

Vocational Misfit: Source of Occupational Stress Among Accountants

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Abstract

The career path of management accountants involves rotation through disparate positions that, we hypothesized, puts these professionals at risk for episodes of vocational misfit. Survey data from 188 management accountants were examined through correlational analyses and structural equation modeling. As predicted, many respondents (40%) met Holland's (1985b) criterion for vocational misfit. Poor vocational fit was significantly associated in correlational analysis with job dissatisfaction, low self-esteem, and turnover and, in a structural equation model, with a stress process that included both stressors and strains.

Introduction

Management accountants perform unique services within their organizations. They provide information for decisions to all levels within the organization and have a professional obligation to serve the organization, the public, their profession, and themselves by maintaining the highest standards of ethical conduct. To fulfill these obligations in a demanding and often time-pressured job, management accountants require a healthy work environment that facilitates rather than hampers functioning. A stressful workplace is a potential threat both to their well-being and productivity. The present study was designed to examine possible stress-related consequences of poor vocational fit that, we propose, arises from the typical job-rotation career path of these accountants.

Comments and questions concerning this article should be sent directly to the authors via e-mail.

Researchers and managers have long agreed that stress in the workplace can disrupt the work environment (Caplan, Cobb, French, Harrison, and Pinneau 1975), decrease job performance (Caplan et al. 1975; Rebele and Michaels 1990), increase job dissatisfaction (Kahn, Wolf, Quinn, Snoek, and Rosenthal 1964), lower self-esteem (French and Caplan 1973), induce illness (Ivancevich and Matteson 1984), and increase turnover (Aranya, Lachman, and Amernic 1982; Bullen and Flamholtz 1985). Such organizational outcomes of the job stress process, collectively termed job strains, likely interfere with the job performance of management accountants as with other workers.

Due to the costs involved, organizations increasingly are attempting to control the work stress process. Techniques that firms have adopted to contain job stress effects include employee assistance programs that primarily offer

counselling and, more recently, employee wellness programs that seek to prevent stress outcomes (Riley and Zaccaro 1987). Feuer (1987, 217) traced the development of stress reduction training through employee assistance programs and found it to be "perhaps the fastest-growing human service field today". She attributes this growth to recognition of the organizational as well as the human costs of job stress in terms of employee health, performance, absenteeism, and turnover. Developing alternative strategies for controlling or, better yet, preventing such costly stress effects remains an important challenge.

Theory

One approach to managing job stress is to identify and address its antecedents. Job stressors generally may be defined as conditions or events that place demands on individuals beyond their capacity to cope (Caplan et al. 1975; Hobfoll 1988). Sutherland and Cooper (1990) advocate identifying key job stressors in order to enhance the ability of both the employee and organization to effectively use stress-reduction techniques. Several decades ago, French and Caplan (1973) mapped out important domains of job stressors: (a) role conditions such as role ambiguity and role conflict, (b) job qualities such as work overload or underload, and (c) work relations such as having supervisors or co-workers that are unsupportive, unreliable, or uncooperative. Cooper and Marshall (1978) added the domain of career progress stressors that are particularly important among white-collar workers. These include job insecurity, slow promotion, over promotion, and misdirected promotion. Decades of research support the importance of these work stressors, establishing their --plausibly causal-- relationship to such strains as job dissatisfaction (Caplan et al. 1975; House 1981; Crank 1991; Rebele and Michaels 1990).

