The social cognitive model of job satisfaction among teachers: Testing and validation

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The social cognitive model of job satisfaction among teachers: Testing and validation

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1. Introduction and review

A rich body of existing research examines the factors that may explain or predict teacher job satisfaction (Ilies & Judge, 2003; Judge, Erez, Bono, & Thoresen, 2002; Judge, Heller, & Mount, 2002; Lent et al., 2005). Most have developed models that incorporate key predictors. However, the key components of these models vary, and may include combinations of person-environment fit (Dawis & Lockquist, 1984; Kristof-Brown, Zimmerman, & Johnson, 2005), goal setting (Locke & Latham, 1990), personality and affect (Brief & Weiss, 2002; Judge, Erez, et al., 2002; Judge & Larsen, 2001), work characteristics (Brief & Weiss, 2002; Hackman & Oldham, 1976), expectations (Porter & Lawler, 1968; Vroom, 1964), and various perceptions such as self-efficacy, self-esteem, and locus of control (Brown, Ryan, & McPartland, 1996; Connolly & Viswesvaran, 2000; Judge, Erez, et al., 2002).

Based on Bandura’s (1986) social cognitive framework, Lent and Brown (2006) proposed a theory of job satisfaction that combines many of these components into a unified, empirically testable model (Fig. 1). The Lent and Brown (2006) model comprises five classes of predictor variables: Personality/affective traits. Participation in/progress at goal-directed activities. Self-efficacy expectations. Work conditions. Environmental supports and obstacles.

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The model is based on the assumption that people are likely to be generally satisfied with their jobs when 5 situations (or conditions) exist: they feel competent to perform their major work tasks or attain their work goals (self-efficacy), they are exposed to (or expect to receive) favorable work conditions, they perceive that they are making progress at personally relevant work goals, they receive support for their goals and self-efficacy, and they possess traits that predispose them to experience positive affect in most life situations.

Lent and Brown (2006) also note that job satisfaction is assumed to be reciprocally related to general life satisfaction. In addition to their direct links to job satisfaction, the model posits various paths among the precursors of job satisfaction.

The present study tests the validity of Lent and Brown's (2006) model in a particular sample of teachers, determining the utility of each predictor variable, and, on the basis of those results, proposes suggestions. Specifically, this study examines Lent and Brown's (2006; Lent et al., 2011; Lent, Taveira, & Lobo, in press) model using a sample of employed teachers in Abu Dhabi schools. The pioneering work of Lent and Brown (2006) has received considerable attention in the West, but has never before been tested in other environments such as Abu Dhabi.

1.1. Predicting satisfaction among teachers

Teacher job satisfaction has been the focus of considerable research (De Nobile, 2003; De Nobile & McCormick, 2005; Dinham & Scott, 1998, 2000; Luthans, 2002; Singh & Billingsley, 1996; Spector, 1997). Research indicates that school teachers experience burnout, decreased job satisfaction (e.g., Cano-Garcia, Padilla-Munoz, & Carrasco-Ortiz, 2005; Hakanen, Bakker, & Jokisaari, 2011; Hakanen, Bakker, & Schaufeli, 2006). Other studies focused on certain job resources such as workload, students' behavior, parent–teacher relationship, cooperation with colleagues, support from the school leadership, and autonomy (Skaalvik & Skaalvik, 2007). In many empirical studies, teacher job satisfaction has been related to emotional exhaustion, job demands, control over one's work environment, school type, stress, tenure, competence, organizational culture, demographic variables (age, sex, class grade taught, subject taught, type of school, nationality, pay related factors) and social support (Badri & El Mourad, 2011; Chan, 2002; McDonald, 1999; Van Houtte, 2006). Most of these studies provided linear, descriptive, and exploratory methods of analysis.

Several studies attempted to provide more structural models of teacher satisfaction in different contexts. Each study examined various factors of different constructs and predictors. These predictors included teacher experience, grade level taught, and teacher stress (Malik, Mueller, & Meinke, 1991); self-efficacy, gender, experience, and stress (Klassen & Chiu, 2010); positive affect and self-efficacy (Moe, Pazzaglia, & Ronconi, 2010); school context and burnout (Skaalvik & Skaalvik, 2009); motivation, feeling of belonging, and emotional exhaustion (Skaalvik & Skaalvik, 2011); self-efficacy beliefs and student academic achievement (Caprara, Barbaranelli, Steca, & Malone, 2006); organizational values, teachers' feelings of sense of community, and discipline (Fang, 1996); and commitment, intention to stay, race, sex, and training (Culver, Wolfe, & Cross, 1992).

Relating directly to the present study, several previous studies examined teacher satisfaction in the context of social cognitive theory (Duffy & Lent, 2009; Lent & Brown, 2006; Lent et al., 2011, in press).

1.2. Most recent studies of social cognitive model and job satisfaction

Lent (2008) focused on the development of integrative models on the basis of the assumption that job satisfaction was probably determined by the interplay among multiple factors.

