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Job satisfaction as mediator: An assessment of job satisfaction's position within the nomological network

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Abstract

Job satisfaction's position within the nomological network and the mechanism outlined by theories of social exchange suggest that job satisfaction functions as a mediator of the relationship between various antecedent variables and volitional workplace behaviours. We extend social exchange theory to include perceptions of the total job situation and develop a model that positions job satisfaction as a mediator of the relationships between various internal and external antecedent variables, and three volitional workplace behaviours: citizenship behaviours, counterproductive workplace behaviours, and job withdrawal. The fit of a fully mediated model is good and all four classes of antecedents (dispositions, workplace events, job characteristics, job opportunities) contributed uniquely to the prediction of satisfaction. Job satisfaction is also shown to mediate most antecedent-consequence relationships, although two important exceptions are evident. A direct link from pro-social disposition to OCBs, and a direct link and one from anti-social disposition to counterproductivity, suggest that job satisfaction does not fully moderate the relationships between dispositions and contextual behaviours.

Job satisfaction remains a dominant construct in the organizational literature for a variety of reasons, including the intrinsic desirability of employee satisfaction, job satisfaction's relationship to a variety of relevant workplace behaviours including job performance (Judge, Thoresen, Bono, & Patton, 2001), and withdrawal behaviours (Tett & Meyer, 1993), and its strong relationship to related constructs such as organizational commitment (e.g. Meyer, Stanley, Herscovitch, & Topolnytsky, 2002) and Perceived Organizational Support (Rhoades & Eisenberger, 2002).

Decades of research on job satisfaction have resulted in a sound understanding of how both personological factors (e.g. dispositions) and environmental factors (e.g. working conditions, economic conditions) affect employees' level of job satisfaction and how job satisfaction, in turn, influences a variety of important workplace behaviours (e.g. job performance and turnover). For the most part, job satisfaction is thus positioned either as a determinant of workplace behaviour (e.g. an independent variable) or as a desirable outcome in its own right (i.e. a dependent variable). While we recognize the intrinsic value of these two perspectives, we argue in this paper that an additional important role of job satisfaction lies in its role as mediator of the relationships between various situational and dispositional characteristics and organizational outcomes. This mediational role is not only a logical extension of the manner in which job satisfaction is positioned within the nomological network, but is also consistent with various theoretical frameworks that focus on the manner in which an

individual's actions toward an attitude object (e.g. organization, coworkers, supervisors) are informed by the manner in which the attitude object is perceived to have acted toward the individual. Among such theoretical frameworks, we count social exchange theory, the theory of psychological contracts and the norm of reciprocity (e.g. Norm of Reciprocity; Gouldner, 1960).

A brief review of these theoretical frameworks and of the extensive theoretical and empirical literatures devoted to developing an understanding of how job satisfactions are formed and translated into volitional workplace behaviours will allow us to establish a general theoretical model of how job satisfaction acts as a mediator of the relationships between its various antecedent factors and subsequent workplace behaviours.

Job satisfaction as mediator

Our position that job satisfaction functions as a mediator within the nomological network has seldom been explicitly articulated in the organizational literature. It has however been implicitly presented in both important theoretical reviews (e.g. Hulin & Judge, 2003) and empirically oriented work (e.g. Hulin, & Judge, 2003; Judge, Parker, Colbert, Heller, & Ilies, 2001; Turnley & Feldman, 2000; Weiss & Cropanzano, 1996; Yousef, 2002). It is also consistent with Social-Exchange Theory (Thibaut & Kelley, 1959), the Norm of Reciprocity (Gouldner, 1960), Perceived Organizational Support (Rhoades & Eisenberger, 2002), and theories of psychological contracts (e.g. Rousseau, 1989).

These theories, when applied to the employee-employer relationship, predict that employees respond to perceived favorable working conditions by behaving in ways that benefit the organization and/or other employees (i.e. organizational citizenship behaviour). Equally, employees retaliate against dissatisfying conditions by engaging in harmful behaviour (i.e. counterproductive work behaviour). Employees may even retaliate against extremely dissatisfying conditions by deciding to quit or by engaging in behaviour commensurate with preparations to quit.

These theories of social exchange suggest that employees engage in positive or negative behaviours toward the organization only in response to positive or negative actions that are seen to originate from the organization (e.g. favorable or unfavorable working conditions, unfair treatment). This would, in turn, suggest that job satisfaction mediates the relationship between actual working conditions and workplace behaviours. We argue here that such theoretical frameworks, and the implicit mediation mechanisms, need to be extended to include factors that influence the perception of organizational actions. That is, the perception of working conditions is not solely determined by the objective nature of the job situation but is rather a function of a wide variety of factors, including the objective nature of the job as well as factors that are internal to an employee (e.g. traits) and external to an employee (e.g. characteristics of the job). Specifically, we focus on factors that include economic circumstances, negative organizational experiences, and personal dispositions; factors that function as lenses through which the objective job situation is viewed. If these factors also exert influence on job satisfaction, and, through job satisfaction, exert influence on organizational behaviours, then we are able to extend not only our understanding of exchange relationships in the organizational context but also of the function of job satisfaction within the nomological network.

