

Job and Life Attitudes of Male Executives

Timothy A. Judge, John W. Boudreau, and Robert D. Bretz, Jr.

Despite executives' important positions in organizations, their attitudes have not received much research attention. To remedy this deficiency, the authors tested a hypothesized model of executive attitudes involving job satisfaction, life satisfaction, job stress, and work-family conflict. Using data from a large, representative sample of male executives (because of the small number of female executives in the study, the analyses were confined to men), the authors obtained LISREL results indicating support for the overall model and the specific relationships within the model. These results—the first to simultaneously consider job satisfaction, life satisfaction, job stress, and work-family conflict—constitute the most comprehensive evidence to date on executive attitudes. The meaning and contributions of the findings are discussed.

Executives occupy positions of high pay, power, and prestige. Their decisions have significant consequences for large numbers of employees as well as for shareholders, communities, and other stakeholders. This is true for both their personal decisions, such as whether to stay or leave an organization, and their decisions about policies and strategies affecting others. These decisions are undoubtedly driven, in part, by the attitudes of executives toward their work. Executive work attitudes, and their antecedents and consequences, thus represent an important area of study. Better understanding of these attitudes may provide insight into behaviors such as executive job search or performance. Moreover, executives may make decisions about their organizations' policies on the basis of beliefs that others are like them. If executives' work attitudes differ from those of others, such decisions may be based on a faulty premise and thus be flawed. In fact, researchers calling for increased diversity in executive ranks have used this argument (Cox, 1991).

Unfortunately, little research currently exists on executive attitudes. Previous research on executives has focused on topics such as executive pay (e.g., Kerr & Bettis, 1987), personal characteristics of executives (e.g., Miller, Kets de Vries, & Toulouse, 1982), and the influence of executives on organizational effectiveness (e.g., A. K. Gupta & Govindarajan, 1984). Some

prior research has been conducted on executive stress (Cooper & Marshall, 1978; Glowinkowski & Cooper, 1987; Marshall & Cooper, 1979). Although this research has revealed interesting insights into the antecedents and consequences of executive stress, it has not specifically addressed the relationship between executive work and life attitudes, nor the combined effects of these attitudes on executive job stress. We know surprisingly little about executive work attitudes, despite the fact that programs such as compensation and work-family assistance are often designed to affect executive attitudes and that attitudes such as stress and work-family conflict would seem to be particularly relevant to executives.

Although the lack of research on the interrelationships among executive attitudes is conspicuous, equally important is the piecemeal nature in which employee attitudes in general have been studied. For example, although job satisfaction is one of the most studied concepts in the organizational sciences, research investigating the reciprocal relationship between job and life satisfaction is relatively recent (see Judge & Watanabe, 1993, for a review). Similarly, although considerable research has been published that investigated the relationship between job satisfaction and job stress (Kahn & Byosiene, 1992), the possible reciprocity of this relationship has been ignored. Near (1984) noted the lack of causal research on the relationship between work and nonwork a decade ago, and the situation has improved only marginally since then. Thus, although some research has addressed the nature and determinants of several important job and life attitudes, these studies have focused on one or two of these variables at a time and generally have not considered bidirectional relationships among the constructs. Furthermore, of the constructs of central interest in this study, only job stress has received any empirical attention with respect to executives. Therefore, the purpose of the present study is to propose and test a model of male executive job and life attitudes that includes job satisfaction, life satisfaction, job stress, work → family conflict, and family → work conflict. This study provides the most comprehensive evidence to date on the relationships among job and life attitudes and the first published evidence of the relevance of these attitudes for executives.

Before proceeding we should note that we consider conflict between work and family roles and job stress to be attitudes with

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cognitive and emotional characteristics. It is not uncommon for researchers to define these concepts in this manner (e.g., Motowidlo, Packard, & Manning, 1986). On the other hand, others may prefer to think of work-family conflict and stress as processes or outcomes. Although these definitional issues are important, they are unresolved by past research (see Kahn & Byosiore, 1992, in reference to job stress, and Higgins & Duxbury, 1992, in reference to work and family conflict) and unresolvable in this article. Therefore, we refer to work → family conflict, family → work conflict, and job stress as attitudes, realizing that other researchers, with equal justification, may prefer to define them differently. Thus, although the core constructs themselves may be processes or outcomes, they are operationalized with attitudinal measures.

Model of Executive Attitudes

We hypothesized a causal model consisting of five key constructs: job satisfaction, life satisfaction, job stress, work → family conflict, and family → work conflict. To ensure that the model was relatively inclusive, and to avoid biased parameter estimates resulting from omitted variables, we embedded the relationships among the core constructs in a network of other variables. The hypothesized model of the five core constructs (i.e., endogenous variables) is displayed in Figure 1. Included in the model estimation, but not displayed in Figure 1, are the independent or exogenous variables that were used as controls. The core hypothesized links are discussed first, and then the exogenous variables are considered.

Job Satisfaction to Life Satisfaction

Life satisfaction is typically defined as the degree to which individuals judge the quality of their lives favorably, and it can be equated with happiness (Veenhoven, 1991). Researchers often consider life satisfaction, happiness, and positive and nega-

tive affect as comprising the same construct, labeled *subjective well-being* (Diener, 1984; Veenhoven, 1991). The question of whether these constructs are ephemeral states or fixed traits remains unanswered, but existing evidence suggests that life satisfaction is partly a function of genetic characteristics or early childhood experiences and partly a state that can fluctuate depending on other factors present in individuals' lives (e.g., quality of life, marital status, and age; Veenhoven, 1991).

Research has indicated that the relationship between job satisfaction and life satisfaction is significant (Tait, Padgett, & Baldwin, 1989), and job satisfaction appears to exert a causal effect on life satisfaction (Judge & Watanabe, 1993; Schmitt & Bedeian, 1982). The rationale for the effect of job satisfaction on life satisfaction is intuitive when one recognizes the considerable impact of work on individuals' lives (Judge & Hulin, 1993; Kornhauser, 1965). Assuming that most executives make a significant lifestyle investment in their jobs, it is reasonable to expect that executives' affective reactions to their work will have a large effect on the satisfaction they derive from their lives. The positive link from job satisfaction to life satisfaction is included in Figure 1.

Life Satisfaction to Job Satisfaction

Although a number of studies have supported the effect of job satisfaction on life satisfaction, causal research has suggested that job and life satisfaction are reciprocally related (Judge & Watanabe, 1993; Schmitt & Bedeian, 1982). In fact, Judge and Watanabe (1993) found that the reciprocal effects of job and life satisfaction were not significantly different at one point in time, which suggests that both links must be included in the model. Some researchers have argued that the influence of life satisfaction on job satisfaction represents a dispositional effect (Judge & Hulin, 1993; Staw, Bell, & Clausen, 1986). The psychology underlying this dispositional effect can be illuminated by research from cognitive psychology, which suggests that individuals in positive affective states recall positive material more often (Bower, 1981). Thus, individuals satisfied with their lives may be more likely to be satisfied with their jobs because their positive disposition toward life influences their recall and interpretation of job conditions and past job events (Judge & Watanabe, 1993). As shown in Figure 1, we hypothesized that life satisfaction would positively influence job satisfaction.

