MEDIATING EFFECT OF JOB SATISFACTION ON THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND PERCEIVED GENERAL HEALTH

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We examined the mediating role that job satisfaction plays in the relationship between emotional intelligence (EI) and perceived general health. Participants were 124 faculty members in the School of Basic Medical Sciences at Southern Medical University, China. The simple path and fully mediated models were subjected to structural equation modeling. Results indicated that EI was positively correlated with job satisfaction, and that job satisfaction was positively correlated with perceived general health. However, when job satisfaction was controlled for, the partial correlation between EI and perceived general health became nonsignificant. Finally, we found that job satisfaction mediated the relationship between EI and perceived general health.

Keywords: emotional intelligence, job satisfaction, perceived general health, occupational psychology, structural equation modeling.

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Emotional intelligence, job satisfaction, and perceived general health are important concepts in occupational psychology (Arnold et al., 2005). Emotional intelligence is of particular importance for fields with a high requirement for competence in interpersonal communication, such as business negotiations and health care (Güleriyüz, Güney, Aydın, & Aşan, 2008; Jones & Argentino, 2010). In addition, job satisfaction and perceived good general health are key to keeping employees work focused (Wright & Cropanzano, 2000).

Salovey and Mayer (1990) were the first to posit the concept of *emotional intelligence* (EI), which they defined as “the subset of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (p. 189). In the second version of the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT V2.0), four branches of EI are assessed: (a) perceiving emotion accurately, (b) using emotion to facilitate thought, (c) understanding emotion, and (d) managing emotion (Mayer, Salovey, Caruso, & Sitarenios, 2003). Other recent measures of EI are the Bar-On Emotional Quotient Inventory (Bar-On, 1997a, 1997b), the Emotional Intelligence Scale (Schutte et al., 1998), and the Work Profile Questionnaire–Emotional Intelligence Version (Cameron, 1999).

In recent years, the use of EI as a psychological determinant of occupational success has generated great interest in the field of occupational psychology. For instance, EI has been found to affect a variety of work behaviors, including teamwork, innovation, and customer loyalty (Zeidner, Matthews, & Roberts, 2004). In the field of education, Ignat and Clipa (2012) found that teachers’ strong EI was correlated with their positive attitude toward work, and work and life satisfaction, and in another study, results showed that teachers’ EI significantly affected the quality of education they delivered (Birol, Atamtürk, Silman, & Şensoy, 2009). In other studies, Birks and Watt (2007) found that food service employees and health care professionals with high EI were more likely to have higher levels of job satisfaction, and Güleriyüz et al. (2008) regarded EI as a predictor of job satisfaction and organizational commitment.

The notion of *job satisfaction* was introduced by Hoppock (1935), after which Locke (1976) defined it as “a pleasurable or positive emotional state resulting from an appraisal of one’s job or job experiences” (p. 1300). In other words, job satisfaction is how content an individual is with his or her job. Modern interest in job satisfaction began with Herzberg’s (1968) two-factor theory, in which the focus is on intrinsic and extrinsic factors in the workplace. Recently, job satisfaction has received a substantial amount of attention. For example, the importance of job satisfaction to staff retention in healthcare organizations has been demonstrated in numerous studies (Duffield, Roche, O’Brien-Pallas,

Catling-Paull, & King, 2009; Giriappa & Sullivan, 2009; Hayne, Gerhardt, & Davis, 2009; Tsai & Hsu, 2008). Although job satisfaction is also thought to affect work performance (Robertson, Birch, & Cooper, 2012), in a meta-analysis, Judge, Thoresen, Bono, and Patton (2001) suggested that the correlation between job satisfaction and productivity is tenuous. Nevertheless, Ignat and Clipa (2012) recognized job satisfaction as an important factor influencing teachers' work performance.

