes two linkages between emotional intelligence and longer-term career success (see Fig. 1). First, we propose that emotional intelligence should be related to one's ability to build supportive social networks, or social capital (Adler & Kwon, 2002; Lin, 2001), which in turn facilitates higher job performance and associated outcomes. In support of this argument, we hypothesize that emotional intelligence increases the likelihood that an individual will develop a relationship with a mentor, which is a specific form of social capital shown to be positively related to career success in prior research (i.e., a mediated pathway; Eby, Allen, Evans, Ng, & DuBois, 2008). Consistent with the view proposed by Allen and Eby (2007) and Ragins and Kram (2007), mentors could be individuals either within or outside the respondent's organization. Second, echoing the literature linking emotional intelligence with leadership effectiveness (Kerr, Garvin, Heaton, & Boyle, 2006; Rosete & Ciarrochi, 2005), we also propose that emotional intelligence will be more strongly related to career success at higher organizational levels where leadership skills become increasingly important (i.e., a moderated effect).

We test our hypotheses using a time-lagged study design, where we administered an ability-based measure of emotional intelligence to 126 college students and then collected objective data on their career progression approximately a decade later. Career development theorists argue that first ten years or so of employment are marked initially by a concern with establishing oneself in the organization, followed by a desire for personal achievement and promotion (Hall & Nougaim, 1968; Low, Bordia, & Bordia, 2016; Super, 1980; Van Maanen & Katz, 1976). After the first ten years, employees enter a “maintenance stage” which is defined by a reliance on established relationships with others and reduced self-focus (Hall, 1976; Low et al., 2016). Similarly, Dalton, Thompson, and Price (1977) argue that the early years of career development include the apprentice stage, where the emphasis is on developing one's capabilities, and the colleague stage, where work is performed more independently in collaboration with peers. Thus, the primary developmental tasks of the first decade of employment suggest a primary focus on social capital formation as the basis for career success and subsequent career progression. In particular, young employees are likely to benefit from relationships with more advanced workers in the later career stages who serve as mentors, helping them to build their skill base and to navigate social networks and organizational realities.

If our conceptual model is correct, the lack of a significant relationship between emotional intelligence and early career success reported by Rode et al. (2008) may have been because the study's two-year time period did not allow adequate opportunities for social capital to develop. In contrast, the 10- to 12-year time lag in the current study ensures that enough time has elapsed for significant work relationships to form and for participants to advance into leadership positions in their organizations. Moreover, the significant time lag between the measurement of emotional intelligence and career success provides compelling evidence regarding the causality of the proposed theoretical relationships, in contrast to prior studies relying on cross-sectional data.

In addition, this paper makes a significant practical contribution. While many claims have been made regarding the importance of emotional intelligence for career success, our study is the first to establish an empirical relationship between an ability-based measure of emotional intelligence prior to entering the workforce and an objective indicator of career success several years later. As individuals advance within their careers, the amount of compensation their skill sets command increases. While salary is not the sole indicator of success, it is a clear outward sign of one's worth within an organization and industry compared to other workers, and has a direct impact on that individual's quality of life. Moreover, it is not subject to the perceptual biases of self-reported indicators of career success that may be influenced by various contextual factors and individual differences, including emotional intelligence. Our findings therefore have significant implications for college education curricula as well as employee selection and development programs.

## 1. Theory and hypotheses

We follow the “mental abilities” conceptualization of emotional intelligence (Mayer, Salovey, & Caruso, 2000), which proposes that emotional intelligence represents the intersection of general mental ability and emotions. In other words, both emotional intelligence and general mental ability are dimensions of an overall construct of intelligence that involves the flexible application of declarative and procedural knowledge (e.g., Cantor & Harlow, 1994; Lohman, 2000). However, emotional intelligence differs from

general mental ability with respect to the type of information (emotional vs. verbal, symbolic, or mathematical) considered. Consistent with this perspective, prior research has shown ability-based measures of emotional intelligence to be significantly correlated with but distinct from general mental ability and from measures of both short- and long-term affect (Roberts, Zeidner, & Matthews, 2001).

Mayer and Salovey (1997) identified four facets (sometimes referred to as "branches") of emotional intelligence:

1) Perceiving Emotions, or the ability to identify emotions in self and others;
2) Facilitating Thought, or the ability to access and generate emotions in order to communicate feelings or to employ them in other cognitive processes;
3) Understanding Emotions, or the ability to comprehend how emotions combine and transition, and to understand the meaning of such combinations and transitions; and
4) Managing Emotions, or the ability to reflectively regulate emotions and emotional relationships.

Mayer et al. (2000) argue that these four abilities inform one another such that in combination they constitute a single, general EI factor, a notion that has received empirical support (Mayer, Salovey, & Caruso, 2002; Palmer, Gignac, Manocha, & Stough, 2005). Measures based on this conceptualization ask respondents to identify emotions and emotional transitions and to solve intrapersonal or interpersonal problems. They differ significantly from self-report measures based on broader "mixed-models" of emotional intelligence, which have been criticized for lacking discriminant validity from measures of personality (Davies, Stankov, & Roberts, 1998; MacCann, Matthews, Zeidner, & Roberts, 2003) and which demonstrate weak correlations to ability-based EI measures ($r$ = 0.15 to 0.31; Mayer, Salovey, Caruso, & Sitarenios, 2003). Thus, our literature review and theoretical arguments draw from the literature on the mental abilities model rather than competing mixed models of emotional intelligence.