Work → Family Conflict and Family → Work Conflict to Job Stress

The last few decades have witnessed a rapid increase in the number of dual-income couples and single heads of households (Zedeck, 1992). Because these changes have increased the potential for conflict between work and family life, researchers have become increasingly interested in the antecedents and outcomes of work-family conflict (e.g., Frone, Russell, & Cooper, 1992; Higgins, Duxbury, & Irving, 1992). Although much research has implicitly assumed that work-family conflict is a unidimensional construct (for an exception see Kabanoff, 1980), several recent studies are notable in their distinction between work → family conflict and family → work conflict. According to Gutek, Searle, and Klepa (1991), *work → family con-*

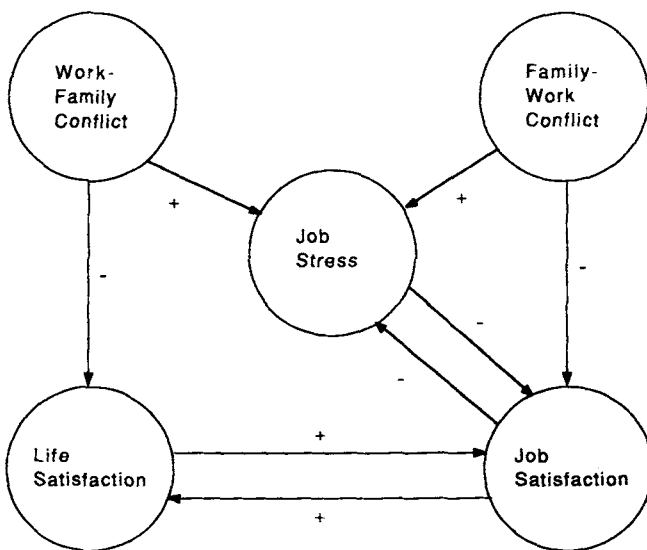


Figure 1. Hypothesized relationships among endogenous variables.

flict reflects the interference of work with family activities (e.g., long hours at work prevent performance of duties at home and spending time with one's family, thoughts of work consume the time spent with family), whereas *family* → *work conflict* represents the interference of family activities with work responsibilities (e.g., care giving obligations prevent adequate time for work, thoughts of family represent distractions at work). Because most workers report that family is more important than work (Andrews & Withey, 1976; Gutek, Repetti, & Silver, 1988), Gutek et al. (1991) hypothesized and found that workers report a higher degree of work → family conflict than family → work conflict. Building on the work of Gutek et al. (1991), Frone et al. (1992) and O'Driscoll, Ilgen, and Hildreth (1992) found that work → family conflict was distinct from family → work conflict.

Several relevant theories support the prediction that conflict between work and family roles leads to job stress. Role theory proposes that individuals experience role conflict when presented with incompatible demands such that compliance with the expectations of one role makes performance of the other more difficult (Katz & Kahn, 1978). One form of role conflict is that which may exist between work and family roles. Conflict between work and family roles may lead to job stress because interrole conflict (of which work-family conflict is an example) requires that individuals enact incompatible behaviors in different domains (e.g., spend substantial time with one's family and work long hours; Cooke & Rousseau, 1984; Duxbury & Higgins, 1991; O'Driscoll et al., 1992). As noted by Frone et al. (1992), the prediction that work-family conflict leads to job stress is also consistent with the tenets of self-identity theory (Schlenker, 1987). Self-identity theory maintains that individuals seek to construct desired images of themselves, and anything that blocks construction of these desired images represents a threat to self-identification. Because conflict between work and family roles constitutes an impediment to goals of self-fulfillment, threats resulting from work-family conflict likely lead to job stress.

It is reasonable to expect that both work → family and family → work conflict will induce job stress because both represent interrole conflict and impediments to self-identification that make one's job stressful. Work → family conflict is likely to lead to job stress because when work interferes with family life, pressure is often placed on individuals to spend less time at work and more time with their families. Similarly, family → work conflict is likely to lead to job stress because familial time demands may lead to too few hours being spent at work and thus to increased stress on the job. This is particularly likely when explicit or implicit work standards are high and highly visible work roles facilitate social comparisons. Pressure from fellow executives and constituents to perform work duties may only exacerbate the pressure at work caused by familial demands.

The effect of work-family conflict on job stress has been consistently supported by empirical evidence (e.g., Frone et al., 1992; Parasuraman, Greenhaus, & Granrose, 1992; O'Driscoll et al., 1992). Although these studies generally have not distinguished between work → family and family → work conflict, O'Driscoll et al. (1992) did make this distinction and found that job stress was significantly correlated with both job interference (a close approximation of work → family conflict) and off-job

interference (representing family → work conflict). Both Frone et al. (1992) and O'Driscoll et al. found that the relationship between work → family conflict and job stress was stronger than the relationship between family → work conflict and job stress. Thus, theoretical and empirical evidence supports the hypothesis that both work → family conflict and family → work conflict influence job stress, and findings by Frone et al. and O'Driscoll et al. suggest that the effect of work → family conflict on job stress will be stronger than the effect of family → work conflict on job stress. These hypothesized links are shown in Figure 1.

Work → Family Conflict to Life Satisfaction

Because family activities contribute to life satisfaction (Near, Smith, Rice, & Hunt, 1984; Veenhoven, 1991), when work interferes with family activities, lower life satisfaction should result. When work → family conflict is perceived, it is the non-work domain that is impeded; therefore work → family conflict should influence life satisfaction directly. Furthermore, Bedeian, Burke, and Moffett (1988) noted that when work interferes with family life, this conflict is often released on the family, causing poor marital adjustment, which further contributes to lower levels of life satisfaction. Consistent with these arguments, empirical evidence suggests that work-family conflict results in lower levels of life satisfaction (Bedeian et al., 1988; Parasuraman et al., 1992). Thus, as displayed in Figure 1, we expected work → family conflict to negatively influence life satisfaction. Executives who felt their work interferes with family life were expected to report lower levels of life satisfaction than executives who perceived no such interference.

Family → Work Conflict to Job Satisfaction

Because family → work conflict represents the interference of family activities with work, we expected executives to be less satisfied with their jobs when these impediments were perceived. Jobs vary in the degree to which nonwork activities interfere with them because of the demands that various jobs impose on individuals. For example, some jobs may be so all-consuming that virtually any family activity represents an interference with work. In such a case, we expected executives to perceive their jobs as less fulfilling. The link between family → work conflict and job dissatisfaction is supported by a number of studies (e.g., Duxbury & Higgins, 1991; Kopelman, Greenhaus, & Connolly, 1983); this link is displayed in Figure 1.

Because work is an important part of executives' lives, it is possible that family → work conflict influences life satisfaction as well as job satisfaction. However, because the job rather than the life in general is directly affected by family → work conflict, a link between family → work conflict and life satisfaction was not hypothesized in the model, but an alternative model was estimated that includes this link. Clearly, one's life may be affected by family → work conflict, but because it is the work domain that is impeded, the influence of family → work conflict should operate mainly through job satisfaction.

Job Stress to Job Satisfaction

Most empirical evidence supports a negative relationship between job stress and job satisfaction (see Kahn & Byosiere,

1992, for a review). From the perspective of person–environment fit theory, job stress signifies a poor fit between the demands of the work environment and what the individual is equipped to handle (French, 1963). Because most employees are adverse to job stress (N. Gupta & Beehr, 1979), it seems likely that high levels of job stress suggest person–job misfit, which in turn should lead to job dissatisfaction (Assouline & Meir, 1987). In fact, Jamal (1990) found that person–environment misfit was associated with job stress and, in turn, job dissatisfaction. Thus, we hypothesized that job stress would negatively influence job satisfaction (see Figure 1).

Job Satisfaction to Job Stress

As noted above, the literature consistently supports a significant negative relationship between job stress and job satisfaction. In almost all cases this has been assumed to represent a causal effect of job stress on job satisfaction. However, as Bedeian et al. (1988) noted, the relationship between job stress and job satisfaction may be reciprocal. In fact, O'Driscoll et al. (1992) found a purported causal link from job satisfaction to job stress. The rationale behind such a link is that job dissatisfaction motivates a desire to change job features, and this desire for change creates anxiety or tension (Roznowski & Hulin, 1992). The assumption that the relationship between job stress and job satisfaction is unidirectional appears to be questionable on both empirical and conceptual grounds, so we hypothesized that the relationship between job stress and job satisfaction is reciprocal. Job stress was hypothesized to be both a significant influence on, and a consequence of, job satisfaction, as shown in Figure 1.

Exogenous Influences on Core Constructs

An extensive series of control variables was derived from past research. The exogenous influences on each endogenous variable are explained in the following paragraphs.

Exogenous influences on life satisfaction. Diener's (1984) comprehensive review of the subjective well-being literature served as the basis for deriving the influences on life satisfaction. We included age as an influence on life satisfaction because Diener's review of recent evidence suggests that life satisfaction increases with age. Married individuals have higher levels of life satisfaction than unmarried individuals (Diener, 1984; Veenhoven, 1991). Accordingly, we expected marital status to significantly influence life satisfaction. Diener's and Veenhoven's (1991) reviews clearly indicate that health and life satisfaction are positively related. Therefore, we included health as an exogenous variable. Finally, leisure activities have been found to be a significant source of life satisfaction (Diener, 1984). Thus, we expected time devoted to leisure activities to positively influence life satisfaction.