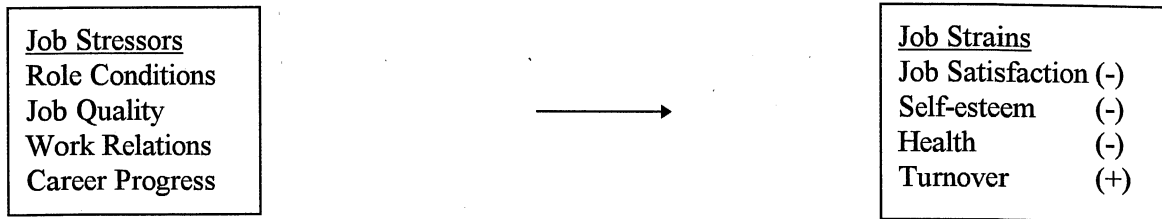
Some studies have examined work stress among public accountants. In a study of CPA firms, Senatra (1980) found that role conditions were associated with tension, job dissatisfaction, and turnover. Aranya et al. (1982) found that professional and organizational commitment,

generally theorized to reflect positive work relations, were predictive of job satisfaction among employees of Canadian accounting firms. Haskins, Baglioni, and Cooper (1991) studied senior auditors and found that role conditions, job quality, and work relations were significantly related to job strains. In short, the few existing studies on accountants suggest that findings regarding stress processes generalize to this group of professionals. The present study was designed to replicate and extend earlier work on accountants by examining the relationship between four types of job stressors --role conditions, job qualities, work relations, and career progress-- and four types of job strains --job dissatisfaction, low work self-esteem, poor health, and turnover (intent to leave). We predicted that these job stressors and strains, collectively referred to as job stress process, would be significantly associated with one another. Further, the study was designed to examine a potential antecedent of these stressors and strains, viz. vocational misfit, in a process outlined below.

H1: An increase in job stressors (role conditions, job qualities, work relations, career progress) on management accountants will be: (1) negatively associated with job satisfaction, (2) negatively associated with good health, (3) negatively associated with self-esteem, and (4) positively associated with turnover.

A variety of person-environment (PE) fit theories have been proposed to clarify processes of stress and workplace adjustment (e.g., French, Rodgers, and Cobb 1974; Harrison 1985; Holland 1985b; Gottfredson and Holland 1990; Edwards 1992; Edwards 1996). Harrison (1985) identified two types of fit between an employee and a job: (a) the extent to which the organization provides resources that meet the individual's needs and (b) the extent to which the individual's skills and abilities meet the demands of the job and organization. Reviewing the research evidence, Harrison (1985) concludes that poor fit of either type may lead to job strain, such as job dissatisfaction, anxiety, low self-esteem, absenteeism, and turnover.

Figure 1
Occupational Stress Model of Management Accountants
Hypothesis 1



PE fit is integral to Holland's vocational theory (Holland 1962, 1968, 1985a). According to this model, vocational fit involves a match between an employee's personality and the occupational requirements of the job, with both being construed in terms of the vocational hexagon (Abe and Holland 1965; Baird 1970; Gottfredson and Holland 1990). Holland (1985a) views vocational search as people and organizations seeking suitable matches of like personality and jobs. People search for work environments that allow them to exercise their skills and abilities and to express their attitudes and values. According to Gottfredson and Holland (1990), the degree of congruence between personality and occupation is fundamental to vocational theory, and their empirical findings support the view that choice of vocation is an expression of personality.

When an individual occupies a job that is a poor vocational fit, problems are likely to arise. The individual may resolve the problem by leaving the job and seeking a more congruent position: but, when this is not possible, job strains such as dissatisfaction are likely (Abe and Holland 1965; Gottfredson and Holland 1990). This appears to be exactly the position of management accountants. They are expected to rotate through a variety of positions during their career. A sequence of positions might be staff cost accountant, cost accounting supervisor, mid-level budget analyst, general accounting manager, internal auditor, tax accounting manager, overseas controller, accounting personnel director, and corporate controller. This sequence was obtained from an informal survey of accounting

human resource managers at large organizations (Boeing, Caterpillar, Chevron, Digital, etc.). Moreover, accounting jobs can be quite disparate. Holland (1985b) has empirically identified eight distinct occupational environments for management accountants, each of which requires different vocational personality features to optimally satisfy the task demands (Table 1). For example, an individual may be ideally suited to the position of general accountant (code CRS) but poorly suited to that of auditor (REC). Likewise, an accountant may be an excellent fit with the position of auditor (REC) but a poor fit with the position of controller (EIS). Thus, management accountants would seem highly vulnerable to vocational misfit.