## 2. Emotional intelligence and salary

Emotional intelligence encompasses the ability to effectively identify, comprehend, and regulate emotions for use in communication, cognitive processes, and relationship building and maintenance (Mayer & Salovey, 1997). Individuals who are able to manage their emotions should be better able to use them to their advantage throughout their careers. Many theorists argue that organizations represent social systems in which members compete for scarce resources by proactively balancing power relationships and navigating the organization's social and political environment (Burns & Stalker, 1961; Mintzberg, 1983; Pfeffer, 1982). Alternatively stated, alongside every formal organizational structure resides an informal organization consisting of "the aggregate of the personal contacts and interactions and…associated groupings of people" (Barnard, 2001: 115). Social cooperation among these individuals and groups is necessary in order to achieve organizational goals, suggesting that strong interpersonal relationships, networking skills, and political acumen are critical to achieving long-term career success within organizations. Accordingly, the link between emotional intelligence and career success can perhaps best be attributed to the facility of individuals with strong emotional abilities to develop meaningful interpersonal relationships in the workplace. Moreover, some have argued that building strong interpersonal connections at work has become increasingly important in today's global work environment, where jobs are no longer static but dynamic and require ready access to information and strong social support (Cascio, 1995; Momm et al., 2015).

This perspective aligns with social capital theory, which posits that strong interpersonal relationships are a valuable employee resource (Coleman, 1990) that can be "accessed and/or mobilized in purposive actions" (Lin, 2001: 29). Although various models have been proposed, theorists generally agree that social capital provides employees with access to information and support, facilitating better decision making and increased exposure to powerful individuals in the organization and thereby enhancing career development over time (Coleman, 1990; Krackhardt & Hanson, 1993; Nahapiet & Ghoshal, 1998; Seibert, Kraimer, & Liden, 2001). Given their heightened ability to identify and comprehend the importance of emotions and strategically use them in their communications and cognitions, individuals with high emotional intelligence are likely to become more deeply embedded in the organization's social network (i.e., structural social capital). Thus, high EI employees are more likely to have social ties they can draw on to gain access to needed resources and/or knowledgeable colleagues (Bolino, Turnley, & Bloodgood, 2002), increasing their performance, which in turn leads to higher compensation. In support of these arguments, Igbaria and Wormley (1992) found that the ability of individuals to form, understand, and manage complex organizational relationships was critical to career success. More specifically, Cherniss (1995) reported that "emotion recognition ability", or the ability to sense (and make sense of) another person's emotions from one's face and voice was directly related to salary in a cross-sectional study. Based on this logic and preliminary empirical evidence, we propose the following hypothesis:

**Hypothesis 1.** Emotional intelligence is positively related to salary.

## 3. The mediating role of mentoring

In addition to broader structural benefits, emotional intelligence may aid employees in building mentoring relationships, a specific form of relational social capital (Nahapiet & Ghoshal, 1998). Mentoring is generally conceptualized as an intense developmental relationship between a more experienced senior individual and a less experienced junior individual, where the senior person contributes time, energy, and resources for the junior person's career and personal development (Allen & Eby, 2007; Kram, 1985; Ragins & Kram, 2007). Relational social capital ties are characterized by high levels of trust, mutual identification, reciprocity,

and emotional intensity (Granovetter, 1973; Krackhardt, 1992; Nahapiet & Ghoshal, 1998). As explained by Bolino et al. (2002: 510), these are "affective relationships between employees in which coworkers like one another, trust one another, and identify with one another," and therefore, are more likely to engage in helping behaviors. Accordingly, several theorists have identified mentoring as an important form of social capital with respect to career development (Hazlett & Gibson, 2007; Higgins & Kram, 2001). Consistent with previous conceptualizations (e.g., Allen & Eby, 2007; Ragins & Kram, 2007) mentors could be individuals either within or outside the respondent's organization. External mentors link their mentees to others in the profession and can also bring objectivity or new perspectives. Internal mentors are uniquely situated to provide insight into internal processes, power dynamics, and opportunities within the organization. Both forms provide important benefits (Baugh & Fagenson-Eland, 2005; Godshalk & Sosik, 2007) and are commonly captured using a single yes/no measure (e.g., Ramaswami, Dreher, Bretz, & Wiethoff, 2010).

Mentoring provides mentees with access to a valuable array of career enabling resources such as coaching, counseling, and career advice that facilitate the development of one's career network. Mentors are therefore crucial in helping junior employees to make personal decisions that best serve their career development (Allen, Eby, Poteet, Lentz, & Lima, 2004; Dreher & Ash, 1990; Kram, 1985). In support, several meta-analytic reviews have found a positive relationship between having a mentor and career success (Allen et al., 2004; Eby et al., 2008; Ng et al., 2005; Underhill, 2006). To our knowledge, no prior studies have examined the relationship between emotional intelligence and the likelihood of obtaining a mentor.

We argue that emotional intelligence and mentoring may be related for three reasons. First, the self-awareness of emotionally intelligent individuals (Mayer & Salovey, 1997) enables them to better assess and realistically understand their needs, goals, and career motivations (Poon, 2004). High EI individuals are likely to be interpersonally competent (Lopes et al., 2004; Momm et al., 2015), increasing their self-awareness of their strengths and weaknesses (Sheldon, Dunning, & Ames, 2014), which in turn drives them to seek further development. Indeed, Sheldon et al. (2014) found that individuals with low emotional intelligence had poor insights into their low performance and were also less likely to accept feedback or pursue paths towards self-improvement, compared to those with high emotional intelligence. These results suggest that people with high emotional intelligence may be more likely to seek out a mentor and to maintain the mentoring relationship over time.