Perceived general health is essentially a self-reported general health status measured using the General Health Questionnaire (GHQ; Goldberg, 1978). Since its introduction, the GHQ has been the most common assessment of mental well-being, encompassing physical, emotional, and personal aspects (Bowling, 1997). It was designed to assess an individual's ability to carry out normal healthy functions, rather than screening for serious mental disorders. Of the various versions, the 28-item GHQ has been used most widely in working populations, allowing for more valid comparisons (Dale, Sævareid, & Söderhamn, 2009). Some researchers have reported that job satisfaction could be an important factor influencing perceived general health. For example, Ríos-Risquez and Godoy-Fernández (2008) found that higher levels of job satisfaction were significantly associated with better general health among nurses.

However, although these researchers have examined the correlations among EI, job satisfaction, and perceived general health, a simple correlation among study variables is not sufficient to determine the mediating effect. In addition, little is known about the interrelationships of these factors among personnel whose jobs involve less interpersonal communication in an Asian cultural context, such as university faculty members in China. Therefore, our objective in this study was to examine the interrelationships between EI, job satisfaction, and perceived general health in faculty members at a Chinese medical university. A simple path model (Figure 1) was constructed based on the view that EI is a predictor of job satisfaction (Abraham, 2000) and that job satisfaction has a predominant role in maintaining good general health. We developed a fully mediated structural model (Figure 2) to explore the mediating effects of extrinsic and intrinsic job satisfaction on perceived general health. Thus, we proposed the following hypotheses:

Hypothesis 1: Emotional intelligence will be positively and significantly correlated with job satisfaction.

Hypothesis 2: Job satisfaction will be positively and significantly correlated with perceived general health.

Hypothesis 3: Job satisfaction will play a mediating role in the relationship between emotional intelligence and perceived general health.

Method

Participants

Participants ($N = 135$) were selected randomly in 2013 from the 205 faculty members in the School of Basic Medical Sciences, Southern Medical University, China. To avoid common method bias, participants completed the measures of EI, job satisfaction, and perceived general health one at a time. After 2 months the second measure was completed, and the final measure was completed 4 months after the first measure. We received 124 fully completed and valid questionnaires, for a response rate of 92%. Of these, 68 were men (54.8%) and 56 were women (45.2%) with ages ranging from 21 to 61 years ($M = 35.61$, $SD = 9.19$).

Measures

Emotional intelligence. EI was measured with the 33-item Emotional Intelligence Scale developed by Schutte et al. (1998). The questionnaire items cover four domains: optimism/mood regulation (OMR), appraisal of emotion (AOE), social skills (SS), and utilization of emotion (UOE). Responses are recorded on a 5-point Likert-style scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Job satisfaction. Job satisfaction was measured with the 20-item Minnesota Satisfaction Questionnaire short form (MSQ 20; Weiss, Dawis, England, & Lofquist, 1967). The MSQ 20 is used to measure workers' satisfaction with 20 vocationally relevant need dimensions that include ability utilization, achievement, activity, advancement, authority, company policies and practices, and compensation. The items are divided into two subscales: intrinsic satisfaction and extrinsic satisfaction. Responses are recorded on the 5-point Likert-style scale used for the EI measure.

Perceived general health. Perceived general health was measured using the 28-item General Health Questionnaire (GHQ-28; Goldberg & Williams, 1988). The GHQ-28 is a self-administered questionnaire used to assess an individual's well-being in two areas: the inability to carry out normal functions and the appearance of new and distressing phenomena. It consists of four subscales, each comprising seven items: somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. Responses are rated on a 4-point scale of severity ranging from 0 (*less well than usual*) to 3 (*much worse than usual*). Thus, scores for each subscale range from 0 to 21 points, and overall severity scores range from 0 to 84, with lower scores indicating better health.

Data Analysis

A simple correlation analysis was performed on the study variables. Structural equation modeling (SEM) was used to assess the mediating effect of job

satisfaction on the four EI dimensions and perceived general health. Several indices were calculated to evaluate the fit of the model to the data: chi square (χ^2), goodness of fit index (GFI), comparative fit index (CFI), normed fit index (NFI), and standardized root mean square residual (SRMSR). In all cases, a p value less than .05 was considered to be significant. All data analyses were carried out using SAS/STAT® software version 9.2 (SAS Institute Inc., 2008).