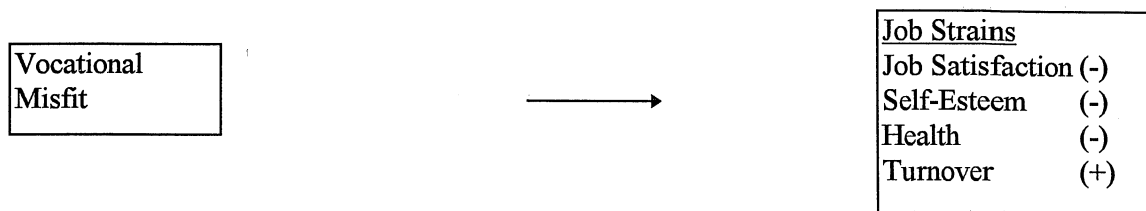
As an occupational group, management accountants represent a valuable opportunity to examine vocational misfit in the context of restricted opportunity to leave. We predicted that management accountants would report a substantial degree of misfit and that greater vocational misfit would be related to increased job stress, specifically job strains.

H2: An increase in vocational misfit of management accountants will be associated with job stress in the following manner: (1) negatively associated with job satisfaction, (2) negatively associated with good health, (3) negatively associated with self-esteem, and (4) positively associated with turnover.

Method

Participants and Survey Procedure

Figure 2
Vocational Misfit Stress Model
Hypothesis 2



Participants were employees of a heavy equipment manufacturing company located in the U.S. Midwest. The survey was distributed to individuals identified by the company as "management accountants" on the basis of three criteria: (a) performing functions expected of a 4-year accounting graduate, and (b) occupying a position designated for accounting, finance, or information systems, and (c) performing in a staff, supervisory, or management capacity. The company distributed the survey package -- containing a cover letter, survey questionnaire booklet, and return envelope-- to 338 management accountants. Subjects were asked to participate in a survey to study the effects of occupational stress on management accountants.

Follow-up reminders were sent after two weeks to all potential participants. Completed surveys were mailed to a central location within the firm and collected weekly by the researcher for a period of five weeks. Completed surveys were obtained from 188 accountants, resulting in a response rate of 56% (188 of 338).

The majority of the respondents were male (79%), married (80%), approximately 41 years of age, and held a college degree (92%). Professional accounting certification (CPA, CMA, or CIA) was reported by 31% of respondents, reflecting the emphasis of the company on professional competence. Respondents reported being with the company an average of 12.9

years, but in the current position for only 2.3 years. The low ratio of time-in-job to time-with-company reflects the company policy of job rotation for management accountants and confirms our view of the high rate of job rotation among these professionals.

Vocational Fit Measure

Accounting position fit was measured using the Iachan index (Holland 1985b). This index compares

Table 1
Distribution of Sample Across Accounting Positions,
Corresponding Vocational Codes, and Percent of Participants
Meeting a Vocational Misfit Criterion

| Accounting Position | Sample | | Code | Misfit* | |
|---------------------|--------|------|-------|---------|-----|
| | # | % | | # | % |
| General Accountant | 63 | 34% | C R S | 18 | 29% |
| Cost Accountant | 57 | 30% | C E S | 23 | 40% |
| Systems Accountant | 17 | 9% | C S E | 7 | 41% |
| Tax Accountant | 11 | 6% | E C S | 6 | 55% |
| Auditor | 4 | 2% | R E C | 3 | 75% |
| Internal Auditor | 10 | 5% | I C R | 8 | 80% |
| Controller | 5 | 3% | E I S | 3 | 60% |
| Manager | 21 | 11% | E S C | 8 | 38% |
| Total | 188 | 100% | | 76 | 40% |

*"Misfit" was defined as an Iachan index of 13 or below (Holland 1985b).