The Lent, Nota, et al. (2011) study tested a social cognitive model of work and life satisfaction (Lent & Brown, 2006) in a sample of 235 Italian school teachers. The model offered good overall fit to the data, though not all individual path coefficients were significant. Three of five predictors (favorable work conditions, efficacy-relevant supports, and positive

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**Fig. 1. Lent and Brown's (2006) model of work satisfaction.**
affectivity) produced significant, direct paths to job satisfaction. Job satisfaction, progress toward personal work goals, and positive affectivity were predictive of teachers’ life satisfaction. Task self-efficacy was related indirectly to both job satisfaction (via work conditions) and life satisfaction (via goal progress). The study discussed findings’ implications for future research and efforts to promote teacher job satisfaction.

1.3. The social cognitive model and relationships

Previous research has found each of these five predictor classes related to satisfaction within the work domain, or other closely related domains. To assess personality/affect, Watson, Clark, and Tellegen (1988) measure positive affect at a trait level, finding a moderate to strong relation between positive affect and job satisfaction, which suggests that individuals who generally experience more positive emotion are more likely to be satisfied at work. Many authors found positive and negative affect to correlate with job satisfaction (Connolly & Viswesvaran, 2000; Ilies & Judge, 2003; Judge & Ilies, 2004; Thoresen, Kaplan, Barsky, Warren, & de Chermonl, 2003).

Many authors focused on the work domain and suggested that having goals at work serves as a motivating force and thus increases work performance and satisfaction (Diener, Emmons, Larsen, & Griffin, 1985; Judge, Bono, Erez, & Locke, 2005; Lent, 2004; Locke & Latham, 1990; Ryan & Deci, 2001). These authors concluded that work-related goal progress appears to moderately to strongly correlate with job satisfaction and that progressing toward goals seems more important than simply having them. The Lent and Brown (2006) model suggested that positively progressing toward work-related goals leads to increased job satisfaction. Other studies supported this conclusion (Maier & Brunstein, 2001; Wiese & Freund, 2005).

A central component of Bandura’s (1986) social cognitive theory and Lent, Brown, & Hackett’s (1994) social cognitive career theory is self-efficacy. Other studies have also found that generalized self-efficacy relates to job satisfaction (Judge & Bono, 2001; Judge et al., 2005; Judge, Erez, et al., 2002; Judge, Erez, Bono, & Thoresen, 2003; Judge, Heller, et al., 2002). Lent and Brown (2006) proposed that the link between self-efficacy and job satisfaction is most pronounced when self-efficacy is measured in job or goal-specific terms. They also noted that very little empirical research had linked work-related goals or task self-efficacy to job satisfaction. Several studies found that teachers’ beliefs in their abilities to successfully complete teaching-related work activities correlated positively with job satisfaction (Caprara, Barbaranelli, Borgogni, & Steca, 2003; Chen, Goddard, & Casper, 2004). These few studies suggested a moderate to strong correlation between domain-specific task and goal self-efficacy and domain satisfaction.

Lent (2008) proposed that the degree to which employees feel supported by their work organization is an important component of the work environment. He proposed that work conditions include a variety of components, two of which are perceived work-related fit and perceived organizational support. Cable and DeRue (2002) have proposed two general types of work-related fit: needs/supplies fit and person/occupation fit. The needs/supply fit pertains to congruence between an employee’s needs and work rewards, and person/occupation fit pertains to the congruence between an employee’s values and the organizational culture (Cable & DeRue, 2002). They found that both these fit indices correlated with job satisfaction. Kristof-Brown et al. (2005) explored the relation of these fit indices to job satisfaction, finding that the needs/supply fit correlates with job satisfaction, which suggested that the fit of individuals’ needs and values to their work environment may correlate moderately to strongly with job satisfaction. In sum, work-related fit is hypothesized to be a latent factor of perceived work conditions, where individuals who feel a fit with their work environment and feel supported by their organization report higher job satisfaction.

The final component of Lent and Brown’s (2006) job satisfaction model, environmental supports and obstacles, concerns the degree to which one receives support versus barriers from others in relation to his/her work goals and self-efficacy. They hypothesized that support relates to these variables and increases job satisfaction. They added that this component of the model is the most tentative, as no previous research has specifically examined work-related goal support and social cognitive outcomes. However, several studies (e.g., Babin & Boles, 1996; Baruch-Feldman, Brondolo, Ben-Dayan, & Schwartz, 2002) have related general work support received from coworkers, supervisors, family members, and friends to job satisfaction. Others (Lent et al., 2005; Lent, Singley, Sheu, Schmidt, & Schmidt, 2007) have related goal support in non-work domains (e.g., academic, social) to satisfaction.

In addition to the direct paths proposed between the predictors and job satisfaction, the Lent and Brown (2006) model proposed a network of relationships among the predictor variables. In their review, Duffy and Lent (2009) provided details of all the links and references to studies that supported these links. Table 1 summarizes the studies that tested the various links.