Exogenous influences on job satisfaction. Hulin, Roznowski, and Hachiya's (1985) theoretically based model of job satisfaction served as the basis for selecting relevant influences on job satisfaction. Hulin et al. proposed that job satisfaction is a function of the balance between work role inputs—that is, what the individual puts into the work role (e.g., education)—and work role outcomes—that is, what is received (e.g., pay). As out-

comes received relative to inputs invested increase, job satisfaction is hypothesized to increase. In the present study, education level, hours worked, and—as a measure of quality of contribution—the appraised quality of the executive were selected as representations of work role inputs. Thus, controlling for work role outcomes, we predicted that the more inputs the executive has invested, the lower the executive's job satisfaction should be.

Cash compensation was chosen as the most obvious manifestation of work role outcomes and was expected to influence job satisfaction positively. Several other outcome variables that are relevant to executives were expected to influence job satisfaction. Organization success or failure is likely to be quite salient to executives because their rewards (e.g., stock options, bonuses) and future employment depend substantially on the performance of their organization. Working in an unsuccessful organization may be intrinsically dissatisfying to executives and may lead to reduced extrinsic rewards and employment security. Thus, we expected executives working in organizations they perceived as successful to be more satisfied with their jobs. Finally, on the basis of the assumption that work–family issues are of concern to executives in this sample (an apparently reasonable assumption given that most executives were married and had children), we expected organization work–family policies to positively influence the job satisfaction of executives.

Hulin et al. (1985) also hypothesized that an individual's frame of reference, which they defined as past experience with relevant outcomes, influences how current outcomes are perceived. In other words, individuals become accustomed to a certain level of outcomes, and those experiences influence how they evaluate outcomes. As a frame-of-reference variable, job tenure was expected to relate negatively to job satisfaction (holding outcomes constant). Individuals who have had past experience with a certain level of outcomes are more likely to be critical in evaluating a particular level of job outcomes (Judge & Watanabe, 1993). Furthermore, like Judge and Hulin (1993) and Judge and Locke (1993), we expected the executive's current salary relative to his past salary to positively influence job satisfaction; we expected executives who felt that their present salary was higher than what they had received in the past to be more satisfied with their jobs, and vice versa. Finally, we expected ambition to act as a frame-of-reference variable in judgments of job satisfaction. Because individuals use their aspirations (goals) as standards of self-satisfaction (Bandura, 1986), people with high goals should be harder to satisfy than people with modest goals. This suggests that high ambition should be associated with low satisfaction because ambitious executives are less likely to be satisfied with their present jobs. In fact, Erez (1994) and Judge and Locke (1993) found that ambition significantly negatively predicted job satisfaction. Because organizational structures differ across organizations, and because most executives in the sample work in different organizations, it is important to adjust the measure of ambition for organization hierarchy. Thus, relative ambition was defined as the number of levels an executive wished to advance less the number of levels he thought it was possible to advance in his organization.

Exogenous influences on job stress. Because working in unsuccessful organizations is expected to be stressful to executives, we expected organization success to negatively influence job

stress. In fact, Allen, Hitt, and Greer (1982) found a significant relationship between organization success and executive job stress. Thus, in addition to the expected inverse relationship between organization success and job satisfaction, we also expected organization success to positively affect job stress. Research has suggested that another potential influence on job stress is job level (Parasuraman & Alutto, 1981; Schuler, 1980). Job level may be positively associated with job stress because high-level jobs include responsibility for greater numbers of employees and often have high role demands, which are characteristics that increase job stress (Kahn & Byosiere, 1992). Therefore, we expected job level to positively influence job stress (although the restricted range in job level among this sample of high-level executives may attenuate this effect).

Exogenous influences on work → family conflict and family → work conflict. With respect to work → family and family → work conflict, we expected a number of exogenous variables to be relevant. Hours worked per week were expected to positively influence work → family conflict, whereas hours spent per week on dependent care were expected to positively influence family → work conflict (Bedeian et al., 1988; Gutek et al., 1991; O'Driscoll et al., 1992). As several authors (e.g., Brett, Stroh, & Reilly, 1992; Higgins & Duxbury, 1992; Schner & Reitman, 1993) have noted, it is important to examine differences in work and family outcomes between traditional families and dual-career families and between individuals with children and those without children. Traditional families allow male executives to spend more time at work with fewer household responsibilities; thus we expected male executives in traditional family structures to report lower levels of job stress and family → work conflict than male executives in dual-income family structures. Because parental demands, and the felt need to spend time with one's family, may depend on the number of children one has, and on the youth of those children (Bedeian et al., 1988), we expected these variables to influence work → family and family → work conflict. Because organization work-family policies may allow one greater flexibility to spend time with one's family, we expected such policies to negatively influence work → family conflict. Finally, work schedule may be an important variable in predicting work → family conflict. Because working evenings represents time spent away from family, the number of nights an executive works per week was expected to positively influence work → family conflict.

Method

Subjects and Procedure

Subjects were male executives contained in the database of Paul R. Ray & Company, the fifth largest executive search firm in the United States. The following descriptive information (presented only for male executives who were part of the study) helps characterize the sample. All members of the sample were working in the United States at the time of the study and most were U.S. citizens (96%). Ninety-eight percent of the male executives were White. The average age of the male executives was 45.87 years. Ninety-three percent of the male executives were married, and 51% had one or more children. In terms of family structure, of those male executives who were married, 53% of the wives did not work outside the home. The average male executive spent 55.81 hours per week in paid work, spent 4.74 hours per week caring for dependents,

and devoted 12.94 hours per week to leisure activities. Average annual cash compensation was \$129,580 ($SD = \$91,656$). On average, male executives had earned 6.5 promotions in their careers, their last promotion occurred 3.25 years ago, and the typical male executive was positioned two levels below the CEO of the organization. The average male executive had been in his current position 3.1 years. Education of respondents was distributed as follows: undergraduate degree, 45%; master's degree, 46%; doctoral degree, 9%. Forty-six percent of male executives had some international work experience. On average, male executives reported being satisfied with their jobs 53.58% of the time and reported that their organizations were 65.87% successful in meeting their strategic goals during the last 2 years. The average number of workers employed in the executives' organizations was 5,099; average annual sales of the employing organizations were \$1.46 billion per year.

Surveys were mailed to a sample of 3,581 male executives (a 50% random sample of the database). Accompanying the survey was a cover letter from the CEO of Paul R. Ray & Company soliciting the executives' participation and a stamped envelope addressed to us. To reduce reliance on self-report data, we encoded surveys so that those returned could be matched with information contained in Paul R. Ray & Company's database. Executives were told in the cover letter that although their responses were not anonymous, all were strictly confidential. Of the surveys that were mailed out, 1,388 usable surveys were returned (1,309 of these were from male executives), representing a response rate of 39%. This response rate compares favorably with those in other mail survey research (Dillman, 1978). A multivariate analysis of variance model, simultaneously considering the interrelated effects of all variables, was used to determine if respondents were representative of the larger sample. In no case did any variable in the search firm's database (marital status, number of children, evaluation of executive quality, citizenship, age, employer size defined in terms of sales volume or number of employees, cash compensation, international work experience, job tenure, or education) differ significantly at the .05 level between respondents and nonrespondents. Thus, it appears that our sample was representative of the larger population. Moreover, there appears to be no reason to believe that the male executives listed in Paul R. Ray & Company's database are different from the predominantly male executive population in general (Lucht, 1991).

Measures

Job satisfaction. Job satisfaction was measured with three items, two of which Scarpello and Campbell (1983) suggested were valid measures of job satisfaction that exhibited psychometric properties as favorable as more established measures of job satisfaction. These measures were the Gallup Poll measure of job satisfaction (where respondents indicate whether they are satisfied with their jobs by responding *yes* or *no*) and the nongraphic version of the G. M. Faces Scale. In addition, an adapted version of the Fordyce Percent Time Happy Item was used, in which individuals report the percentage of time they are satisfied with their jobs on average. This item was used because it has received favorable evaluations in other research (Diener, 1984, 1990; Judge, 1990). Each of the three items was placed in different parts of the survey, and because these items had different response formats, the possibility of a response set seems unlikely. Because the three items were measured on different scales, they were standardized prior to computation of the composite measure. The coefficient alpha (α) reliability estimate for this three-item composite measure was .85.