Holland codes for an individual's vocational personality and current job position, yielding a vocational fit score ranging from 0 to 28 (scores closer to 0 represent greater misfit). Table 1 presents data on the distribution of participants across eight accounting positions, the Holland code for each position, and the percent of participants in each position that meet Holland's (1985b) criterion for poor fit (an Iachan index of less than or equal to 13). Note that fit was measured as a continuous variable in the principal data analyses.

Job Stressor Measures

Job stressors were measured through four variables: (a) role conditions (role ambiguity & conflict), (b) job qualities (work overload & underload), (c) work relations, and (d) career progress (Burke 1988). These variables were measured by 32 items primarily from several widely used sources noted below. In all cases, variables were scored so that higher scores represent higher reported stressor levels. Each item was measured with a 5-point response format (1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree).

Role conditions

Stressors related to role conditions reflect both role ambiguity and role conflict. Osipow and Spokane (1987) define role ambiguity as employees being unsure of what they are expected to do, how they should spend their time, and how they will be evaluated. They define role conflict as employees feeling caught between conflicting supervisory demands and factions. Role ambiguity and role conflict were measured here by Osipow and Spokane's (1987) two scales, each consisting of six items with a 5-point agree-disagree response format. Respective sample items are "I am clear on what my job responsibilities are" and "I have more than one person telling me what to do." Osipow and Spokane (1987) report evidence of each scale's reliability ($\alpha = .81$ & $.82$) and validity. These scales were combined as role conditions for the principal data analyses.

Job quality

Osipow and Spokane (1987) describe stressors related to job qualities as including an increasing or decreasing workload, working under tight deadlines, and being unsupported with needed resources. Their job quality scale contains eight items, such as "I work under tight deadlines," and has shown adequate reliability ($\alpha = .83$) and validity (Osipow & Spokane 1987).

Work relations

Stressors may arise from relationships and social interactions between an individual and organizational subordinates, colleagues, or superiors (Cooper & Marshall 1978). Work relation stressors were measured here using seven items from Caplan et al. (1975), such as "My immediate supervisor can be relied on when things get tough at work." Caplan et al. (1975) report evidence of the scale's reliability ($\alpha = .73$) and validity.

Career progress

Stressors related to career progress reflect job insecurity and over or under promotion. Career progress stressors were measured using the Caplan et al. (1975) scale, consisting of five items such as "I am certain about how my future career picture looks." The scale has shown adequate reliability ($\alpha = .79$) and validity (Caplan et al. 1975).

Job Strain Measures

Job strains were measured through four latent variables: job satisfaction, self-esteem, health, and turnover (French and Caplan 1973). Job strains were measured using 28 items from the sources noted below. Each item was measured with a 5-point response format (1-strongly disagree, 2-disagree, 3-not sure, 4-agree, 5-strongly agree; except for six items of health which were 1-never, 2-rarely, 3-sometimes, 4-fairly often, 5-very often).

Job satisfaction

The eight-item Caplan et al. (1975) scale was used to measure job satisfaction. Items include "I dread going to work lately." Adequate reliability ($\alpha = .85$) and validity evidence have been reported for the scale (Caplan et al. 1975).

Self-esteem

Ganster and Schaubroeck (1991) define work self-esteem as how positively an individual appraises his or her value in the workplace. Self-esteem was measured here by Rosenberg's (1989) scale, which consists of seven items such as "I feel important at work." Findings support the reliability ($\alpha = .93$) and validity of the scale (Rosenberg 1989).

Health

Sutherland and Cooper (1990) define health as an individual's physical and mental well-being. The nine-item Caplan et al. (1975) scale was used. Items include "During the past month I was in ill health which affected my work."

Turnover

For pragmatic reasons, turnover is often measured by an antecedent proxy, reported intent to change jobs (French et al. 1974). A four-item scale was used to measure intent to change jobs (Kahn et al. 1964). Items include "I am currently seeking employment outside the company."