Duffy and Lent (2009) tested Lent and Brown’s (2006) model in a sample of 366 teachers in Italy, finding good overall model-data fit. Of the five predictor classes, work conditions, self-efficacy, and positive affect were each found to explain unique predictive variance. They noted that teachers who are most satisfied with their jobs see their work environment as supportive, are confident in their abilities to complete work-related tasks and goals, and report high levels of trait positive affect. Their findings also supported the contention that measures of subjective person–environment fit may not be empirically distinct from job satisfaction. They further noted that their study involved a sample of teachers from one school system, who were mostly White and female, experienced favorable working conditions, and tended to be highly satisfied with their jobs. They also recommended further validation of the model required because such sample characteristics rendered the findings’ generalizability uncertain for other, more diverse samples of teachers.
Table 1
Links between model components and background.

<table>
<thead>
<tr>
<th>From</th>
<th>To*</th>
<th>References</th>
<th>Nature of relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive affect</td>
<td>Goal support</td>
<td>Thoresen et al. (2003), Wong, Cheuk, and Rosen (2000), Kristof-Brown et al. (2005), Duffy and Lent (2009), Lent et al. (2005), Lakey and Scoboria (2005), Swanson and Power (2001), Wong et al. (2000), and Lent and Brown (2006)</td>
<td>Weak to moderate relations</td>
</tr>
<tr>
<td>Goal progress</td>
<td>Work conditions</td>
<td>Ryan and Deci (2001), Judge and Bono (2001), Brief and Weiss (2002), Duffy and Lent (2009), Lent and Brown (2006), Lent (2008), Lent et al. (2007), and Cable and DeRue (2002)</td>
<td>Weak to strong relations</td>
</tr>
</tbody>
</table>

* The (from to effect) might be direct or through other variables. Some of these studies are empirical, and some conceptual but provide support for the proposed relationship.

1.4. The Abu Dhabi context

The nature of Abu Dhabi’s educational context imposes another dimension for the importance of teacher job satisfaction. Abu Dhabi’s education system is undergoing a major reform that began in 2008. The authority responsible for Abu Dhabi public school education is the Abu Dhabi Education Council, ADEC. The previous system tended to minimize teacher autonomy and their engagement in related management issues.

The makeup of the teaching force is another differentiating variable in Abu Dhabi’s education environment. In 2010, the number of public school teachers totaled 10,758 teachers (60% female and 40% male; 60% expats and 40% nationals). These teachers were distributed among four school types (PPP, government, model, and Ghad), where each type offered the teachers different responsibilities, curricula, resources, and school environments.

Private school teachers in Abu Dhabi total 16,757 teachers (11,803 male and 4954 female; with nearly 95% expats). The only discriminating factor in teacher salaries was the teacher’s years of experience. The system offered no incentives for teachers based on individual performance or school outcomes. The school reform in Abu Dhabi, in its third year in 2010, has evolved around “the new school model – NSM.”

The previous lack of teacher satisfaction research in Abu Dhabi is evident. The search of literature identified several studies related to education in the UAE in general, but none focused on teacher satisfaction. This lack of related research along with the teacher population’s diversity, especially in an era of school reform in a developing country, raises an urgent need for the current research. Therefore, the current study uses the Duffy and Lent (2009) instrument to test the Lent and Brown (2006) model on a sample of Abu Dhabi teachers. The Duffy and Lent (2009) instrument has undergone rigorous psychometric tests proving its reliability and validity. The current study also attempts to verify its applicability in a different education environment, Abu Dhabi.

1.5. Hypotheses

Set 1 – Based on Lent and Brown’s (2006) job satisfaction model and the studies listed in Table 1, the present study tests the overall fit of the model. It also hypothesizes that the five predictors will have a positive direct effect on teacher job satisfaction:
H₁. Positive affect directly affects job satisfaction.
H₂. Goal support directly affects job satisfaction.
H₃. Self-efficacy directly affects job satisfaction.
H₄. Work conditions directly affect job satisfaction.
H₅. Goal progress directly affects job satisfaction.

Set 2 – The study also tests the direct relationships among the predictors according to the Lent and Brown (2006) model:
H₆. There is a direct effect from positive affect directly affects goal support.
H₇. There is a direct effect from positive affect directly affects self-efficacy.
H₈. Positive affect directly affects goal progress.
H₉. Positive affect directly affects work conditions.
H₁₀. Goal support directly affects self-efficacy.
H₁₁. Goal support directly affects goal progress.
H₁₂. Goal support directly affects work conditions.
H₁₃. Self-efficacy directly affects goal progress.
H₁₄. Self-efficacy directly affects work conditions.

Set 3 – The present study tests several sets of mediating relationships as depicted in Fig. 1:
H₁₅. Progress at work-related goals partially mediates the effect of work-related goal support on job satisfaction.
H₁₆. Progress at work-related goals partially mediates the effect of self-efficacy on job satisfaction.
H₁₇. Progress at work-related goals partially mediates the effect of work conditions on job satisfaction.
H₁₈. Work related self-efficacy partially mediates the effect of goal support on job satisfaction.
H₁₉. Work related self-efficacy partially mediates the effect of positive affect on job satisfaction.
H₂₀. Work conditions partially mediate the effect of self-efficacy on job satisfaction.
H₂₁. Work conditions partially mediate the effect of goal support on job satisfaction.
H₂₂. Goal support partially mediates the effect of positive affect on job satisfaction.