Second, emotionally intelligent individuals' ability to perceive, understand, and manage emotions should enable them to deal more effectively with complex interpersonal situations (Lopes et al., 2004; Momm et al., 2015), increasing their likelihood of forming positive close interpersonal relationships, including mentoring (Cherniss, 2007; George, 2000; London & Stumpf, 1982). For example, Kalbfleisch and Davies (1993) found that anxiety associated with intimacy in close relationships interferes with people getting involved in mentoring relationships. Emotional intelligence is negatively related to the experience of negative affect, including anxiety (Rode et al., 2008). Thus, to the extent that emotional intelligence enables individuals to mitigate or manage anxiety or negative emotions in close interpersonal relationships, it should increase their likelihood of having mentors.

Finally, mentors examine potential protégés based on their costs versus benefits (Ragins & Scandura, 1999). From a social exchange perspective, mentors prefer to engage in relationships with and provide more guidance to those perceived to be competent and more likely to succeed (Allen, Poteet, & Burroughs, 1997; Allen, Poteet, & Russell, 2000; Mullen & Noe, 1999; Olian, Carroll, & Giannantonio, 1993). Thus, the stronger interpersonal skills, increased self-awareness, and willingness for self-improvement associated with emotional intelligence should make high EI individuals more attractive to potential mentors than those who lack such abilities. Based on these arguments and acknowledging past work demonstrating a clear link between mentoring and career success, we offer the following hypothesis:

**Hypothesis 2.** Mentoring mediates the relationship between emotional intelligence and salary.

## 4. Moderating effects of job level

Organizational theory and empirical research indicate that job content shifts as employees move from lower to higher organizational levels. Individuals who are part of, or who are preparing to join, the organization's guiding coalition are primarily responsible for influencing others rather than completing discrete tasks (Cyert & March, 1963; Pfeffer & Salancik, 1978). In this environment, the ability to read and utilize one's professional and personal networks to navigate the political and organizational power structures becomes critically important to success (Momm et al., 2015; Pfeffer & Salancik, 1978). Career progress and other organizational rewards become increasingly dependent on interpersonal effectiveness, skills related to leading others, and skills related to coping with ambiguous and or stressful environments (Ferris & Judge, 1991; Momm et al., 2015).

Thus, we would expect emotional intelligence to have a greater impact on salary at higher organizational levels for at least three reasons. First, emotions are intricately related to the power structure of social relationships and are often used as subtle cues to convey one's standing in social situations (Gordon, 1990). The ability to read these emotional cues, understand the meaning of these cues in the larger context, and manage the presentation of such cues to others should facilitate navigating the political environment at higher echelons. Second, the ability to form strong interpersonal relationships should translate well to developing the strong professional networks necessary for success at higher organizational levels. In support, Momm et al. (2015) found that emotional recognition significantly related to other reports of both political skill and facilitation of productive interpersonal work relationships.

Third, previous research has found positive associations between ability measures of emotional intelligence and leadership effectiveness (Kerr et al., 2006; Leban & Zulauf, 2004; Rosete & Ciarrochi, 2005) and other skills that become increasingly important at higher ranks. For example, emotional intelligence has been linked to effective macro-level decision making (Azouzi & Jarboui, 2014) and teamwork effectiveness under conditions of high managerial work demands (and Farh, Seo, & Tesluk, 2012). Moreover, Carmeli's (2003) study of 98 senior managers concluded that emotional intelligence was positively associated with the ability to control stress,

succeed in stressful environments, and eliminate career obstacles. Similarly, McFarlin, Rode, and Shervani (2015) found that individuals with high emotional intelligence had higher job performance, a longer-term perspective, and lower levels of burnout under conditions of high-role stress than those with low emotional intelligence. In sum, these arguments support the notion that emotional intelligence relates to a number of personal factors that become increasingly important at higher organizational levels, leading to our third hypothesis:

**Hypothesis 3.** The effects of emotional intelligence on salary will be stronger at higher organizational levels than at lower organizational levels.

## 5. Methods

### 5.1. Sample

The respondents were alumni of a large university in the Midwestern United States who previously provided data as undergraduate students in a required multi-section course in organizational behavior. The first wave of data collection consisted of a series of online surveys containing a number of individual difference measures. We administered the Wonderlic Personnel Test (WPT) in person via a paper-and-pencil instrument. This initial data collection effort took place between 2001 and 2003, and included four cohorts (semesters) with a total sample size of 3230 participants. Two of these four cohorts completed an ability based assessment of emotional intelligence. A total of 857 respondents from the first wave had complete data for all measures employed in the current study.

We conducted the second wave of data collection from May through July of 2014. The university's alumni office provided us with contact information for all business school graduates for the years 2001 through 2005; e-mail and/or mailing addresses were available for 4606 out of 4777 graduates listed. This range covered the expected graduation dates of all study participants, given that most students took the organizational behavior course during their junior or senior year of college. For graduates with current e-mail addresses ($n$ = 2803; 99 of these e-mail addresses were invalid), we sent a series of three weekly e-mails (initial message, plus two reminders to nonresponders) inviting them to participate in the follow-up study, offering a $25 Amazon.com gift card as an incentive. Initially, students had a one-in-three chance of receiving the gift card, with subsequent reminders guaranteeing a gift card. For individuals with mailing addresses only ($n$ = 1803), we sent a paper invitation to participate in the online survey with the incentive guaranteeing a gift card.

We received 776 responses out of the 4507 individuals with valid contact information for an overall Time 2 data collection response rate of 17.2%. Of these 776 respondents, we were able to match 383 individuals to the Time 1 dataset (11.9% of the total Time 1 sample). We had Time 2 data for 136 of the 857 Time 1 respondents with complete data for all measures used in the present study (not all measures were included in each of the four data collection efforts at Time 1), for an effective response rate of 15.9%. Of the 136 respondents with complete Time 1 and Time 2 data, ten reported that they were not employed full-time at the time of the survey, so our final sample size for the present study was 126 subjects.