Life satisfaction. Life satisfaction was measured with the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). Evidence suggests that the Satisfaction With Life Scale displays favorable psychometric properties (Pavot, Diener, Colvin, & Sandvik, 1991), and it has been used successfully in other organizational research (George, 1991; Judge & Bretz, 1994; Judge & Hulin, 1993; Judge & Locke, 1993). In the present study, the alpha of the five-item scale was .87.

Job stress. Although a number of apparently adequate measures of job stress exist (see Matteson & Ivancevich, 1987, for a review), existing measures possessed several disadvantages that prevented their use in the present study. First, most measures of job stress are extremely long. As examples, the Stress Diagnostic Survey (see Matteson & Ivancevich, 1987) contains 60 items; the Hassles and Uplifts Scales (Lazarus, 1984) contain 117 items. We consulted with several representatives of Paul R. Ray & Company who had extensive experience with surveys and interviews with executives. These consultations suggested it was impractical for executives to complete such a lengthy scale. Second, most scales contained some individual items that were not appropriate for executives. For example, the Stress Diagnostic Survey has a large number of items that assess quality of supervision. Because many of these executives had no supervisor (or supervisor was not a relevant concept to them), this scale was not appropriate. In light of these limitations, we constructed a new scale that was relatively brief (16 items) but incorporated the most appropriate items from existing measures. In this scale, respondents were asked to indicate the degree to which the items produced stress at work for them on a scale from 1 = *produces no stress* to 5 = *produces a great deal of stress*. Four items were derived from the Michigan Diagnostic Survey (e.g., "the number of projects and/or assignments I have" and "the amount of time I spend in meetings"; French & Kahn, 1962). Eight items were adapted from the Stress Diagnostic Survey (e.g., "the inability to clearly understand what is expected of me on the job" and "the volume of work that must be accomplished in the allotted time"; Matteson & Ivancevich, 1987). Finally, four items were adapted from the Job Stress Index (e.g., "the time pressures I experience" and "the scope of responsibilities my position entails"; Sandman, 1992). This new scale is available from us on request. The alpha for this 16-item scale was .84.

Work → family conflict and family → work conflict. Work → family conflict and family → work conflict were measured with the scales developed by Gutek et al. (1991) and used by Frone et al. (1992). In both studies these scales displayed favorable psychometric properties. In the present study, the alpha of the four-item work → family conflict scale was .82 and the alpha of the four-item family → work conflict scale was .76.

Appraisal of executive quality. Associates of Paul R. Ray & Company rated the overall quality of each executive on the following dimensions: (a) appearance, stature, and impact; (b) degree of proficiency in present job; and (c) flexibility and adaptability. Each dimension was rated on a 3–5 scale. The alpha for this three-item scale was .62.

Organization work–family policies. To measure the degree to which organizations have policies in place to accommodate work and family issues, we developed five items which the executive rated on a scale from 1 = *none* to 5 = *a very large amount*. These items were (a) "My organization provides programs to assist in balancing demands of dual-career couples"; (b) "My organization provides programs to assist in balancing demands of families with children and/or elderly family members"; (c) "My organization stresses the importance of family, leisure, and health"; (d) "My organization provides opportunities for executives to take part-time or temporary assignments"; and (e) "My organization supports employee involvement in community service." The alpha for this five-item scale was .75.

Other variables. Health was measured by the health ladder, a commonly used measure of health (e.g., Judge & Watanabe, 1993; Suchman, Phillips, & Strieb, 1978). Hours worked per week, hours spent on dependent care, hours devoted to leisure activities per week, number of years since last promotion, present salary relative to past salary (1 = *much lower* to 5 = *much higher*), organization success (assessed on a scale from 0% to 100%), relative ambition (defined as the number of levels the executive wished to advance less the number of levels he thought it was possible to advance in his organization), and age of youngest child were assessed with specific questions on the employee survey.

Marital status (coded 1 = *married* and 0 = *otherwise*), family type (0 = *traditional family structure* and 1 = *dual-income family structure*), number of children, age, annual cash compensation in dollars, years of job tenure, and education (coded 1 = *bachelor's degree*, 2 = *master's degree*, and 3 = *doctoral degree*) were collected from information in Paul R. Ray & Company's database.

Covariance Structure Models

We estimated the hypothesized model using covariance structure models. Covariance structure models, estimated in the present study with LISREL 7 (Jöreskog & Sörbom, 1989), allow specification and estimation of the model hypothesized to account for the data. Although covariance structure models do not establish proof of causality, properly identified models do support inferences of causality (Hayduk, 1987; James, Mulaik, & Brett, 1982; Jöreskog & Sörbom, 1989). One critical requirement in drawing causal inferences is that the model be "identified" such that the structural parameters within the model are uniquely determined (Goldberger, 1991). Because adding unique exogenous influences is one means of ensuring proper identification (Hayduk, 1987), each endogenous variable in the model had at least one unique exogenous influence.

Several statistics provide information on the fit of the model. The most widely used measure of fit is the chi-square statistic. Perhaps the most conventional use of chi-square is to examine the ratio of chi-square relative to the degrees of freedom. Other conventional fit statistics include the goodness-of-fit index and the adjusted goodness-of-fit index. The normed fit index (Bentler & Bonnett, 1980), the Tucker-Lewis index (Marsh, Balla, & McDonald, 1988), the parsimonious fit index (James et al., 1982; Mulaik et al., 1989), and the comparative fit index (Bentler, 1990) also are reported because they have been found to depend less on the sample size than do other fit statistics.

Several caveats in interpreting fit statistics should be mentioned. First, a particular value of a fit statistic cannot be used to rule out the possibility of omitted variables. It is possible to infer, on the basis of an examination of the fit statistics, that a particular model fits the data well when in fact not all relevant causes of a dependent variable have been specified (La Du & Tanaka, 1989). Second, levels of most fit statistics depend on the sample size (La Du & Tanaka, 1989). Finally, because the underlying distributions of most fit statistics are unknown, evaluating their acceptability is subjective. Thus, the acceptability of a particular model should be evaluated by examining the fit indices cumulatively (Harris & Schaubroeck, 1990).

Although fit statistics of the hypothesized model are important in judging the adequacy of the model, they do not always permit confident conclusions to be drawn about its suitability. Because one model fits the data does not necessarily mean it is the correct model. Other models may fit the data equally well. Although there are a nearly infinite number of alternative models, Hayduk (1987) encouraged testing of alternative models that are theoretically or conceptually compelling. In many cases, that entails adding links. If adding a link results in a significant decrease in chi-square, this indicates that the link significantly improves the fit of the model and therefore should be included. Thus, we tested several models that are alternatives to the hypothesized model. Furthermore, although not alternative models per se, several models that constrain relevant effects to be equal were also tested in this study so we could compare differences in the relative effects of one variable on another.

Results

Multivariate regressions revealed few differences between men and women with respect to most of the relationships in the model. However, because only 7% of the executives in this sam-

ple were female, such an analysis is not particularly powerful. Therefore, all women were excluded from the analysis and our conclusions are confined to male executives. Table 1 shows the means, standard deviations, and intercorrelations of variables used in the analysis. Per Cudeck's (1989) recommendation, we used sample covariances as input into the LISREL program. LISREL assumes that the distributions of the variables included in the analysis are approximately normal (Jöreskog & Sörbom, 1989). Because several variables had skewed distributions (cash compensation, marital status, hours per week spent on dependent care, years since last promotion, job tenure), we applied a natural logarithmic transformation to these variables prior to their entry into the LISREL program (Bollen, 1989). The LISREL model was estimated using Submodel 2 and the FIXED-X keyword (Jöreskog & Sörbom, 1989, p. 10 and p. 24), which is a structural equations or path analysis model. Models estimated using covariances corrected and uncorrected for measurement error yielded equivalent results. Accordingly, the reported estimates are those uncorrected for measurement error.