2. Methods

2.1. Participants

The sample consisted of 5022 teachers in Abu Dhabi employed full-time in public and private schools. Respondents who missed answering some of the questions on the questionnaire were, however, counted if they responded to most of the questions. As a result, the totals for certain categories do not add up to the full number of respondents. For the gender question, responses included 3163 females and 1858 males. The same process of counting is true for the other categories. For the specific demographic questions, 3895 teachers come from public schools and 850 from private schools; 236 teachers hold teaching diplomas (less than a bachelor’s degree), 3919 teachers hold bachelor’s degrees, 802 teachers hold master’s degrees, and 65 teachers hold PhDs; the highest percentage of teachers (15%) teach grade 12, and the lowest percentage (5%) teach grade 2; the highest number of teachers teach English (1099), Arabic (1045), and math (571); teachers’ average age is 38.65 years; and they average 13 years’ experience.

2.2. Measures

Multiple observed indicators represented each factor. The measures replicated Lent and Brown’s (2006), later used by others (i.e., Duffy & Lent, 2009; Lent et al., 2011, in press). Other scholars developed most of the measures and used them in other applications. The reliability coefficients ranged from a low of 0.874 to a high of 0.981.
In summary, two measures of job satisfaction served as observed indicators of the job satisfaction construct: the five-item version of the Brayfield and Rothe (1951) index of job satisfaction (Judge, Locke, Durham, & Kluger, 1998) and the Teacher Satisfaction Scale (TSS; Lim-Ho & Tung-Au, 2006). Participants were asked to respond to the items of the index of job satisfaction on a 7-point scale ranging from strongly disagree to strongly agree. The two measures’ scores were summed only for the job satisfaction construct.

The positive affect construct was measured with the Positive Affect (PA) items of the Positive and Negative Affect Scales (PANAS; Watson et al., 1988). Participants were asked to indicate the extent to which they have felt each of the 10 emotions listed during the past few weeks, using a 5-point scale ranging from very slightly to extremely.

Progress at work-related goals was measured with a 5-item scale adapted from Lent et al. (2005). The degree to which participants felt supported in their pursuit of work-related goals was measured with a modified version of a scale (modified by Duffy & Lent, 2009) originally designed to measure marital partner goal support (Brunstein, Dangelmayr, & Schultheiss, 1996). Each item was rated on a 7-point scale, ranging from completely disagree to completely agree.

Finally, this study used three measures to index participants’ perceptions of the favorability of their work environments. Person/organization (PO) fit and needs/supplies (NS) fit (Cable & DeRue, 2002) measured two aspects of perceived fit between oneself and one’s work environment. Both scales contained three items, to each of which participants responded on a 7-point scale ranging from strongly disagree to strongly agree. The Perceived Organizational Support Scale-Short Form (SPOS; Eisenberger, Huntington, Hutchison, & Sowa, 1986) assessed the third aspect of work conditions. Participants responded to each item on a 7-point scale from strongly disagree to strongly agree. The totaled scores from each measure were further summed together to form the work conditions construct.

2.3. Survey process

The Research, Planning and Performance Management Unit [Remark 6] in the Abu Dhabi Education Council (ADEC) designed the survey and administered it via the Internet to teachers in Abu Dhabi Emirate schools. An online survey produced a random sample of the general population of Abu Dhabi teachers. ADEC oversees a total of 305 public schools (126,294 students and 10,758 teachers) and 184 private schools (165,020 students and 9445 teachers). Many methods were used to reach the teachers to encourage them to participate. The methods included half-page ad in major Abu Dhabi newspapers (both English and Arabic), phone text messages directly to teachers, emails, and letters written from the ADEC Director General to schools. As noted, there were 3895 public school teachers and 850 private school teachers, the unbalanced reply resulting from ADEC’s greater means for reaching public school teachers, all of whose complete contact information is registered in the central ADEC system. As a result, in a two week span, all public school teachers received an SMS on their cell phones encouraging them to participate, a method not available for the private school teachers. ADEC also participated in many live radio shows for this purpose, and the response instrument was online for two weeks.

2.4. Analysis methods

Structural equations modeling (SEM) assessed the overall fit of the proposed model. Statistical measures of fit included $\chi^2$, root mean square error of approximation RMSEA, comparative fit index CFI, and SRMR. A non-significant $\chi^2$ suggests that the model fits the data adequately, but $\chi^2$ is sensitive to sample size. The CFI determines whether the hypothesized model is a better fit to the data than a null model. CFI values range from 0 to 1, and Hu and Bentler (1999) have suggested a minimum cutoff of 0.95. RMSEA assesses the degree of complexity in the model, and resulting values close to 0.06 indicate adequate model-data fit (Hu & Bentler, 1999). SRMR values <0.08 (Hu & Bentler, 1999) are typically considered as indicating acceptable levels of fit. SEM outputs tested the strength and direction of effects and relationships described in the 22 hypotheses.