Antecedents of job satisfaction

Our focus on antecedents of job satisfaction as presented here relies both on the manner in which job satisfaction has been defined and an acknowledgment that an employee's experience of his/her job is influenced by multiple interrelated factors.

In their recent review of the job satisfaction literature, Hulin and Judge (2003) define job satisfaction as being '... multidimensional psychological responses to one's job. These responses have cognitive (evaluative), affective (emotional), and behavioural components. Job satisfactions refer to internal cognitive and affective states ...' (p. 255–256). We argue here that these cognitive and affective states can be traced to multiple influences, ranging from factors that are highly proximal to the individual (e.g. dispositions) to factors that are more distal (e.g. local and national economic conditions).

Economic/macro-environmental factors

Research examining the relationship of job satisfaction to environmental factors has largely focused on external economic conditions such as available job opportunities and standard of living in the area. The Cornell Model of job attitudes (Smith, Kendall, & Hulin, 1969) proposes that employees use a frame of reference, such as the availability of potentially satisfying alternative employment, to evaluate their current jobs. Consequently employees will rate their jobs more favorably during difficult economic times, when opportunities are scarce, than during prosperous times when alternatives are plentiful. Similarly, employees should act more favorably toward their organization in times of economic hardship than during times of plenty. This opportunity cost model is supported by studies finding negative correlations between job satisfaction and local economic conditions (e.g. Hulin, 1966; Miller, Katerberg, & Hulin, 1979). Modeling the impact of economic conditions is difficult within a single organization, given a lack of variance, unless one assesses perceptions of the economic environment rather than the objective reality of this environment.

Objective characteristics of the job

The approach that perhaps best links job satisfaction to the objective nature of the work environment is the Job Characteristics Model (e.g. Hackman & Oldham, 1976). Hackman and Oldham use five specific descriptors to describe jobs that are likely to be satisfying: skill variety, task significance, task identity, autonomy, and feedback. Empirical support for the Job Characteristics Model, or components of it, is extensive. Indeed a meta-analysis by Fried and Ferris (1987) summarizing nearly 200 studies reported corrected correlations for the objective characteristics of the job with job satisfaction to be .45 (skill variety), .35 (task significance), .26 (task identity), .48 (autonomy), and .43 (feedback) (see also Behson, Eddy, & Lorenzet, 2000). These meta-analyses suggest that objective job characteristics account for a substantial proportion of the variance in job satisfaction. The manner in which desirable job features such as autonomy or task significance are translated into higher levels of job satisfaction can be understood from the theory of Perceived Organizational Support (POS). From this perspective employees attribute humanlike qualities to the organization (Rhoades & Eisenberger, 2002). The creation of jobs with desirable characteristics as thus seen as an indication that the organization is concerned with the well-being of the employee, resulting in higher levels of satisfaction with the organization and the job.

Objective job characteristics have also been integrated into various other models of job satisfaction, such as the Cornell Model (e.g. Hulin, Roznowski, & Hachiya, 1985). Hulin et al. classified many objective job characteristics as job outcomes (e.g. autonomy provided by job) that are evaluated using relevant frames of reference in order to arrive at work evaluations.

Reactions to workplace events

Whereas the Job Characteristics Model emphasize stable and enduring characteristics of the job environment that are constant across employees in the same job, other approaches focus on events that individual employees may experience, but that are not an inherent component of the workplace, or part of the standard job description. Numerous such job events have been linked to lower levels of job satisfaction including job incivility (Cortina, Magley, Williams, & Langhout, 2001), stressful events (Kelloway, Barling, & Shah, 1993), favoritism (Zellars & Kacmar, 1999), workplace discrimination (Ensher, Grant-Vallone, & Donaldson, 2001), and sexual harassment (Fitzgerald, Drasgow, Hulin, Gelfand, & Magley, 1997; Sczesny & Stahlberg, 2000).

The perception of unjust workplace outcomes and events, such as unfair procedures (Schmitt & Doerfel, 1999) or unfair outcomes (e.g. McFarlin & Sweeney, 1992), has also been linked to lower levels of job satisfaction with a recent meta-analysis (Colquitt, Conlon, Wesson, Porter, & Ng, 2001) reporting correlations between job satisfaction and distributive, procedural, interpersonal and informational justice of .56, .62, .35, and .43, respectively. As was the case for objective job characteristics, the effect of negative events on job satisfaction can be understood from a POS perspective. That is, employees blame the organization for negative events that occur in the workplace and subsequently have a reduced perception that the organization cares about employees' welfare, thereby reducing job satisfaction.