Descriptive Comparison of Executive Attitudes

Comparison of the means of the core constructs with means reported for them in previous research reveals some interesting findings. Comparing the mean score on the Satisfaction With Life Scale of the male executives ($M = 24.1$, $SD = 6.0$, $N = 1,062$) with the mean scores of other groups of employees shows that these executives seem to be more satisfied with their lives than clerical workers ($M = 20.6$, $SD = 6.7$, $N = 231$; Judge & Locke, 1993), about as satisfied with their lives as nurses ($M = 23.6$, $SD = 6.1$, $N = 248$; Judge, 1990), printing trade workers ($M = 24.2$, $SD = 6.0$, $N = 304$; George, 1991), university employees ($M = 23.5$, $SD = 6.2$, $N = 224$; Judge, Erez, & Martocchio, 1993), and college students ($M = 23.7$, $SD = 6.4$, $N = 244$; Pavot et al., 1991), and somewhat less satisfied with their lives than middle managers ($M = 25.3$, $SD = 6.2$, $N = 857$; Judge & Bretz, 1994). On the other hand, on average, male executives reported being satisfied with their jobs only 54% of the time, which is lower than has been found in previous research on nurses ($M = 76\%$; Judge, 1990). Furthermore, the average level of work \rightarrow family conflict ($M = 15.3$, $SD = 5.4$, $N = 1,062$) in this sample was higher than the averages reported by Gutek et al. (1991) in their study of psychologists ($M = 12.8$, $SD = 4.8$, $N = 423$) and managers ($M = 13.4$, $SD = 4.6$, $N = 209$) and substantially higher than the averages of a heterogeneous cross-section of employees reported by Frone et al. (1992; $M = 8.8$, $SD = 4.3$, $N = 631$). A smaller but still noticeable difference was detected between the level of family \rightarrow work conflict in this sample ($M = 7.4$, $SD = 2.9$, $N = 1,062$) and that of the psychologists ($M = 7.2$, $SD = 3.6$, $N = 423$) and managers ($M = 6.8$, $SD = 3.0$, $N = 209$) in Gutek et al.'s study and the employees in Frone et al.'s study ($M = 5.6$, $SD = 2.4$, $N = 631$). The male executives in this sample may have reported higher levels of work \rightarrow family conflict and family \rightarrow work conflict because of the nature of the jobs they occupy (male executives in our study spent about 56 hours per week in paid work compared with roughly 41 hours per week in the Gutek et al., 1991, study). Because the measure of job stress was developed for this study,

comparison with other studies is not possible. However, the mean for the job stress scale was 40.7 on a scale that ranges from 16 to 80, which suggests that the average male executive perceives a moderate degree of stress in his life. In sum, the attitudinal profile of the typical male executive is of someone who has moderate levels of job and life satisfaction and a high degree of work \rightarrow family conflict and family \rightarrow work conflict.

Discriminant Validity of Constructs

The hypothesized relations are assumed to represent structural relationships between distinct constructs. The validity of the hypothesis tests, however, depends on the assumption that the measures are distinct. If job satisfaction, life satisfaction, job stress, work \rightarrow family conflict, and family \rightarrow work conflict are indistinguishable because of common method variance, for example, it would undermine the causal attributions made in this study.

Consequently, we investigated the discriminant validity of the hypothesized constructs by comparing the fit of the hypothesized measurement model to several more parsimonious measurement models. If the measures did not have adequate discriminant validity, the fit of these alternative models would not be significantly worse than that of the hypothesized multiple factor model. Table 2 shows a comparison of the hypothesized measurement structure (where the 3 items from the job satisfaction composite scale, the 5 items from the life satisfaction scale, the 16 items from the job stress scale, and the 4 items from the work \rightarrow family conflict and family \rightarrow work conflict scales were constrained to load on their respective factors) with that obtained from alternative models. The hypothesized measurement structure provided a significantly better fit to the data than a null model (where all factor loadings and factor intercorrelations were constrained to equal zero), a single-factor model, and two models where the most highly related factors were combined (combining job satisfaction and life satisfaction and combining work \rightarrow family conflict and job stress). Overall, this evidence suggests that the factors, as assessed, are empirically distinct.

Test of Hypothesized Model

Figure 2 shows the parameter estimates that describe the structural relationships among the endogenous variables. The figure indicates that all but one of the hypothesized links were supported. Specifically, job satisfaction and life satisfaction were positively and reciprocally related. Male executives who were satisfied with their jobs were significantly more likely to be satisfied with their lives in general, and vice versa. A similar reciprocal relationship, although weaker in magnitude, was found between job satisfaction and job stress. Male executives reporting high levels of job stress were significantly more likely to be dissatisfied with their jobs. By the same token, executives who were dissatisfied with their jobs were significantly more likely to report that their jobs were stressful. As hypothesized, both work \rightarrow family conflict and family \rightarrow work conflict significantly influenced job stress. Executives who felt that work interfered with their family lives, or that their family responsibilities interfered with work, were significantly more likely to

Table 1
Means, Standard Deviations, and Intercorrelations of Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Life satisfaction	24.02	5.99	.87																								
2. Job satisfaction	0.00	2.63	.49	.85																							
3. Job stress	40.29	8.97	-.21	-.29	.84																						
4. Work → family conflict	15.15	5.39	-.18	-.10	.44	.82																					
5. Family → work conflict	7.45	2.95	-.12	-.09	.26	.27	.76																				
6. Health	6.17	0.78	.14	.07	-.17	-.22	-.16																				
7. Hours worked per week	55.81	8.85	-.08	.01	.11	.34	-.03	.00																			
8. Log married	-0.85	3.01	.09	-.01	.02	.05	.06	.00	-.01																		
9. Age	45.87	7.24	.02	-.00	-.14	-.19	-.11	-.01	-.13	.13																	
10. Log years since last promotion	0.36	2.80	-.04	-.07	.01	-.07	-.02	.00	-.12	.01	.24																
11. Log cash compensation	11.64	0.48	.11	.10	-.06	.08	-.05	.00	.14	.04	.14	.00															
12. Present salary relative to past	4.13	1.09	.19	.22	.00	.17	-.06	.04	.17	-.02	-.24	-.18	.13														
13. Log job tenure	0.49	2.40	.04	.07	-.06	-.06	-.06	.04	-.04	-.03	.20	.36	.14	.04													
14. Education	1.64	0.64	.02	.01	-.01	-.01	-.02	-.02	.00	-.02	.09	.04	.04	-.02	.01												
15. Candidate rating	13.30	1.07	.07	.05	-.04	.02	-.05	.04	.06	-.01	-.03	-.02	.15	.05	.01	-.02	.62										
16. Organization success	65.87	26.01	.16	.33	-.11	-.00	-.07	.10	.03	-.02	.03	.02	.08	.11	.13	-.09	.00										
17. Number of children	0.92	1.09	.02	.02	.04	.16	.20	.03	.04	.15	-.38	-.10	-.05	.12	-.05	.02	.02	-.01									
18. Age of youngest child	13.10	9.39	.03	-.01	-.12	-.17	-.12	.01	-.07	.17	.67	.20	.12	-.24	.12	-.02	-.04	.05	-.45								
19. Log hours per week dependent care	-5.74	6.75	-.01	.00	-.00	.02	.14	.01	-.04	-.02	-.24	-.07	-.08	.10	-.02	-.01	-.01	.00	.42	-.26							
20. Organization work-family policies	9.53	3.81	.20	.28	-.17	-.15	-.02	-.01	-.07	.05	.03	.02	.01	.01	.08	.02	.00	.12	.02	.04	.07	.75					
21. Leisure hours per week	12.94	9.64	.08	-.04	-.08	-.18	-.09	.03	-.11	-.09	.09	.08	-.00	-.05	.01	.03	-.01	-.01	-.18	.07	-.07	.04					
22. Relative ambition	0.33	0.89	-.15	-.26	.10	-.01	-.01	.08	.04	.02	-.04	.03	-.06	-.02	-.01	.03	-.02	-.09	.01	-.05	.03	-.12	.00				
23. Dual income vs. traditional family	0.44	0.50	-.02	-.00	.05	-.03	.02	-.04	-.08	.25	-.04	.06	-.15	-.06	.05	.06	-.05	-.05	-.06	-.02	-.05	.03	.01	.03			
24. Log job level	-1.46	4.71	-.01	-.09	.06	.03	.00	.01	-.02	-.01	-.09	-.03	-.12	.08	.00	-.09	-.04	-.02	.07	-.10	.04	-.01	-.02	.09	.02		
25. Evenings worked per week	4.90	4.17	-.02	.09	.03	.12	.00	.02	.29	-.01	-.01	-.10	.11	.11	-.03	-.08	.03	.10	.02	.01	-.03	.01	-.09	-.06	-.08	.03	

Note. N = 1,062. Where appropriate, reliability estimates are given on the diagonal. Correlations greater than .06 were significant at the .05 level (two-tailed).