3. Results

3.1. Prior analysis and results

Similar to the Duffy and Lent study, when computing descriptive statistics for each of the six constructs, observation found most of them negatively skewed and kurtotic; that is, the standardized skewness values were not within the range expected for data from a normal distribution. Table 2 presents the summary statistics for the selected data variables, including their measures of central tendency, variability, and shape. Of particular interest here are the standardized skewness and standardized kurtosis, from which we can determine whether the sample represents a normal distribution. These statistics’ values outside the range of ±2 to ±2 indicate significant departures from normality, which invalidates many of the statistical procedures normally applied to this data. The data exhibits standardized skewness values outside the expected range for all variables.

Table 3 presents the correlation coefficients among the constructs used in this study. All bivariate correlations are relatively high and significant. We found the highest correlation between self-efficacy and goal progress (0.806), positive affectivity and job satisfaction (0.798), and work conditions and goal support (0.783).
To create more normally distributed scores, we subjected the variables to rank transformations and then converted these to z scores (McDonald, 1999). These transformed values were used in all subsequent analyses. Table 3 contains the original means and standard deviations of constructs, and the correlation coefficients among the constructs.

The six constructs were relatively high internal consistencies (Cronbach reliability coefficients): job satisfaction (0.938), positive affect (0.966), work-related goal progress (0.920) [work related self-efficacy (0.874), teacher self-efficacy (0.927), work task self-efficacy (0.886)], and [perceived fit (0.923), work goal support (0.912), perceived organizational support (0.981)].

Each of the model’s six constructs was represented by a single variable (summed scores of all the items in the same construct). For those constructs that Duffy and Lent considered to represent more than one measure, a single summed score was computed to represent the measures (i.e., job satisfaction, 2 measures; work conditions, 3 measures; and work related self-efficacy, 3 measures). This study used path analysis as a result of these modifications.

### 3.2. Test of the predictive model

LISREL 8.8 tested the overall fit of the path model depicted in Fig. 1. We first ran the six-factor structural model (Fig. 1) suggested by Duffy and Lent (2009), unmodified. The test proved the Duffy and Lent (2009) model not a good fit to the data ($\chi^2 [5] = 156, p < 0.001, \text{CFI} = 0.94, \text{RMSEA} = 0.246$), and so that model could not be generalized to the full population of Abu Dhabi teachers.

Next, we used LISREL output modification results to identify a model with adequate fit. Fig. 2 depicts the best-fit model to the data of Abu Dhabi teacher satisfaction ($\chi^2 [4] = 14.69, p < 0.0538, \text{CFI} = 1.0, \text{RMSEA} = 0.023, \text{SRMR} = 0.0048$). The full model accounted for 82% of the variance in job satisfaction, which is relatively high compared to the 75% obtained in the Duffy and Lent (2009) study of 366 full time teachers in the North Carolina Association of Independent Schools.
Table 4
Results of hypotheses testing—and SEM coefficients.

<table>
<thead>
<tr>
<th>Hypotheses Set 1</th>
<th>Hypotheses Set 2</th>
<th>Hypotheses Set 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct effects (independent variables to dependent variables)</td>
<td>Direct effects (independent variables to dependent variables)</td>
<td>Indirect effects (independent variables to dependent variable – mediations)</td>
</tr>
<tr>
<td>H1</td>
<td>Yes (0.50)</td>
<td>H5</td>
</tr>
<tr>
<td>H2</td>
<td>No</td>
<td>H6</td>
</tr>
<tr>
<td>H3</td>
<td>No</td>
<td>H8</td>
</tr>
<tr>
<td>H4</td>
<td>Yes (0.28)</td>
<td>H9</td>
</tr>
<tr>
<td>H5</td>
<td>Yes (0.17)</td>
<td>H10</td>
</tr>
<tr>
<td>H11</td>
<td>No</td>
<td>H12</td>
</tr>
<tr>
<td>H13</td>
<td>Yes (0.54)</td>
<td>H14</td>
</tr>
<tr>
<td>H15</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H16</td>
<td>Yes (0.54) — (0.17)</td>
<td></td>
</tr>
<tr>
<td>H17</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H18</td>
<td>Yes (0.27) — (0.54) — (0.17)</td>
<td></td>
</tr>
<tr>
<td>H19</td>
<td>Yes (0.21) — (0.54) — (0.17)</td>
<td></td>
</tr>
<tr>
<td>H20</td>
<td>Yes (0.16) — (0.28)</td>
<td></td>
</tr>
<tr>
<td>H21</td>
<td>Yes (0.55) — (0.28)</td>
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<tr>
<td>H22</td>
<td>Yes (0.54) — (0.55) — (0.28)</td>
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<td>Yes (0.54) — (0.27) — (0.16) — (0.28)</td>
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<tr>
<td></td>
<td></td>
<td>Yes (0.21) — (0.16) — (0.28)</td>
</tr>
</tbody>
</table>

When we add a path from goal support to goal progress as proposed by Duffy and Lent (2009), the resulting model-fit parameters are not inadequate ($\chi^2$ [5] = 508.54, $p < 0.0001$, CFI = 0.98, RMSEA = 0.14, SRMR = 0.043). As a result, it makes statistical sense to add a path only from positive affect to work conditions.