We performed a series of analyses to assess the potential for non-random sampling effects due to subject attrition (Goodman & Blum, 1996). First, we ran a logistic regression using all Time 1 independent and control variables as predictors of a dichotomous variable indicating whether the Time 1 respondents stayed (1) or left (0) the sample. Both (male) gender ($\beta$ = 0.83, $p < 0.01$) and GPA ($\beta$ = 0.82, $p < 0.01$) positively predicted the likelihood of participating in the Time 2 follow-up survey. These findings were corroborated by an independent samples $t$-test comparing the means on all Time 1 variables for subjects who stayed versus left the sample at Time 2. We observed significant mean differences for gender (0.52 versus 0.67, $p < 0.01$), GPA (3.33 versus 3.19, $p < 0.01$), and the Wonderlic (28.88 versus 27.40, $p < 0.01$). The difference in scores for GPA and the Wonderlic represented 2.96% and 3.51% of the total range in each measure. Third, a comparison of the variances between the Time 1 and Time 2 samples indicated a slight constriction of variance among Time 2 respondents for GPA only (0.16 versus 0.11). These results are in keeping with prior studies indicating a tendency for subjects higher in various mental abilities to persist in longitudinal data collection efforts (Baltes, Schaie, & Nardi, 1971; Botwinick & Siegler, 1980; Goodman & Blum, 1996). The gender effects are likely attributable to a higher tendency for women to drop out of the active workforce during childbearing years (Lu, Wang, Han, & Wang, 2017). In addition, name changes by female participants from Time 1 to Time 2 made it more difficult to track female respondents over time and to match their data records.

## 6. Measures

### 6.1. Salary

In the Time 2 survey, respondents reported their total annual compensation (*salary*) from their current jobs, which included salary, bonuses, and any other forms of monetary compensation, in US dollar value (000 s).

### 6.2. Emotional intelligence

We measured *emotional intelligence* using the ability-based Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT© V2.0), administered as part of the Time 1 survey prior to college graduation and full-time entry into the workforce. The premise of ability-

based EI theory and objective, ability-based assessment tools like the MSCEIT© V2.0 (Mayer et al., 2002) is that there are correct answers to the instrument's questions, similar to an IQ test. This has the advantage of eliminating the self-report biases that are highly problematic with other existing EI instruments (Landy, 2005; Mayer et al., 2002, 2003).

The MSCEIT© V2.0 includes 141 items divided into eight sections (tasks) that sample the four facets of emotional intelligence as defined by Mayer and Salovey (1997). The identifying emotions dimension is measured by two tasks requiring respondents to indicate which emotions are present in a series of photographs representing faces (*faces* task) or in a series of pictures of other objects, such as landscapes or abstract pieces of art (*pictures* task). For the facilitation dimension, respondents select the relative effectiveness of various emotions in facilitating certain behaviors in hypothetical situations (*facilitation* task) and compare the emotion being felt by a character in a scenario to colors, temperature, and lighting characteristics (*sensations* task). The understanding dimension is measured by asking respondents to identify both the possible emotional reactions given a character's emotional state (*changes* task) and the complex emotion formed when simple emotions are aggregated (*blends* task). The managing emotions dimension requires respondents to evaluate the effectiveness of a character's response with respect to managing specific emotions (*emotional management* task) and to rate the usefulness of several actions, given specific interpersonal relationship objectives (*emotional relations* task).

A statistical firm affiliated with the test publisher, Multi-Health Systems, utilized a general consensus method to calculate item and task scores. Item scores were assigned based on the percentage of respondents in the normative sample ($N$ = 5000, weighted to mirror the demographic characteristics within the United States) who selected the same answer as the respondent. As a result, item scores ranged from 0 to 1.0. Task scores were calculated as the mean of the item scores within the task and then rescaled as a deviation from the mean of the normative sample, which was scaled with a mean of 100. As recommended by Mayer et al. (2000), we averaged the eight task scores ($\alpha$ = 0.73) to create one overall measure of emotional intelligence. This approach was further supported by the results of a confirmatory factor analysis (described in the Analysis section).

### 6.3. Mentoring

In the Time 2 survey, we asked respondents whether or not they were currently engaged in mentoring relationships (*mentor*). Following past research (Dreher & Ash, 1990; Ragins & McFarlin, 1990), we defined a mentor as "someone who holds a senior position and takes an active interest in developing your career. While it is possible for an immediate supervisor to serve as a mentor, this type of relationship represents a special opportunity to interact with a senior manager. The standard subordinate/supervisor relationship is not a mentoring relationship." Accordingly, mentors could be individuals either within or outside the respondent's organization (e.g., Allen & Eby, 2007; Ragins & Kram, 2007). We coded those who responded "no" to this question as 0, and those who responded "yes" as 1. We focused on the presence or absence of a mentor because meta-analyses by Allen et al. (2004) and Eby et al. (2008) found that mentor presence was a stronger predictor of career outcomes than mentoring functions. Also, as Allen et al. (2004) suggest, measures of mentor behaviors are not likely to capture the full range of support that a mentor might provide protégés.

### 6.4. Job level

We measured job level in the Time 2 survey, using the following scale: 1 = Individual contributor (e.g., staff accountant, programmer/analyst, sales representative, human resource representative); 2 = Manager of individuals (e.g., senior accountant, regional sales representative, senior analyst); 3 = Manager of managers (e.g., sales manager, programming manager); and 4 = Senior executive (e.g., vice president, division manager, other members of the top management team).