Table 2
Fit Statistics for Hypothesized and Alternative Measurement Models

Model	χ^2	df	χ^2/df	TLI	CFI
Hypothesized	1,617.86	454	3.56	.922	.929
Null	16,816.91	496	33.91	—	—
Single factor	7,835.52	464	16.89	.518	.548
Combining job satisfaction and life satisfaction factors	2,510.69	458	5.48	.864	.874
Combining job stress and work → family conflict factors	2,477.09	458	5.41	.866	.876

Note. Dashes indicate statistic cannot be computed for null model; TLI = Tucker-Lewis index; CFI = comparative fit index. In all cases the chi-square from the alternative models was significantly higher ($p < .01$) than the chi-square from the hypothesized model.

report high levels of job stress. Finally, although the hypothesis that family → work conflict influences job satisfaction was not supported by the results, support was indicated for the hypothesis that work → family conflict significantly influences life satisfaction. Thus, although family → work conflict and job satisfaction were unrelated for this sample of male executives, executives who reported high levels of work → family conflict were significantly less likely to be satisfied with their lives.

As indicated earlier, the relationships among the endogenous variables were embedded in a larger model that included a series of exogenous influences on the core constructs. Although the effects of these exogenous variables on the endogenous variables were estimated simultaneously with the estimation of the interrelationships among the endogenous variables, for presentation purposes the effects of the exogenous variables on the endogenous variables are displayed in Table 3. The table indicates that most of the variables influenced the core constructs as expected. Health, marital status, and hours spent per week on leisure activities all significantly influenced life satisfaction in the predicted direction. Male executives who reported good health, were married, and devoted time to leisure activities reported

higher levels of life satisfaction than other male executives. Age did not significantly influence life satisfaction.

As was the case with life satisfaction, most of the exogenous influences on job satisfaction were significant. Number of years since promotion, relative ambition, job tenure, present salary relative to past salary, education, executive quality, organization success, and organization work-family policies all significantly influenced job satisfaction. As expected, male executives who had reached a plateau (a high number of years since their last promotion), who had high levels of job tenure, and who had high levels of relative ambition were significantly less satisfied with their jobs. Also as expected, male executives who believed that their present salary was high relative to what they had been accustomed to receiving in the past, who worked in what they felt were successful organizations, and who reported that their organizations had made significant accommodation to work-family issues were significantly more satisfied with their jobs than were other male executives. It should be noted that the coefficients on education and executive quality were in the direction opposite to that predicted; that is, male executives who were highly educated and were rated high in executive quality reported significantly higher levels of job satisfaction than male executives with lower levels of education and lower ratings of their executive quality. These unexpected results might have been due to the uniqueness of the sample (e.g., the lowest level of education was a bachelor's degree) or perhaps to the failure to fully control for work role outcomes (high-quality or highly educated executives may have received valent rewards such as respect or other ego-enhancing outcomes that were not measured in the study). Also, hours worked and compensation level did not significantly influence job satisfaction. In general, though, the exogenous influences on job satisfaction were significant and in the predicted direction.

Most of the influences on job stress, work → family conflict, and family → work conflict were significant and in the predicted direction. Specifically, dual-income versus traditional family structure and job level were significantly related to job stress in that male executives who held high-level jobs and those who were in dual-income families reported higher levels of job stress than did other male executives. Hours worked per week, number of children, age of the youngest child, and organizational work-family policies all significantly influenced work → family conflict. Male executives who worked more hours per week and

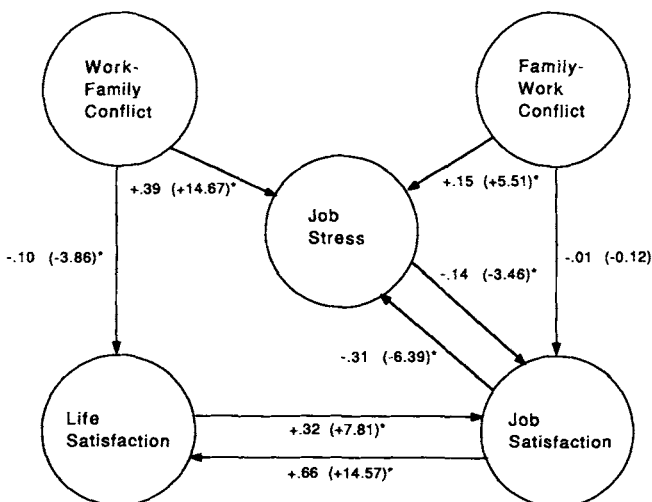


Figure 2. Estimates of relationships among endogenous variables. * $p < .01$ (two-tailed); t values are in parentheses.

Table 3
Effects of Exogenous Variables on Endogenous Variables

Exogenous variable	Endogenous variable									
	Life satisfaction		Job satisfaction		Job stress		Work → family conflict		Family → work conflict	
	γ	t	γ	t	γ	t	γ	t	γ	t
Health	.08	3.76***								
Hours worked per week			.01	0.40			.33	11.43***		
Married	.10	4.59***								
Age	-.01	-0.63								
Years since last promotion			-.06	-3.02***						
Relative ambition			-.15	-7.41***						
Cash compensation			.02	0.74						
Present salary relative to past			.14	6.67***						
Job tenure			-.04	-1.88*						
Education			.04	2.02**						
Executive quality			.04	1.89*						
Organization success			.17	8.00***	-.03	-0.97				
Job level					.06	2.42**				
Number of children							.09	2.83***	.13	3.40***
Age of youngest child							-.09	-2.70***	-.06	-1.80*
Hours per week dependent care									.07	1.98**
Organization work-family policies			.15	7.48***			-.12	-4.39***		
Leisure hours per week	.05	2.02**								
Dual income vs. traditional family					.08	3.14***			.03	0.95
Nights worked per week							.04	1.36		

* $p < .10$ (two-tailed). ** $p < .05$ (two-tailed). *** $p < .01$ (two-tailed).

those with more children reported higher levels of work → family conflict than those who worked fewer hours per week and who had few or no children. Male executives who were not parents of young children and who worked in organizations that emphasized work-family balance reported lower levels of work → family conflict than the other male executives. The coefficient for number of nights worked per week approached but did not reach significance. Finally, number of children, age of youngest child, and hours per week dedicated to dependent responsibilities significantly influenced family → work conflict. Male executives who had few or no young children and who spent few hours per week on dependent care reported lower levels of family → work conflict than other male executives. Family structure did not influence family → work conflict; this finding may be due to the all-male sample.

Alternative and Equivalent Effects Model Testing

The fit statistics for the hypothesized model are displayed in Table 4. By typical conventions, the statistics indicate that the model fits the data well. Table 4 also shows that the hypothesized model represents a substantial improvement in fit over the null model (which posits no relations among the constructs).

As indicated earlier, Hayduk (1987) recommended testing plausible alternative models. In the present study, several alternative models seemed reasonable. It could be argued that the relationship between work-family conflict and job stress is reciprocal. For example, a job that is stressful may dramatically affect an individual's family life and lead to work → family con-

flict. Thus, it is possible that in addition to work → family conflict's influencing job stress, job stress influences work → family conflict. Similarly, a job that is demanding or stressful may lead an individual to feel that even ordinary family activities represent an impediment to work, leading to family → work conflict. Thus, it is possible that in addition to the hypothesized effect of family → work conflict on job stress, job stress leads to family → work conflict. Because both alternative models were possible, we tested whether adding reciprocal links significantly improved the model fit. As is shown in Table 4, adding a link from job stress to work → family conflict or from job stress to family → work conflict did not significantly improve the fit of the model.

Several other alternative models were estimated. One alternative model suggests that in addition to work → family conflict's influencing life satisfaction, life satisfaction influences work → family conflict. Although not predicted by past theory or research, this link is possible because those who find their personal lives generally satisfying may be less inclined to believe that work interferes with their nonwork lives. Furthermore, to the extent that life satisfaction measures a dispositional construct (Judge & Locke, 1993), those who are dissatisfied with their lives may have a tendency to see many aspects of their lives, including their work-family interface, in negative terms. However, as is shown in Table 4, adding a link from work → family conflict to life satisfaction was not significant.