In general, the structural model supports the five predictor components of job satisfaction, and most of the relationships among the predictors were also consistent with the hypotheses drawn using the Duffy and Lent (2009) path diagram.

3.3. Testing hypotheses

For the best fit model depicted in Fig. 2, the significant path coefficients are used to test the present study’s 22 hypotheses (were derived from the Duffy and Lent (2009) model). Table 4 depicts the hypotheses, the direct effects, and the indirect effects associated with each set of hypotheses.

For direct effect on job satisfaction (Fig. 2), structural coefficients indicated that positive affect, goal progress, and work conditions each produced significant paths to job satisfaction. Positive affect produced the largest coefficient (0.50). However, self-efficacy and goal support did not produce significant paths to job satisfaction (as suggested by Duffy and Lent (2009)). Therefore, the first set of hypotheses was partially supported by the sample of Abu Dhabi teachers.

For the second set of hypotheses related to the predictor variables’ direct effect on each other, structural coefficients indicated direct effect from positive affect to goal support (0.54), from positive affect to self-efficacy (0.21), from positive affect to work conditions (0.29), from goal support to self-efficacy (0.27), and from goal support to work conditions (0.55). Note that the study followed Duffy and Lent (2009) in not proposing a direct link from positive affect to work conditions, and from work conditions to goal progress. The present study observed no significant link from work conditions to goal progress, but a significant path from positive affect to work conditions. As a result, the second set of hypotheses was partially supported by the sample of Abu Dhabi teachers.

For the third set of hypotheses related to mediating effects, results supported six of eight hypotheses, but not the 15th and 17th. Results in Table 4 demonstrate three hypotheses’ ($H_{16}$, $H_{20}$, and $H_{21}$) proposed indirect effect of the independent variables on job satisfaction but through only one mediating variable. Progress toward work-related goals partially mediated self-efficacy’s effect on job satisfaction. Self-efficacy’s indirect effect on job satisfaction is $0.54 \times (0.17) = 0.092$. Work conditions partially mediate self-efficacy’s and goal support’s effect on job satisfaction. For the 18th hypothesis, work-related self-efficacy partially mediates goal support’s effect on job satisfaction, but through a third mediating variable, goal progress. As a result, self-efficacy’s indirect effect on job satisfaction is $(0.27) \times (0.54) \times (0.17) = 0.025$. For the 19th hypothesis, note that work related self-efficacy partially mediates positive affect’s effect on job satisfaction but through two separate third variables, goal progress and work conditions. Positive affect’s indirect effect on job satisfaction is $0.019 + 0.009 = 0.028$. The 22nd hypothesis is also supported, as goal support partially mediates positive affect’s effect on job satisfaction but through four different paths and with a combination of other mediating variables. Positive affect’s total indirect effect on job satisfaction where goal progress is a mediating variable is 0.1184.

4. Discussion

The present study’s results provide overall support the integrative social cognitive model’s application to explain teacher job satisfaction. Testing the hypothesized structural model provided good overall fit to the data for the sample of Abu Dhabi teachers. The paths representing direct and indirect effects of the predictors on job satisfaction provided statistical evidence of the validity of the five component model of job satisfaction predictors. In general, these results support the findings of Duffy and Lent (2009). The Duffy and Lent (2009) model’s validity further justifies the investigation of teacher satisfaction...
from a broad, integrative, and system wide perspective. The set of independent variables within the social cognitive model accounted for 82% of job satisfaction variance. This result suggests that school decision makers should consider teacher job satisfaction in an integrative model.

However, two specified paths deviated from expectations. Specifically, although three of the five predictors – positive affect, goal progress, and work conditions – explained unique variances in job satisfaction prediction, self-efficacy and goal support did not significantly influence teacher job satisfaction. Although both self-efficacy and goal support each produced significant bivariate relations with job satisfaction (0.616 and 0.622, respectively), which is consistent with past findings (e.g., Babin & Boles, 1996; Baruch-Feldman et al., 2002; Maier & Brunstein, 2001; Wiese & Freund, 2005), these two variables did not yield unique direct paths to job satisfaction, only indirect effects on teacher job satisfaction through other constructs.

The lack of self-efficacy's effect on job satisfaction is not in line with past findings in the academic, social, and work domains (e.g., Caprara et al., 2003; Duffy & Lent, 2009; Judge & Bono, 2001; Lent et al., 2005, 2007). This result suggests that Abu Dhabi teachers with greater confidence in performing their work-related tasks and fulfilling their work-related goals may not be more satisfied with their work. However, the significant path from self-efficacy to goal progress, then to job satisfaction justifies the conclusion that teachers need to feel true progress before feeling fully satisfied. For Abu Dhabi, this result might have major consequences if not directly addressed. That is, in a system where self-efficacy does not directly affect job satisfaction, other variables such as goal progress and work conditions become essential.