Confirmatory Factor Analysis

Convergent

In order to assess the convergent and discriminant validity of the job stressor and job strain measures, a preliminary confirmatory factor analysis was conducted. The loadings of the 60 items on the eight latent variables were tested using LISREL. Of the 60 measured items, 58

showed significant factor loadings on the appropriate latent variable ($p < .05$). Only two health items failed to show significant loading on their designated latent variable. This finding provides evidence of convergent validity -- that is, high correlations between items measuring the same trait (Allen and Yen 1979).

Discriminant

The path coefficients from each of the 60 measured items to other than the appropriate latent variable were in every case less than those to the designated latent variable, supporting the discriminant validity of the measures -- that is, low correlations between items measuring different traits (Allen and Yen 1979).

Results

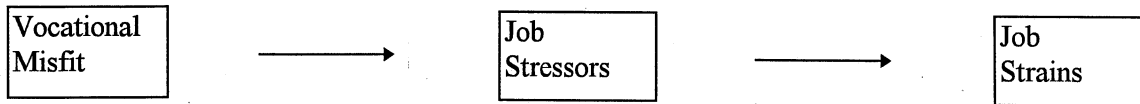
Descriptive Statistics

Basic descriptive information on all the principal variables is presented in Table 2. All variables showed adequate internal consistency reliability (estimated by alpha coefficients, presented on the matrix diagonal). Means and standard deviations were comparable to data reported in previous studies. It is worth noting the observed range of scores (0-28) for the vocational fit variable and the relatively low median score (median = 16) indicating that many respondents experienced poor vocational fit, as noted earlier in the description of the sample.

Correlation Analyses

Table 2 also presents correlations between job strains, job stressors, and vocational fit. Of the 16 correlations between job stressors and job strains, 15 were in the predicted direction and were significant at $p < .01$. The exception was the correlation between job quality and self-esteem, which was significant but contrary to the predicted direction. Vocational fit was largely independent of job stressors, none of the four correlations were significant. However, vocational fit was significantly correlated in the predicted direction with three of the four job

Figure 3
Structural Model 1



strain variables: job satisfaction, work self-esteem, and turnover, but not reported health.

Thus, individuals whose vocational personality was a poor fit for their current position were no more likely than peers to report job stressors in the areas of role conditions, job quality, work relations, or career progress. However, they were more likely to report less job satisfaction, less self-esteem, and greater intent to leave, relative to peers. Similarly, those reporting relatively higher levels of job stressors also generally reported more job strain.

Structural Modeling

A second and more complex data-analytic strategy involved evaluating the goodness of fit between the sample data and a hypothesized structural model (Figure 3) that speci-

fied relationships among latent variables (Byrne 1989). Four criteria are useful in assessing fit for the model as a whole. These are chi-squared with degrees of freedom, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), and root-mean-square residual (RMR).

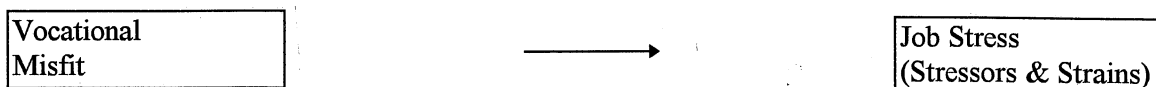
The hypothesized model involved a simple linear relationship between latent variables: poor vocational fit influences job stressors, that in turn influence job strains. The initial structural model analysis produced an extremely high path coefficient between job stressors and job strains (path coefficients = .94, $p < .0001$), consistent with the latter part of the model. Because of this strong relationship, a second structural model (Figure 4) which combined job stressors and job strains into a single latent variable - job stress was analyzed. A comparison of both models (separate latent variables - job stressors