Results

Preliminary Analysis

The descriptive statistics, reliability, and zero-order correlation coefficients for the study variables are shown in Table 1. Job satisfaction was significantly and positively correlated with all four EI dimensions (OMR, AOE, SS, and UOE), and EI was significantly and positively correlated with job satisfaction and negatively correlated with perceived general health (lower scores indicated better perceived general health because it was scored inversely). When job satisfaction was controlled for, the partial correlation between EI and perceived general health became nonsignificant ($p > .10$). As can be seen in Table 1, all EI dimensions had inverse correlations with perceived general health and significant positive correlations with job satisfaction. That is, individuals with higher EI scores were more likely to have high levels of job satisfaction and to report a better perceived level of general health, than were individuals with lower EI scores.

Table 1. *Correlation Matrix, Descriptive Statistics, and Reliability for the Study Variables*

Variables	EI	OMR	AOE	SS	UOE	JS	IJS	EJS	GH
EI	1								
OMR	.869**	1							
AOE	.879**	.634**	1						
SS	.919**	.711**	.743**	1					
UOE	.875**	.786**	.685**	.747**	1				
JS	.550**	.509**	.500**	.494**	.421**	1			
IJS	.516**	.483**	.464**	.465**	.396**	.962**	1		
EJS	.523**	.476**	.485**	.469**	.399**	.919**	.776**	1	
GH	-.306**	-.354**	-.203*	-.285**	-.236**	-.453**	-.461**	-.379**	1
<i>M</i>	122.452	33.726	32.718	40.726	15.282	72.000	43.734	28.266	21.976
<i>SD</i>	14.856	4.148	4.786	5.258	2.530	9.878	6.187	4.272	8.658
α	.915	.700	.810	.741	.740	.904	.858	.792	.888

Note. EI = emotional intelligence; OMR = optimism/mood regulation; AOE = appraisal of emotion; SS = social skills; UOE = utilization of emotion; JS = job satisfaction; IJS = intrinsic job satisfaction; EJS = extrinsic job satisfaction; GH = general health. $N = 124$. * $p < .05$, ** $p < .01$.

The Mediating Effect of Job Satisfaction on the Relationship Between EI and Perceived General Health

We tested the mediating effects in this study using SEM as recommended by Holmbeck (1997). The standardized direct path coefficients for the study model (Figure 1) are listed in Table 2. For example, to test the direct path from EI to perceived general health, the coefficient of the path from job satisfaction to perceived general health was constrained to zero. The direct path coefficients were all significant in the predicted directions. Next, the mediating effect was assessed under two conditions: (a) the direct path from EI to perceived general health was constrained to zero, and (b) the direct path from EI to perceived general health was not constrained. The results showed that the addition to the constrained model of the direct path from EI to perceived general health did not improve the fit ($\Delta\chi^2$ was nonsignificant). As can be seen in Figure 1, a nonsignificant path (p_1) was also found from EI to perceived general health. The findings suggested that job satisfaction had a mediating role in the relationship between EI and perceived general health.

Table 2. *Direct Path Test*

Model: direct path	Standardized coefficient	<i>p</i>
EI→GH (p_1)	-.306	≤ .05
EI→JS (p_2)	.550	≤ .05
JS→GH (p_3)	-.453	≤ .05

Figure 1. *Hypothetical path model of the mediating effect of job satisfaction on EI and perceived general health.*

Note. Significant paths are shown with solid lines (p_2 and p_3) and the nonsignificant path is shown with a broken line (p_1).

The Mediating Effect of Aspects of Job Satisfaction on the Relationship Between the EI Dimensions and Perceived General Health

Examination of the fully mediated structural model of the mediating effects of extrinsic and intrinsic job satisfaction on perceived general health (Figure 2)

Figure 2. Hypothetical model of the mediating effect of aspects of job satisfaction on the relationship between the four EI dimensions and perceived general health.