In Abu Dhabi's education system, and among public schools specifically, teachers' performance is not formally rated on the basis of their self-efficacy “factors” or elements. Salary package calculations consider only job experience. During 2008–2010 of education reform, many other factors have become to play a major role for teachers, such as teacher specialization, awards, professional development participation, command of certain skills (i.e., information technology), and student results in local and international tests. All these factors are believed to affect the teacher self-efficacy. What teachers believe about their capability is a strong predictor of their effectiveness. Research has demonstrated that teachers with high self-efficacy tend to persist in difficult situations (Gibson & Dembo, 1984), take more risks with the curriculum (Guskey, 1988), use new teaching approaches (Gibson & Dembo, 1984), obtain better gains in students’ achievement (Brookover, Beady, Flood, Schweitzer, & Wisenbaker, 1979), and have more motivated students (Midgley, Feldlaufer, & Eccles, 1989).

Meanwhile, the lack of linkage of perceived organizational support to job satisfaction differs from other previous findings (Duffy & Lent, 2009; Rhoades & Eisenberger, 2002). Other studies found perceived goal support directly linked to job satisfaction (Babin & Boles, 1996; Baruch-Feldman et al., 2002; Maier & Brunstein, 2001; Rhoades & Eisenberger, 2002; Wiese & Freund, 2005). In the present Abu Dhabi study, goal progress yielded no significant direct path, only indirect effects through other mediating predictors such as work conditions, self-efficacy, and goal progress.

The finding that positive affect relates to job satisfaction is consistent with other research findings (Caprara & Steca, 2006; Connolly & Visnesvaran, 2000; Duffy & Lent, 2009; Judge & Ilies, 2004; Lent et al., 2011, in press; Rhoades & Eisenberger, 2002; Thoresen et al., 2003), suggesting that teachers with higher levels of trait positive affect are more likely to have positive attitudes toward their work (Duffy & Lent, 2009). It should be noted that Lent et al. (2005) found that the positive affect scale was related to life satisfaction as well as academic self-efficacy and environmental supports.

The present study and others support some of the hypothesized paths (relationships) between the predictor variables in the Lent and Brown (2006) model, most notably, positive affect and self-efficacy, positive affect and goal support, self-efficacy and work conditions, self-efficacy and goal progress, and goal support and self-efficacy. The support for the present study’s related hypotheses provides strong evidence supporting the Lent and Brown (2006) structural model. However, two important links exhibited weak direct effects: goal support and goal progress, and work conditions and goal progress.

Further, the best fit model supported a strong link between positive affect and work conditions. This means that teachers’ positive emotions favorably influence their perceptions of their work environment. Even though this link was not supported directly by the Lent and Brown (2006) model, many other studies yielded direct or indirect relationships between the two constructs. Edwards and Cooper (1990) found a direct relationship between positive affect (especially stress) and person–environment fit (P–E). Others such as Yu (2009) also focused on the important role of work-based affect on P–E fit. He proposed that affective consistency may account for work-based affect’s effect on P–E fit. Such concepts improve our understanding of how individuals actually experience and manage P–E fit as a result of their affective experiences at work.

Results of the relationships among the independent variables (H₃–H₅) confirm previous research results (Table 5), further validating the Duffy and Lent (2009) model. The present study also found goal support to have a weak effect on goal progress, which deviates from other research results showing a moderate to strong relationship (Duffy & Lent, 2009; Lakey & Scoboria, 2005; Lent & Brown, 2006). In the present study, however, self-efficacy mediates between goal support and goal progress. Thus, goal support improves goal progress only if a teacher has high confidence in his/her workplace.

The present study’s finding of self-efficacy’s strong influence on job satisfaction through other mediating predictors suggests that planners need to understand that self-efficacy’s effectiveness requires other essential components. This result concurs with other empirical studies (Duffy & Lent, 2009; Lent et al., 2011, in press). Previous studies have also noted self-efficacy’s direct effect on goal progress. In developing a wellbeing model focused on dispositional optimism, Scheier and Carver (1985) suggested that the degree to which individuals have positive thoughts about their future affects their current subjective wellbeing. In general, this result suggests that teachers with important goals and a sense of progress in attaining them will more likely experience increased job satisfaction over the course of their job career. Previous research also found that goal progress related strongly to wellbeing (Brunstein, 1993; Sheldon & Elliot, 1999).
Table 5
Strength of relations between the independent variables.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Nature of relationships (previous research)</th>
<th>Nature of relationships (current research)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive affect</td>
<td>Work related self efficacy</td>
<td>Moderate to strong relations</td>
<td>Moderate relations</td>
</tr>
<tr>
<td>Positive affect</td>
<td>Goal support</td>
<td>Weak to moderate relations</td>
<td>Strong relations</td>
</tr>
<tr>
<td>Work related self efficacy</td>
<td>Goal progress</td>
<td>Strong relations</td>
<td>Strong relations</td>
</tr>
<tr>
<td>Goal support</td>
<td>Work-related self-efficacy</td>
<td>Moderate relations</td>
<td>Moderate relations</td>
</tr>
<tr>
<td>Goal support</td>
<td>Goal progress</td>
<td>Moderate to strong relations</td>
<td>Weak relations</td>
</tr>
<tr>
<td>Work-related self-efficacy</td>
<td>Work conditions</td>
<td>Weak to strong relations</td>
<td>Weak relations</td>
</tr>
<tr>
<td>Goal progress</td>
<td>Work conditions</td>
<td>Weak to strong relations</td>
<td>Weak relations</td>
</tr>
<tr>
<td>Goal support</td>
<td>Work conditions</td>
<td>Weak to strong relations</td>
<td>Strong relations</td>
</tr>
</tbody>
</table>

Similar to the present study’s results, previous research found that higher levels of goal progress and achievement correlated significantly with job satisfaction, and that work conditions directly affect job satisfaction (Harris, Daniels, & Briner, 2003; Ter Doest, Maes, Gebhardt, & Koelewijn, 2006; Wiese & Freund, 2005).