Another possible alternative model is that in addition to the hypothesized effect of family → work conflict on job satisfac-

Table 4
Fit of Hypothesized, Alternative, and Equivalent Effects Models

Model	χ^2	<i>df</i>	χ^2/df	GFI	AGFI	CFI	TLI	NFI	PFI
Hypothesized and null models									
Hypothesized	265.33	78	3.40	.981	.920	.955	.934	.938	.636
Null	4,277.24*	115	37.19	.650	.010	—	—	—	—
Alternative models									
Adding link from job stress to work → family conflict	264.64	77	3.34	.981	.919	.955	.933	.938	.628
Adding link from job stress to family → work conflict	265.32	77	3.45	.981	.919	.955	.932	.938	.628
Adding link from life satisfaction to work → family conflict	261.33	77	3.39	.981	.920	.955	.934	.939	.629
Adding link from job satisfaction to family → work conflict	253.21*	77	3.29	.981	.922	.958	.937	.941	.630
Adding link from family → work conflict to life satisfaction	263.70	77	3.42	.981	.919	.955	.933	.938	.628
Equivalent effects models									
Equating reciprocal effects between job satisfaction and life satisfaction	405.52*	79	5.13	.968	.870	.922	.886	.905	.622
Equating reciprocal effects between job stress and job satisfaction	305.89*	79	3.87	.977	.907	.945	.921	.928	.638
Equating effects of work → family and family → work conflict on job stress	269.71	79	3.41	.980	.919	.954	.933	.937	.644

Note. Dashes indicate statistic cannot be computed for null model; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; CFI = comparative fit index; TLI = Tucker–Lewis index; NFI = normed-fit index; PFI = parsimonious fit index.

* Difference in chi-square from hypothesized model significant at $p < .01$.

tion, job satisfaction influences family → work conflict. This alternative is plausible because those who find their jobs satisfying may be more likely to feel that their family activities prevent them from devoting as much time to work as they would like. In fact, as is shown in Table 4, adding a link from job satisfaction to family → work conflict did significantly improve the fit of the model. Although this suggests that the hypothesized model should have taken this latter link into account, it is generally not appropriate to modify a model in the midst of testing it (MacCallum, Roznowski, & Necowitz, 1992). Therefore, we did not reestimate the hypothesized model with this link taken into account. It remains for future researchers to replicate the hypothesized model with this link added. Finally, as indicated earlier, we estimated an alternative model that included a link from family → work conflict to life satisfaction. As shown in Table 4, however, adding this link did not improve the fit of the model. Thus, of the five alternative links tested, only one significantly improved the fit of the model. Overall, this increases confidence in the validity of the hypothesized model.

Table 4 also provides information on tests of equivalent effects models. Equivalent effects models are not alternative models per se because they do not question the presence or absence of particular links within the model. Rather, equivalent effects models test for differences in the strength of relevant effects within the model. It seemed reasonable to us to test the equivalency of several links. First, we tested the reciprocal effects of job satisfaction and life satisfaction for their equality. As Figure 2 shows, the effect of job satisfaction on life satisfaction was stronger in magnitude than the effect of life satisfaction on job satisfaction. To test whether these effects were significantly different, we estimated a model constraining these effects to be equal. As is shown in Table 4, imposing this constraint

significantly reduced the fit of the model. Thus, the effect of job satisfaction on life satisfaction is significantly stronger than the reverse effect. We also tested the reciprocal effects between job satisfaction and job stress for equivalence. As is shown in Table 4, estimating a model constraining these effects to be equal significantly reduced the fit of the model, which suggests that the effect of job satisfaction on job stress is stronger than the reverse effect. Finally, we expected the effect of work → family conflict to be stronger than the effect of family → work conflict on job stress. However, a model constraining the effects to be equal did not significantly reduce the fit of the model, which suggests that the effects of these variables on job stress are not significantly different (see Table 4). This unexpected result may have been observed because these executives assigned somewhat more importance to work than to family, which contradicts findings from past research.

Discussion

The results of the present study supported our hypothesized model of executive attitudes that posited interrelationships among job satisfaction and life satisfaction, job stress, and work–family conflict. This study found that, rather than functioning in isolation, these constructs were substantially interrelated and also were influenced by a number of exogenous variables. This improves on the piecemeal manner in which these attitudes have been studied in the past and provides a unique perspective on executive job and life attitudes. A number of specific findings embedded within the hypothesized model deserve discussion.

The positive reciprocal relationship between job satisfaction and life satisfaction is consistent with past research (Judge &

Watanabe, 1993). The effect of job satisfaction on life satisfaction is compatible with a dispositional perspective suggesting that general affective states "spill over" onto judgments of job satisfaction (Judge & Locke, 1993; Staw et al., 1986). Given research suggesting that cognitive processes depend on affective states (Porac, 1987), it seems appropriate for future researchers to investigate the degree to which the encoding, recall, and evaluation of job information depend on affective states. In fact, some initial evidence in this regard was recently offered by Ne-cowitz and Roznowski (1992), who found that individuals in negative affective states recalled more negative task information than those in positive affective states. Similar to the way in which cognitive processing models have illuminated the performance appraisal process, a cognitive approach may also clarify the psychological processes by which life satisfaction influences job satisfaction.

The effect of job satisfaction on life satisfaction is easy to understand in light of the central role that work plays in most individuals' lives. Not only do people (and executives in particular) spend much of their time at work, but most individuals' self-fulfillment and level of self-esteem depend on the satisfaction that is derived from their jobs. It is important to note that the effect of job satisfaction on life satisfaction was found to be significantly stronger than the effect of life satisfaction on job satisfaction. Although this is somewhat inconsistent with past research on more typical groups of employees (Judge & Watanabe, 1993; Schmitt & Bedeian, 1982), on reflection this finding seems quite logical. The average executive in this sample spent a substantial amount of time at work (roughly 56 hours per week), spent relatively little time on leisure or familial activities (approximately 18 hours per week in total), and had climbed to the upper echelons of organizations (the average executive was positioned two levels below the CEO in an organization averaging about 5,000 employees). These pieces of evidence suggest that executives are a group of employees who have demonstrated an unusual commitment to their work, and thus the satisfaction they derive from their jobs has a strong impact on the happiness they find in their lives in general (i.e., they live to work rather than work to live). This is supported by the fact that when male executives were asked to indicate the most important areas of their lives by assigning 100 points to five life domains (work, family, religion, leisure, and community), significantly more points were assigned to work ($M = 38.7$ points) than to any other domain. Of course, it also is possible that these apparently anomalous results can be traced to model misspecification. Excluded variables may account for the differences in the magnitudes of the job satisfaction and life satisfaction path coefficients.

As with the relationship between job satisfaction and life satisfaction, the relationship between job stress and job satisfaction was found to be reciprocal. The effect of job stress on job satisfaction is consistent with findings from a large body of literature (Kahn & Byosiére, 1992). Executives, like other employees, are unlikely to be satisfied in a job that causes them stress. For most individuals, stress is an undesirable state, and thus jobs that create stress are by implication generally undesirable. Although past research has posited that the relationship between job satisfaction and job stress is unidirectional, with the causal direction going from job stress to job satisfaction, results from the

present study suggest that this assumption may be erroneous. A causal link from job satisfaction to job stress also was supported. Although perhaps less obvious than the link from job stress to job satisfaction, the effect of job satisfaction on job stress can be easily explained. As indicated earlier, job dissatisfaction is a stressful state that individuals are motivated to change (Roznowski & Hulin, 1992). Few executives, particularly those accustomed to success, are likely to be content with a less than satisfying job, and this state is likely to create tension on the part of the executive. Given that individuals adapt in reaction to stress (Kahn & Byosiére, 1992), and that job dissatisfaction and adaptive behaviors are related (Judge & Locke, 1993; Roznowski & Hulin, 1992), it is possible that job stress mediates the relationship between job dissatisfaction and withdrawal behaviors. Although we have no data to support this speculation, it would be an interesting prospect for future researchers to investigate.