### 6.5. Control variables

Following previous studies on emotional intelligence, mentoring, and career success (Momm et al., 2015; Ng et al., 2005; Stroh, Brett, & Reilly, 1992), we included various human capital, demographic, personality, and context factors that could represent alternative explanations for the observed effects. The control variables from the Time 1 survey included *gender* (female = 0; male = 1), cumulative self-reported student *GPA*, *general mental ability*, and personality (*conscientiousness* and *emotional stability*). Self-report GPA scores were previously found to have a high degree of correspondence with university records ($r$ = 0.93, $p < 0.01$) for a random subsample of 100 respondents, supporting the use of self-report GPA as a reliable indicator (*cite removed for blinding*). We assessed general mental ability using the Wonderlic Personnel Test, a timed, 12-minute assessment with 50 items, scored as the number of correct responses. The Wonderlic has demonstrated correlations ranging from 0.85 to 0.93 with the Wechsler Adult Intelligence Scale full scale (Dodrill, 1981; Dodrill & Warner, 1988), and has strong validity (McKelvie, 1989) and test-retest reliability (Dodrill, 1983). We utilized items from Goldberg's (1999) International Personality Item Pool to measure conscientiousness and emotional stability, the two Big Five dimensions that prior research has most closely linked to performance and career success (Barrick & Mount, 1991; Judge, Higgins, Thoresen, & Barrick, 1999; Seibert & Kraimer, 2001). Respondents rated a series of five behavioral statements per dimension, using a 5-point scale ranging from 1 (very inaccurate) to 5 (very accurate). We averaged scores across each five-item set to create a composite index.

The control variables from the Time 2 survey included years of work experience (*work years*), industry (government/nonprofit = 1, other = 0), and number of additional college degrees obtained since graduation. We did not control for age or race due to sample homogeneity regarding these characteristics.

## 7. Analysis

We performed a confirmatory factor analysis on the latent variables included in the model. We modeled emotional stability and conscientiousness with their respective indicators and utilized the four emotional-intelligence branch scores as indicators of emotional intelligence. The initial model resulted in a poor fit to the data. Examination of the modification indices indicated that model fit could be improved by relaxing the constraints between two of the emotional stability indicator error terms and between the error terms associated with two of the emotional intelligence branch scores; no cross-loadings were indicated. A modified model in which these two constraints were relaxed displayed an acceptable fit to the data (CFI = 0.93, IFI = 0.93, RMSEA = 0.07). All indicators had significant loadings on their respective factors (above 0.40), and the average variance explained across the indicators for each latent variable was higher than the variances shared by any two latent variables, supporting their discriminant validity (Fornell & Larcker, 1981).

We performed multiple regression analyses to test the relationships predicted by our theoretical model. We assessed the relationship described in Hypothesis 1 using ordinary least squares (OLS) regression analyses in SPSS. We tested the mediated effects (Hypothesis 2) using the binary mediation program in STATA, which automatically standardizes the coefficients for the ordinary least squares and logit regression models (Stata, 2016). We then used the percentile bootstrapping command with 1000 replications to obtain standard errors and confidence intervals for testing the significance of the indirect effects. Percentile confidence intervals provide a nonparametric estimation of the sampling distribution of indirect effects and are recommended for small sample sizes and when sampling distributions are likely to violate assumptions of normality (Preacher & Hayes, 2008). Finally, we reran the full OLS regression model in SPSS to obtain the standardized regression coefficients as well as to test the proposed moderation effect (Hypothesis 3). Following Cronbach (1987), we standardized the scale scores before calculating the interaction term in order to reduce multicollinearity.

## 8. Results

The means, standard deviations, and intercorrelations of the variables included in the study are shown in Table 1. Interestingly, the zero order correlation between emotional intelligence and salary was not significant. We tested Hypothesis 1 with an OLS regression that included all of the independent variables except mentoring (Table 2, Model 1). The regression coefficient associated with emotional intelligence at Time 1 was significantly related to salary at Time 2 ($\beta = 0.20$. $p < 0.05$), as predicted by Hypothesis 1, with one important caveat. This effect was only significant after controlling for the effects of gender, and prior to including mentoring, the mediating variable, in the equation. We return to the observed suppressor effects of gender below in the Discussion section.

Results of logistic regression analyses indicated that emotional intelligence was significantly related to mentoring ($b = 0.04$, $p < 0.05$; Table 3), and OLS regression analyses indicated that mentoring was significantly related to salary ($\beta = 0.25$, $p < 0.01$; Table 2, Model 2). We then proceeded to test Hypothesis 2 through examination of the percentile confidence intervals generated by the binary mediation with percentile bootstrapping command. The total indirect effect was statistically significant ($\beta = 0.06$, SE = 0.04, 95% percentile CI [0.00, 0.16],[1] Table 4). Thus, Hypothesis 2 was supported. The proportion of total effect mediated by mentoring was 0.30.

We tested Hypothesis 3 by adding an interaction term consisting of *emotional intelligence x job level* to Model 2 to create Model 3 (Table 2). The interaction term was significantly related to salary at Time 2 ($\beta = 0.21$, $p < 0.01$), supporting Hypothesis 3. To identify the form of the interaction, we plotted salary at high and low levels ($+1.0$ and $-1.0$ standard deviation from the mean; Aiken & West, 1991). As shown in Fig. 2, the form of the interaction was consistent with our expectation that emotional intelligence at Time 1 would be more positively related to salary at Time 2 at higher job levels than at lower job levels.