Table 2
Descriptive Statistics and Correlations Among Job Strain, Job Stressors, and Vocational Fit

| | Mean (SD) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------|--------------|------|------|------|------|------|------|-----|------|
| Strains | | | | | | | | | |
| 1. Job Sat. | 3.29 (0.77) | .85 | | | | | | | |
| 2. Self-Esteem | 3.97 (0.64) | .62 | .87 | | | | | | |
| 3. Health | 3.83 (0.61) | .35 | .24 | .73 | | | | | |
| 4. Turnover | 2.04 (0.80) | -.55 | -.31 | -.33 | .69 | | | | |
| Stressors | | | | | | | | | |
| 5. Role Conds. | 2.66 (0.66) | -.44 | -.31 | -.26 | .42 | .85 | | | |
| 6. Job Qual. | 3.40 (0.73) | -.23 | .15 | -.35 | .35 | .33 | .85 | | |
| 7. Work Relns. | 2.72 (0.68) | -.51 | -.30 | -.33 | .49 | .52 | .40 | .79 | |
| 8. Career | 3.02 (0.76) | -.66 | -.47 | -.26 | .37 | .40 | .02 | .35 | .74 |
| 9. Misfit | 15.95 (8.49) | .20 | .15 | .09 | -.17 | -.11 | -.04 | .00 | -.12 |

Significant correlation coefficients: .14 ($p < .05$); .20 ($p < .01$); .24 ($p < .00$)

Figure 4
Structural Model 2



and job strains; and a single latent variable - job stress) was conducted. This comparison indicated no significant difference between the models (chi-squared = 133.64 & 135.21, and chi-squared/df ratio = 7.03 & 6.76). Thus, the more parsimonious model (Figure 4) was adopted for subsequent analysis. (Note that this does not imply that job stressors and strains are identical: they can be distinguished conceptually and empirically as shown in the earlier confirmatory factor analysis.)

Structural model 2 was analyzed and tested. In structural model 2, vocational fit influences a stress process that incorporates both job stressors and strains. This model yielded a chi-squared/df ratio of 5.28, larger than the

value (2.00) considered to indicate a good fit. However, this ratio is sensitive to sample size and is not robust with respect to multivariate normality (Gregson 1992). Other indices suggest a moderately good fit. GFI and AGFI indices were equal to 0.84 and 0.74 respectively. These indices range from 0 to 1, with values approaching 1 representing a better fit. Finally, RMR represents the average discrepancy between hypothesized and observed covariance matrices. (Values range between 0 and 1, with values less than 0.05 considered a good fit.) RMR here was equal to 0.095, indicating acceptable fit.

Table 3 presents the standardized path coefficients and associated t-tests for the hypothesized model. All paths between measured and latent variables were in the predicted direction and significant ($p < .05$). The path between the latent variables vocational fit and job stress was significant (standardized path coefficient = -0.22, $t = -2.49$, $p < .01$). Thus, the results are consistent with the prediction that poor vocational fit influences job stress (i.e., both job stressors and strains) and supports Hypothesis 2.

Discussion

This study was designed to examine the job stress process among management accountants, with two principal foci. First, the findings replicate and extend earlier results from the few studies that have investigated these professionals e.g., Aranya et al. 1982; Haskins et al. 1991; and Senatra 1980. Both correlational and structural equation analyses indicate an association

Table 3
Results of Revised Structural Model:
Standardized Path Coefficients and
Corresponding t-Tests

| Variable | | Standardized Path Coefficient | t |
|------------------|---------------|-------------------------------------|-------|
| Misfit | --->Stress | -.22 | -2.49 |
| Role Conditions | --->Stressors | .56 | NA |
| Job Qualities | --->Stressors | .28 | 3.47 |
| Work Relations | --->Stressors | .61 | 6.48 |
| Career | --->Stressors | .70 | 7.07 |
| Job Satisfaction | --->Strains | -.89 | -7.94 |
| Self-Esteem | --->Strains | -.63 | -6.59 |
| Health | --->Strains | -.43 | -4.95 |
| Turnover | --->Strains | .63 | 6.64 |

All t tests significant at $p < .05$. The path for role conditions has no t value because this was the initial fixed parameter for LISREL specification set at 1.00.