The results supported the centrality of work → family conflict and family → work conflict in the formation of male executive attitudes. Consistent with predictions, both of these constructs significantly influenced job stress. Work → family conflict apparently leads to job stress because jobs that interfere with family life are likely to produce stress. On the other hand, the effect of family → work conflict on job satisfaction was not supported. We expected that executives would be dissatisfied with jobs where family activities represented an imposition. In reality these attitudes were not directly related; evidently when male executives form judgments of job satisfaction, the degree to which family life interferes with the job is not relevant. Perhaps the explanation for this finding is that when family responsibilities interfere with their jobs, male executives do not deem this to be a negative aspect of their jobs; that is, they do not attach "blame" to the job. Alternatively, it is possible that male executives have more freedom than most workers to adjust their schedules to accommodate family issues before they create an aggravating situation. It is also possible that a different result would be obtained from a sample of female executives, who may not have stay-at-home spouses, or from lower level managers, who may be more likely to have children or to have lower incomes and thus be less able to manage the responsibilities accompanying small children. Although the relationship between family → work conflict and job satisfaction was not supported, the results did support the hypothesis that work → family conflict significantly influences life satisfaction. Because family activities were an important element in the lives of most executives (second in importance only to work), anything that interferes with this element of their lives is likely to lead to lower levels of life satisfaction.

The exogenous variables influenced the core constructs mostly as expected. The effects of most of the variables were significant and in the predicted direction. The strongest exogenous influence was the effect of hours worked per week on work → family conflict. The relatively strong effect indicates that male executives who work many hours per week believe that their jobs interfere with their nonwork life. Given that family life is very important to these executives, and that individuals only have so many waking hours to devote to their work and their family life, it seems quite logical that significant commitment to one role interferes

with successful performance in the other (O'Driscoll et al., 1992).

Limitations of the Study

This study has several limitations. Because the attitudinal data were collected from self-reports, it is possible that common method variance biased the relationships observed. However, several considerations may mitigate this concern. First, we deliberately collected data from a second source (i.e., archival records) to prevent sole reliance on self-reported data. Second, Harman's one-factor test, often used to investigate the prevalence of method effects (Podsakoff & Organ, 1986), suggested that no method factor was apparent. Although this test does not completely rule out the existence of method effects, it does tend to increase confidence in the substantive interpretations made on the basis of the results. Finally, the correlations among the attitudinal constructs exhibited a great deal of variance (ranging from $-.29$ to $.49$), which would not have been expected if response sets were present. Although these arguments do not entirely repudiate the charge of bias due to common method variance, they do suggest that method effects may not be pervasive.

A second limitation in this study is that undoubtedly not all influences on each endogenous variable were included in the estimated model. It is likely that additional variables could be suggested. For example, role overload, a frequently used predictor of work-family conflict and job stress (Kahn & Byosiere, 1992), was not included in the model. Another potentially relevant omitted variable is family income because the spouse's income could have served as a proxy for power in the relationship and thus have influenced work-family conflict (Brett et al., 1992). Finally, marital status was treated as a dichotomous variable (married or not) because the search firm's database was limited to this information. Because single executives may experience different levels of life satisfaction and work-family conflict than divorced or separated executives, it would have been desirable to analyze differences between these different categories of marital status. On the other hand, given that 93% of the male executives were married, even if such data were available, small cell sizes may have prohibited such an analysis. As is typical in field research, reasonable and practical considerations required us to exclude some potentially interesting variables from the study. The descriptive results show that these executives are quite pressed for time. It is possible that the omission of influences such as those just cited has biased the results and limited the causal conclusions that can be drawn from our results. To increase the probability that the most important influences were included in the model, we relied on past research as a guide to the variables that could be reasonably included. We are hopeful that this decreased the possibility that omitted variables biased our results.

Several additional caveats should be considered in interpreting our results. A fundamental restriction in the generalization of our results is that only male executives were studied. Ideally, we would have run a comparative LISREL analysis to see if the "female" model approximated the "male" model estimated in the present study. Unfortunately, there were only 79 women in our sample, which made us reluctant to attempt such an analysis. Given past research suggesting differences between men and

women in the reporting of job stress, work-family conflict, and life satisfaction, our results should not be generalized to female executives. It is quite possible that different patterns of results would be observed for female executives. Relatedly, some of the findings reported in this study may be due to the uniqueness of the sample. As always, replication of the results with heterogeneous samples is important. Another caveat in interpreting the results derives from our measures of several variables (e.g., job satisfaction, job stress, and organization work-family policies). Although faceted measures of job satisfaction positively covary and form a construct of overall job satisfaction (Judge & Hulin, 1993; Judge & Locke, 1993), our focus on overall job satisfaction in this study may mask potential differential effects involving facets of job satisfaction. Regarding job stress, we developed our measure using items from existing measures, which gives us some confidence in its validity and compatibility with existing measures. Still, the validity of this measure should be further examined and, we hope, replicated in future studies. Finally, ideally we would have objectively measured organizational accommodation of work-family issues because the expression of positive attitudes about an organization's work-family policies may be biased by social desirability. However, given the design of our study, an objective measure of organization work-family policies was not feasible. In sum, future research that uses faceted measures of job satisfaction, a more established measure of job stress, a more objective measure of work-family policies, and a more heterogeneous sample with respect to gender would provide a useful extension of our findings.

Last, it is judicious to acknowledge the limitations of covariance structure models. The interpretations offered in this study were based not on proof of causality, but rather on the notion that the causal relations are "more or less reasonable relative to alternative specifications" (Jöreskog & Sörbom, 1989, p. 1). Although covariance structure models do not permit proof of causality, such analyses do increase the plausibility of the causal model tested while simultaneously decreasing the plausibility of alternative models. Nevertheless, longitudinal data would be particularly useful for confirming the causal inferences made in this study. As Gollob and Reichardt (1987) pointed out, many of the assumptions necessary to draw causal inference are better satisfied with longitudinal than with cross-sectional data. This underscores the importance of replicating this causal model longitudinally.

Study Strengths

Although the present study has potential limitations, these limitations are accompanied by a number of strengths. First, the large, representative sample of executives allows confidence to be placed in the external validity of the results. This is particularly true given that the sample also was reasonably heterogeneous with respect to region of the country, personal characteristics such as age and tenure, pay (ranging from five figures to seven figures in annual compensation), organization size, and industry. Although the executives were less diverse with respect to race and sex, this is the nature of high-level executive positions, where the glass ceiling for women and minorities is well documented (Morrison & Von Glinow, 1990). A second strength of the study is that the hypothesized model was com-

pared with several alternative models. Not only was the hypothesized model supported on an absolute level, it also compared favorably to the alternative models tested (with one exception).

Contributions

Beyond its methodological strengths and weaknesses, the present study makes a number of substantive contributions. First, this is the first study to simultaneously test the interrelationships among job stress, job satisfaction, life satisfaction, work → family conflict, and family → work conflict. Although some studies have related two of these variables at a time, no previous work has been as extensive as the present study. Because the results revealed that these attitudes are significantly interrelated, it is important that we consider their influences simultaneously. A second important contribution of this study is that it represents the first comprehensive study on the antecedents of executive attitudes. These results largely confirm the individual results of past studies, with some interesting departures such as the predominant effect of job satisfaction on life satisfaction. Thus, the results from this study provide a great deal of information, where little presently exists, on what causes executives to be satisfied with their jobs and lives in general, to feel stressed by their jobs, and to perceive conflict between their work and family roles. Given the importance of executives to organizations and the nature of the unique positions they occupy, the next logical step in this line of inquiry is for us to link these attitudes to individual outcomes such as faceted measures of job satisfaction and withdrawal and to organizational outcomes such as organizational performance.

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P&C Board Appoints Editor for New Journal: *Psychological Methods*

The Publications and Communications Board of the American Psychological Association has appointed an editor for a new journal. In 1996, APA will begin publishing *Psychological Methods*. Mark I. Appelbaum, PhD, has been appointed as editor. Starting January 1, 1995, manuscripts should be directed to

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Psychological Methods will be devoted to the development and dissemination of methods for collecting, understanding, and interpreting psychological data. Its purpose is the dissemination of innovations in research design, measurement, methodology, and statistical analysis to the psychological community; its further purpose is to promote effective communication about related substantive and methodological issues. The audience is diverse and includes those who develop new procedures, those who are responsible for undergraduate and graduate training in design, measurement, and statistics, as well as those who employ those procedures in research. The journal solicits original theoretical, quantitative empirical, and methodological articles; reviews of important methodological issues; tutorials; articles illustrating innovative applications of new procedures to psychological problems; articles on the teaching of quantitative methods; and reviews of statistical software. Submissions should illustrate through concrete example how the procedures described or developed can enhance the quality of psychological research. The journal welcomes submissions that show the relevance to psychology of procedures developed in other fields. Empirical and theoretical articles on specific tests or test construction should have a broad thrust; otherwise, they may be more appropriate for *Psychological Assessment*.