## 9. Discussion

We proposed and tested a conceptual model hypothesizing that emotional intelligence fosters the development of social capital, which in turn leads to longer-term career success. Individuals with high emotional intelligence should have stronger relationship-building skills, allowing them to better navigate the informal organization and become more deeply embedded in social networks. Such structural social capital provides access to resources and assistance from colleagues, leading to increased performance and higher compensation. In addition to this broad effect, we hypothesized that emotional intelligence fosters mentoring relationships, which constitute a more specific form of relational social capital (i.e., a mediated effect). We argued that individuals high in emotional intelligence are more self-aware, willing to seek out mentoring advice, less likely to have anxiety interfere with the development of close interpersonal relationships, and more likely to be perceived as competent, desirable protégés. Given that emotional intelligence is associated with several skills that are critical to managerial performance (e.g., managing social cues, navigating political networks, making macro-level decisions, and working under stressful conditions), we further hypothesized that the EI-salary linkage would be even stronger at higher job levels (i.e., a moderated effect). Data collected at two points in time over approximately a 10-year span from 126 respondents working full-time in various industries supported all of our hypotheses. We discuss the

[1] The lower end of the confidence interval was = 0.002. While this value is greater than zero, it rounded down to 0.00 when reported in the text and tables at two decimal points.

**Table 1**
Means, standard deviations, and correlations among study variables.

| | Mean | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Salary (T2) | 112.48 | 49.53 | | | | | | | | | | | |
| 2. Emotional intelligence | 89.03 | 13.14 | 0.05 | (0.73) | | | | | | | | | |
| 3. Conscientiousness | 3.53 | 0.71 | 0.06 | 0.07 | (0.78) | | | | | | | | |
| 4. Emotional stability | 3.33 | 0.89 | 0.08 | 0.16 | − 0.24** | (0.84) | | | | | | | |
| 5. General mental ability | 28.88 | 5.16 | 0.02 | 0.26** | 0.05 | 0.18 | | | | | | | |
| 6. GPA | 3.34 | 0.33 | 0.19* | 0.15 | 0.27** | 0.03 | 0.27** | | | | | | |
| 7. Gender | 0.67 | 0.47 | 0.38** | − 0.30** | − 0.12 | 0.17 | − 0.04 | − 0.09 | | | | | |
| 8. Work years (T2) | 10.12 | 1.42 | 0.03 | 0.04 | − 0.08 | 0.13 | 0.11 | 0.03 | 0.17 | | | | |
| 9. Job level (T2) | 2.32 | 1.11 | 0.32** | − 0.06 | − 0.06 | 0.09 | − 0.02 | 0.10 | 0.25** | 0.08 | | | |
| 10. Government/nonprofit (T2) | 0.16 | 0.37 | − 0.21* | 0.11 | 0.01 | − 0.02 | − 0.04 | − 0.03 | − 0.15 | − 0.19* | − 0.22* | | |
| 11. Additional degrees (T2) | 0.43 | 0.60 | − 0.05 | − 0.00 | − 0.04 | − 0.07 | − 0.01 | − 0.08 | − 0.09 | − 0.48** | − 0.11 | 0.34** | |
| 12. Mentor (T2) | 0.36 | 0.48 | 0.34** | 0.15 | 0.17 | − 0.03 | − 0.00 | 0.14 | 0.04 | 0.03 | 0.15 | − 0.10 | − 0.01 |

$n$ = 126. Cronbach's alphas appear on the diagonal. Gender coded 0 = female, 1 = male. Government/nonprofit and mentor coded 0 = no, 1 = yes.
* $p < 0.05$.
** $p < 0.01$.

**Table 2**
Results of OLS regression analyses on salary.

| | Model 1 (c path) | Model 2 (b & c' paths) | Model 3 (moderator) |
|---|---|---|---|
| Step 1 | | | |
| Emotional intelligence | 0.20* | 0.15 | 0.14 |
| Conscientiousness | 0.05 | 0.01 | − 0.02 |
| Emotional stability | − 0.02 | − 0.01 | 0.02 |
| General mental ability | − 0.07 | − 0.05 | -0.07 |
| GPA | 0.18* | 0.16 | 0.15 |
| Gender | 0.41** | 0.39** | 0.37** |
| Work years | − 0.07 | − 0.08 | − 0.11 |
| Job level | 0.21* | 0.17* | 0.20* |
| Government/nonprofit | − 0.15 | − 0.12 | − 0.11 |
| T1 data collection group | 0.05 | 0.04 | 0.05 |
| Additional degrees | 0.03 | 0.01 | 0.02 |
| Mentor | | 0.25** | 0.25** |
| Step 2 | | | |
| Emotional intelligence x job level | | | 0.21** |
| Change in $R$ squared | 0.22 | 0.06 | 0.04 |
| Overall $F$ | 4.16** | 4.93** | 5.39** |

$n$ = 126. Regression coefficients are standardized. $R$ squared values are adjusted. Gender coded 0 = female, 1 = male. Government/nonprofit and mentor coded 0 = no, 1 = yes.
* $p < 0.05$.
** $p < 0.01$.

**Table 4**
Test of indirect relationships.

| Relationships | *B* | SE | 95% percentile CI |
|---|---|---|---|
| Total indirect effect | 0.06* | 0.04 | [0.00[a], 0.16] |
| Direct effect | 0.15 | 0.11 | [ − 0.05, 0.36] |
| Total effect | 0.21* | 0.11 | [0.01, 0.44] |

Note. N = 126. CI = confidence interval. The indirect effect tests were based on 1000 bootstrapping replications.
[a] The lower confidence interval was = 0.002. While this value is greater than zero, it rounded down to 0.00 when reported in the text and tables at two decimal points.
* $p < 0.05$.

theoretical and practical implications of our findings below.