An important component of Lent and Brown’s (2006) job satisfaction model concerns the degree to which individuals feel supported in the pursuit of their work-related goals. The Abu Dhabi data reveal that goal support directly affects both self-efficacy and work conditions. These results are consistent with other studies (Babin & Boles, 1996; Baruch-Feldman et al., 2002; Duffy & Lent, 2009; Lent et al., 2005, 2007).

The current study examined the measurement and conceptual equivalence of the model’s variables across a sample from a different culture or nation, as many other authors (Miller & Sheu, 2008) have recommended. Thus, the Abu Dhabi study provides more research on the Lent and Brown (2006) job satisfaction model by demonstrating its range of cross-cultural applicability and the psychometric properties of the measures with international samples.

4.1. Limitations and future research

The study sample included an unbalanced mixture of public and private teachers. Future studies should consider using similar solicitation methods to encourage teachers from both public and private schools to take part.

Analysis of variances showed that responses for all SEM constructs in the study differed among the sample by gender, age, nationality, grade level, subjects taught, and type of school. For Abu Dhabi, and because of the large sample of teachers participating in the study single or multiple-group pathway analysis would also be useful (e.g., involving national teachers and foreign teachers, female teachers and male teachers, teachers in public schools and teachers in private schools) to examine possible differences in model fit or path coefficients. Future efforts might yield important results from examining the generalizability of the study finding on the Abu Dhabi sample’s gender composition. In Abu Dhabi public schools, all cycle 1 teachers (KG1, KG2, Grades 1, 2, 3, 4, and 5) are females, whereas teachers in cycles 2 and 3 are a mixture of males and females, depending on the school student-gender or the school’s public/private designation. Results demonstrated that certain factors, such as age, gender, background, and school type may well be further confounding factors in shaping the interactions of the complex model. That is, the school type, for example, may act as a “control-parameter” that may change the entire model. Future studies should examine all respondent characteristics in greater detail because one major limitation of the present study might be biased responses in the sampling, which might in turn cause limitations on the study’s external validity.

Future studies should also seek other underlying causal relationships. As the present study’s objective was, in a sense, to examine a complex relationship among the factors affecting job satisfaction. Byrne (2002) noted that we cannot easily differentiate between a causal factor and a dependent variable in a complex system. Further analysis could also examine whether job satisfaction reciprocally affects this study’s independent variables. That is, the model itself might be reciprocal, with the assumed independent variables also influenced by job satisfaction. Thus the level of job satisfaction among colleagues might also have a contiguous effect on others. Other models could also be examined for various underlying structural designs. Tests should determine how different survey designs support the causal claim and ensure that no other underlying factors caused the various apparent direct and indirect interactions, along with the different directions and interactions, between the factors.

4.2. Study implications

The present study’s major contribution to the literature is that, especially for Abu Dhabi, the results may provide much-needed information on the role of goal specific variables related to job satisfaction. More specifically, the constructs of goal-related progress, positive affect, and goal support are probably the most modifiable variables in the model, and so ADEC decision-makers could effectively target them in their strategies to improve teacher satisfaction.

As noted, the present study’s results differed from those of similar studies (i.e., Duffy & Lent, 2009; Lent & Brown, 2006) in finding no direct path between self-efficacy and job satisfaction. Many ADEC education advisors explain this observation by the absence of a performance based pay system in Abu Dhabi, where only length of experience determines a teacher’s salary.
As one put it, “All teachers are treated the same. There is no difference between a teacher who is providing excellent student outcomes, and those who never develop themselves and rely only on their experience.” In 2011, ADEC, through its school reform program, designed strategies for introducing a performance-based salary policy, expected to be implemented in academic year 2012–2013.

Self-efficacy is considered a relatively important but modifiable variable in the context of job satisfaction (Lent & Brown, 2006). Through carefully planned teacher professional development programs, teachers could strengthen their self-efficacy and skills in work tasks in which they perceive themselves as deficient. However, the present study’s results reveal that such programs must be accompanied by appropriate support and incentives.

The present study’s results may suggest tactics through which ADEC decision makers can increase teacher satisfaction in their schools. Results of this study and those conducted by Lent and Brown (2006) and Duffy and Lent suggest the importance of examining the predictors of job satisfaction within the context of a unified model rather than examining them in isolation from one another.

The present study of teacher satisfaction was conducted during a time when Abu Dhabi teachers were expecting higher monetary compensation because the education system is undergoing a major reform. A new salary system is expected to be in place by the end of 2012, and so future studies of teacher satisfaction should closely examine pay related variables.

References