Note. $\chi^2 = 8.707$, $df = 9$, $p = .465$; GFI = .981; CFI = 1.000; NFI = .984; SRMSR = .035. Only significant paths (indicated with solid lines) are included in the index calculations. Nonsignificant paths not included in the index calculations are indicated with broken lines.

revealed that almost all of the model's fit indices were good, and there were significant path coefficients, indicating that the model fitted very well with the data. Intrinsic job satisfaction was a significant mediator in the relationship between the OMR and AOE dimensions of EI and perceived general health.

Discussion

In this study we found that the four dimensions of EI (OMR, AOE, SS, and UOE) were positively correlated with job satisfaction, supporting Hypothesis 1. In addition, job satisfaction was significantly and positively correlated with perceived general health, supporting Hypothesis 2. The SEM results further indicated that intrinsic job satisfaction was an important mediator of the relationship between EI and perceived general health, supporting Hypothesis 3.

Our results support the notion that EI may have an influence on job satisfaction. The positive correlations we found between EI and job satisfaction were consistent with Wong and Law's (2002) report that employees with higher EI have greater job satisfaction, and also Ignat and Clipa's (2012) recent finding that teachers with a high level of EI had a more positive attitude toward work and were more satisfied with their work, than were teachers with low EI. In addition, our findings were in agreement with those of Kawada and Yamada (2012), that workers with high levels of job satisfaction tended to have better general health.

According to the partial correlation result, EI may have an indirect beneficial effect on perceived general health. However, in the path model it was revealed that the effect of EI on perceived general health became significant only with the addition of job satisfaction. This offers a deeper insight into the relationship between EI and perceived general health than that offered in other studies, in which EI was directly correlated with other factors, such as perceived general health, performance, and leadership (Goleman, 1998; Slaski & Cartwright, 2002).

A mediating effect of job satisfaction was found between only two dimensions of EI (OMR and AOE) and perceived general health. It is well known that effective emotion regulation results in an optimum level of physiological arousal, and influences employees' emotions and emotion expression (Cassidy, 1994). In a study focused on the mediating effect of job satisfaction on the relationship between EI and organizational commitment, Güleriyüz et al. (2008) found that nurses with higher EI levels could manage their own feelings, and understand and deal effectively with others' feelings. Thus, these nurses were happier than others were and more committed to their organization. Similarly, results of our study showed that individuals with higher EI levels were more likely to have high levels of job satisfaction.

In addition, job satisfaction influences teachers' work performance. For example, Abouserie (1996) found that university faculty members were adept

in using a wide range of coping strategies to gain greater job satisfaction, and that those with a higher level of education were more adept in managing their emotions, than were those with lower levels of education. In addition, the faculty members were also aware of the importance of their job, and how well it fitted in with their long-term aims, so they were more likely to be satisfied with their present jobs.

Furthermore, because employees with high EI tend to be satisfied with their life and have a positive attitude toward work, they may report a better perception of general health status (Arnold et al., 2005). This may explain why job satisfaction plays a mediating role in the relationship between EI and perceived general health.

Our findings have several important implications for management in Chinese medical universities. First, some medical universities conduct personality tests as part of human resource management activities, to help understand faculty members' motivation, innovation potential, interests, and attitudes. Our results could be used to assist in understanding the influence of EI on work satisfaction and perceived general health. Second, our results are informative for the design of intervention programs to improve work performance. Third, the mediating role of job satisfaction in the relationship between EI and perceived general health has implications for promoting general health of faculty members in Chinese medical universities.

There are several limitations in this study. First, as all the respondents belonged to a single institution, the results cannot be generalized to all universities. Second, as we did not include many factors that may affect the study variables, and all data were self-reported, our findings offer only a promising platform upon which to base future work. It would be useful to apply SEM to investigate the interrelationships among EI, job satisfaction, and perceived general health across different occupations to obtain more generalizable results.

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