### 9.1. Theoretical implications

The literature addressing the association between emotional intelligence and career success is rather underdeveloped and

**Table 3**
Results of logistic regression analyses.

| | Mentoring (a path) | | |
|---|---|---|---|
| | *b* | SE | z |
| Emotional intelligence | 0.04* | 0.02 | 2.02 |
| Conscientiousness | 0.48 | 0.31 | 1.52 |
| Emotional stability | − 0.12 | 0.24 | − 0.51 |
| General mental ability | − 0.04 | 0.05 | -0.86 |
| GPA | 0.67 | 0.67 | 0.99 |
| Gender | 0.38 | 0.47 | − 0.81 |
| Work years | 0.07 | 0.17 | 0.44 |
| Job level | 0.27 | 0.20 | 1.36 |
| Government/nonprofit | − 0.63 | 0.63 | − 1.00 |
| T1 data collection group | 0.15 | 0.48 | 0.32 |
| Additional degrees | 0.32 | 0.41 | 0.78 |
| Log likelihood | − 75.56 | | |
| Pseudo *R* squared | 0.08 | | |

$N = 126$. Regression coefficients (*b*) are unstandardized.
* $p < 0.05$.

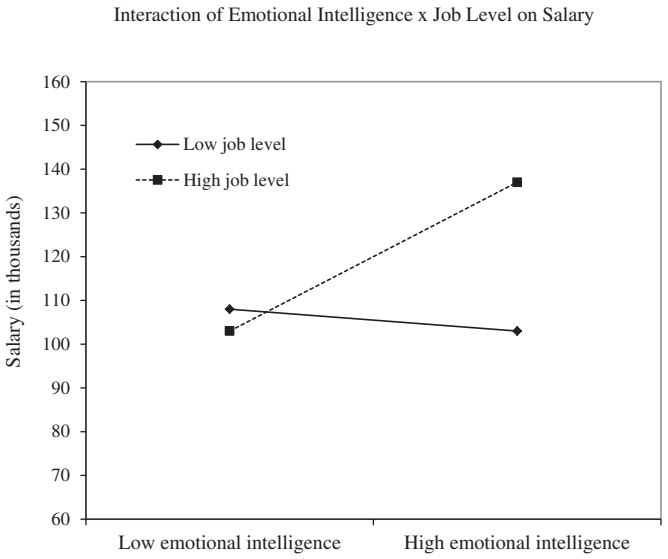


**Fig. 2.** Interaction of emotional intelligence × job level on salary.

fragmented. Although some prior research (Momm et al., 2015; Rode et al., 2008) has examined the relationship between emotional intelligence and salary, little is known about the intervening mechanisms. By incorporating contextual variables that serve as mediators (mentoring) and moderators (job level), our study identifies key levers through which emotional intelligence exerts its influence on career success.

Specifically, several aspects of our research design indicate the importance of emotional intelligence in developing social capital, which in turn facilitates positive career outcomes. Most importantly, we modeled and found empirical support for the mediating effects of mentoring, a form of relational social capital. Not only did our lagged study design permit respondents to reach organizational levels where relational social capital should become increasingly important, but our extended time frame provided more opportunity for key organizational relationships (i.e., structural social capital) to develop. Although we did not explicitly measure other aspects of the social capital domain, social capital logic is consistent with all three of our main findings: a significant relationship between emotional intelligence and salary (after controlling for gender), a significant mediating effect for having a mentor, and a moderating effect for job level. While emotional intelligence may be required by employees at all job levels, we argued that it is particularly important for individuals as they ascend the managerial ranks, given the increased emphasis on interpersonal relationships and networks, as well as leadership and related skills, such as effective decision making, interpersonal influence, and managing ambiguity.

These findings have implications for broader career development theory. Turner's (1960) classic contest and sponsored mobility framework suggests that career success can result from either a combination of individual differences, skills, knowledge, and experience (variables related to contest mobility), or from the support and sponsorship of one's supervisor or wider organization

(variables related to sponsored mobility). At a high level, our model suggests that emotional intelligence should be related to success in both contest and sponsored mobility conditions. As an individual difference, emotional intelligence is related to more effective communication and cognitive processing of emotional information (Mayer & Salovey, 1997), which should provide advantages in contest mobility systems. Similarly, emotional intelligence is also associated with social skills and the ability to build and maintain strong interpersonal relationships (Bracket, Rivers, Shiffman, Lerner, & Salovey, 2006; Yip & Martin, 2006), which should presumably enhance one's success in the contest sponsored portion of career success. In fact, mentoring has been included as a sponsorship measure in previous research (Ng et al., 2005). Thus, emotional intelligence may provide a vehicle for developing more holistic models of career development that integrate the contest and sponsorship perspectives.

Finally, our methodology allowed us to make stronger conclusions regarding causality than has been previously possible. For example, the fact that emotional intelligence was measured prior to the respondents entering the workforce provides strong evidence that emotional intelligence was a significant contributing factor in the development of mentoring relationships (and possibly other forms of social capital), rather than the other way around. Similarly, while previous research has found relationships between emotional intelligence and leadership and other skills related to success at higher organizational levels, none of these studies have been able to definitively determine if emotional intelligence caused these outcomes, or if emotional intelligence increased because of work experiences at higher organizational levels. While our study cannot rule out the possibility of reciprocal relationships, it does provide strong evidence that emotional intelligence prior to having significant organizational leadership experience is related to subsequent career success, as measured by salary.

### 9.2. Practical implications

These findings have practical implications for business educators and managers who are invested in both developing successful organizational leaders and ensuring that they have the skills and support necessary for career success. Our choice to measure emotional intelligence before the respondents entered the professional workforce suggests its causal effect on both mentoring and salary 10 years later. While our results do not preclude the possibility that emotional intelligence may develop throughout post-undergraduate work and life experience, they do suggest that emotional intelligence at the start of one's career is an important predictor of longer-term career success. For business educators, this emphasizes the need for professional formation that extends beyond the mastery of academic subject area content. Similarly, organizations would be well-served to focus on socio-emotional skills as well as cognitive abilities during the selection process. The ability-based model of emotional intelligence provides well-validated assessment instruments that limit the bias and other pitfalls commonly associated with self-report personality or trait-based measures of emotional intelligence (Landy, 2005).