between job stressors and job strains. The job stressors were from four domains: (a) role conditions including role conflict and ambiguity, (b) job quality problems reflecting time pressures, overload, and underload, (c) work relations including relationships with co-workers and supervisors who were unsupportive, unreliable, or unreasonable, and (d) career progress including uncertainty regarding one's career, under promotion, and over promotion. Accountants that reported problems in these areas also reported job strains: particularly job dissatisfaction, low work self-esteem, and intent to leave the organization. Comparable findings for poor health were less robust. Overall, the findings support the generalization of work stress theory to a little-studied professional group, management accountants. As with the majority of research in this area, stressors were not manipulated and we cannot infer with confidence that stressors cause strains. Although that inference is plausible, we think it likely that the association reflects in part two other processes. Strain may influence stressors in turn; for example, dissatisfied workers may irritate colleagues leading them to be less supportive. Reports of both stressors and strain may reflect personal factors such as neuroticism (Costa & McCrae 1980) or PE factors such as those discussed below.

The second and more important focus of the research sought to take advantage of an unusual feature of management accountants' career paths. These typically involve job-rotation through disparate accounting positions. We hypothesized that such rotation places management accountants at risk for vocational misfit. Indeed, on average our accountants had been with the company almost thirteen years but in their present position only a little over two years, and 40% of our sample met Holland's (1985b) criterion for misfit (an Iachan index of 13 or below). Moreover, vocational fit was related to job strains in the correlation analyses, and to both job stressors and strains in the structural equation model. Management accountants whose vocational personality was a poor fit for their current position reported more stressors and strains. That is, accountants in positions of relatively

poor fit reported experiencing more role ambiguity and conflict, more work pressure, poorer work relationships, and more career progress problems, as well as more job dissatisfaction, lower work self-esteem, poorer health, and greater intent to leave the organization. Although the size of the misfit effect is modest, the consequences of poor vocational fit are clearly neither circumscribed nor trivial, for employees or the organization.

These findings clearly have implications for intervention. Employee assistance and wellness programs may be valuable to contain or buffer stress effects, but they offer limited options for managing the stress process from the outset. If the present findings are replicated, then careful attention to vocational fit might allow for reduced onset of the stress process. The vocational personality of management accountants might be assessed and used in assigning them to "tolerable fit" positions. Especially difficult positions might be identified for special attention; for example, 79% of respondents in the auditor positions met the criterion for misfit. Moreover, purported benefits of rotation through disparate jobs --gaining experience and insight necessary for "big picture" functioning-- might be retained by moving accountants progressively through positions that are increasingly incongruent. Such strategies might be complemented by job preview, stress inoculation, and other intervention procedures.


Limitations of Study

The generalizations from the findings for this study are subject to the normal limitations which apply to self-report surveys. Additionally, the focus of the study was the effect of vocational fit on occupational stress of management accountants. The sample was not random, but was drawn from a single, large international manufacturing firm. Thus the results may be generalized only to larger firms requiring separate, multiple accounting functions where research may easily be conducted on management accounting job rotation.

Suggestions For Future Research

The findings have implications beyond stress among accountants. The kind of job-rotation observed among our management accountant sample is not unique and likely represents the career paths of other senior management professionals. Future research should seek to identify and explore this process among other professional groups. Theory and research in the areas of vocational fit and work stress might yield important insights into the special problems characteristic of senior management careers and perhaps generate corresponding interventions to reduce personal and organization costs.

With a cross-sectional study, causality is difficult to prove. A preferred approach of future research efforts may be a longitudinal study where changes in variables (job rotation) could be viewed and related to job stress over time. Also, research studies in accounting tend to investigate subjects in public accounting. Management accountants from the private sector are a relatively unstudied population and offer rich opportunities for fresh approaches to behavioral accounting studies of occupational stress model applications.

Finally, the findings shed light on a less-well explored facet of vocational choice. The search for a congruent position may be one of seeking opportunities to express interests, talents, and values (Holland 1985a), but it also appears to be driven by efforts to escape from the stressors and strains that arise from poor fit. These factors should be explored in future research. 

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