The good news for both educators and managers is that empirical research suggests that emotional intelligence can be enhanced through training and development. Our study suggests that the sooner individuals start learning how to understand and manage their emotions, the better (i.e., social skills belong in the business curriculum). Evidence from MBA student cohorts indicates that emotional intelligence skills can be developed through business-degree programs (Boyatzis & Saatcioglu, 2007; Boyatzis, Stubbs, & Taylor, 2002; Dulewicz, 2000). While the factors related to the long-term development of emotional intelligence in the workplace are not yet well known, emotional intelligence's perceived malleability makes it likely that on-the-job training could be beneficial. However, the relative effectiveness of various training modalities for emotional intelligence remains an interesting question for future examination.

The mediating role played by mentoring provides another important avenue for organizational support. Our study did not differentiate between informal and formal mentoring programs, nor did we ask who initiated the pairing. Rather, we found that individuals higher in emotional intelligence were more likely to enter into and/or maintain mentoring relationships, *and* that people in mentoring relationships (regardless of origin) experienced higher levels of career success. This suggests an important role for organization-sponsored mentoring programs. Employees high in emotional intelligence are likely to create their own mentorship opportunities, but organizations can level the playing field for less emotionally intelligent workers by providing formal mentoring assignments that include interpersonal coaching and social skills training.

### 9.3. Future research

Our positive results stand in contrast to previous studies of the emotional intelligence-salary link over shorter time periods (e.g., Rode et al., 2008) and in cross-sectional samples (e.g., Momm et al., 2015), where results were inconclusive. Future research should therefore seek to substantiate the role of emotional intelligence in developing alternative forms of social capital (e.g., network analyses, teamwork, mutual respect [Adler & Kwon, 2002]) and their subsequent effects on career success. At the same time, controlling for other factors associated with job level (e.g., leadership effectiveness) will be essential in ruling out alternative explanations for the observed moderation effect.

In addition to mentoring and position level, exploring other mediators and moderators (and their associated mechanisms) may further reveal the career-oriented consequences of emotional intelligence. For example, the negative correlation between emotional intelligence and gender and the positive correlation between gender and salary (see Table 1) indicates that gender exerted a suppression effect on the relationship between emotional intelligence and salary (Conger, 1974). Indeed, in our analyses the relationship between emotional intelligence and salary was not significant when gender was omitted from the model. Unfortunately, sample size limitations precluded us from testing for differential gender effects within our research model. Future research may also consider different contexts where interpersonal skills may have an even stronger effect on career success, including international assignments,

client-based service organizations, or professions such as nursing or medicine. Finally, consistent with extant theoretical and empirical evidence, we modeled job level as a moderator of the relationship between emotional intelligence and career success. An alternative perspective could view job level as an outcome of emotional intelligence, as another avenue for future study.

### 9.4. Limitations and conclusion

All data in this study were self-reported, increasing the potential for common-method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, we expect that common method variance did not significantly influence our findings for several reasons. The independent and dependent variables were gathered at two different points in time, more than a decade apart. In addition, many of the study's constructs were demographic (e.g., gender) or biographical (e.g., existence of a mentoring relationship, organizational position), as opposed to perceptual in nature. Moreover, the MSCEIT is an ability-based test with correct answers, making it difficult to provide false or socially desirable answers.

While our response rate aligned with norms in social science research, our sample size was relatively small and homogeneous. We had adequate numbers to test our hypotheses, but our analyses were limited in the number and types of controls we could include and the types of analyses we could perform. Our respondents were primarily Caucasian, which precluded analyzing the effects of race and ethnicity, and almost all were undergraduate business majors, which narrowed the range of potential career choices. Moreover, our sample contained a higher percentage of males (66.7% versus 53.9%) compared to the gender composition of the Time 1 sample and tended to have slightly higher undergraduate GPAs (higher means and reduced variance). These attrition effects were relatively small in magnitude and consistent with both: 1) prior research showing that subjects higher in mental abilities are more likely to remain in longitudinal studies (Baltes et al., 1971; Goodman & Blum, 1996) and 2) demographic trends regarding women's participation in the workforce (Lu et al., 2017). Nevertheless, additional and larger longitudinal data sets that track the evolution of career paths over time are necessary, both to establish the generalizability of our results to other populations (e.g., other majors, non-college graduates) and to provide more nuanced analyses (e.g., effects of demographic variables and other individual differences).

Finally, we note that at least one of our measures was not as robust as it could have been. Specifically, our mentoring measure was a bivariate (“yes”/“no”) measure taken only at Time 2. We focused on the presence or absence of a mentor because meta-analyses by Allen et al. (2004) and Eby et al. (2008) found that mentor presence was a stronger predictor of career outcomes than measures of specific mentoring functions. Still, future research utilizing multi-dimensional measures of mentoring at different times in the career development process could yield greater insights regarding the relationships among emotional intelligence, mentoring (and social capital in general), and career success.

Despite its limitations, this study has notable strengths. Drawing on the ability-based perspective of emotional intelligence and using a longitudinal study design, we found a direct link between emotional intelligence in college and salary level 10 to 12 years after initial career entry. Following social capital logic, this relationship was mediated by mentoring and moderated by job level. Building on these results, future research should explore other individual and contextual mediators and moderators of the association between emotional intelligence and career success, bringing much needed richness and clarity to this literature. Ultimately, although vestiges of the “rational manager” view still exist in organizations (Brotheridge & Lee, 2008), our study supports the need for an increased appreciation of the role of emotions and emotional intelligence in the career-development process.

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