In terms of Affective Events Theory (Weiss & Cropanzano, 1996), these events, whether perceived as discrimination, harassment, or injustice, are accompanied by short-term negative affective reactions that not only lower job satisfaction but also on-the-job behaviour. Similarly, positive events (e.g. fair treatment) result in increased levels of job satisfaction.

Dispositional influences

The dispositional approach to job satisfaction focuses on the role of enduring traits in determining job satisfaction. An assumption here is that individuals are predisposed to evaluate their job in either a positive or negative manner, irrespective of the objective nature of the job. More specifically, it may be that individuals with high levels of negative affect are better able to recall the negative aspects of a job or task (Necowitz & Roznowski, 1994), and therefore self-report higher levels of dissatisfaction. This assumption has found strong empirical support, with job satisfaction exhibiting strong relationships with trait affect (e.g. Judge & Hulin, 1993; Levin & Stokes, 1989; Payne & Morrison, 2002). Recent meta-analytic findings by Connolly and Visweswaran (2000) indicate strong relationships between job satisfaction and positive affect ($r = .49$), negative affect ($r = -.33$), and affective disposition ($r = .36$).

Job satisfaction has also been linked to other, related, personality constructs, such as extraversion (e.g. Tokar & Subich, 1997); neuroticism (Kirkcaldy, Thome, & Thomas, 1989; Tokar & Subich, 1997); an internal locus of control (King, Murray, & Atkinson, 1982; Spector & O'Connell, 1994); and agreeableness and conscientiousness

(Organ & Lingl, 1995). In a recent meta-analysis of the relationship between the Big-five personality constructs and job satisfaction, Judge, Heller, and Mount (2002) observed that the true-score correlations with job satisfaction were $-.29$ for Neuroticism, $.25$ for Extraversion, $.26$ for Conscientiousness, $.17$ for Agreeableness, and $.02$ for Openness to Experience. Dispositional influences are also evident when considering that job satisfaction displays substantial stability across both time and situations (Judge, Bono, & Locke, 2000; Staw, Bell, & Clausen, 1986; Staw & Ross, 1985). This stability may be the result of possible genetic components to job satisfaction (e.g. Arvey, Bouchard, Segal, & Abraham, 1989; Arvey et al., 1994).

Dispositions have, of course, also been linked to both desirable and undesirable workplace behaviours. Conscientiousness, for example, has long been recognized as an important influence on general job performance (e.g. Barrick & Mount, 1991) while pro-social and anti-social disposition have been linked to citizenship behaviours and counterproductive behaviours, respectively (Penner, Midili, & Kegelmeyer, 1997; Spector & Fox, 2002).

Consequences of job satisfaction

Job satisfaction is often conceptualized as a determinant of general job performance although the empirical relationship is of weak to moderate strength with meta-analytic estimates of the relationship ranging from $.18$ (Iaffaldano & Muchinsky, 1987) to $.30$ (Judge et al., 2001).

The relative weakness of this relationship may be due to the fact that much of this research has adopted an overly narrow view of job performance by focusing primarily on the task performance subset of the job performance space. Given the primacy of factors such as general mental ability (e.g. Schmidt & Hunter, 1998; Schmidt, 2002), job experience (e.g. McDaniel, Schmidt, & Hunter, 1988), and procedural and declarative knowledge (e.g. McCloy, Campbell, & Cudeck, 1994) in determining task performance it is not surprising that job satisfaction explains only a small proportion of the variance in task performance. Rather, we argue that job satisfaction is more meaningfully related to more specific components of job performance, specifically workplace behaviours that are engaged in at the discretion of an employee and are less contingent on specific skill or knowledge sets. Among the most important of these volitional behaviours are organizational citizenship behaviours, counterproductive workplace behaviours, and job withdrawal - each of which exerts an important influence on the organization's success (Smith, Organ, & Near, 1983; Sackett & DeVore, 2001).

Organizational citizenship behaviour (OCB)

OCBs refer to behaviours that are intended to help coworkers, the supervisor, or the organization, and include acts such as assisting coworkers, trying to improve workplace morale, suggesting improvements in the functioning of the organization, volunteering for work that is not part of the job description, and speaking highly of the organization to outsiders. A recent meta-analysis, by LePine, Erez, and Johnson (2002), stated a corrected correlation between job satisfaction and organizational citizenship behaviour of $.24$ (see also Organ & Ryan, 1995; Podsakoff, MacKenzie, & Bommer, 1996). These studies indicate that - despite the theoretical frameworks cited above - the satisfaction-OCB relationship does not significantly exceed the satisfaction-performance relationship.

One possible reason for this weak relationship is that OCBs are 'affect driven' rather than 'judgment driven' (Weiss & Cropanzano, 1996). If the latter were so, we would not expect job satisfaction to fully mediate the relationship between affective dispositions and OCBs.

Counterproductive workplace behaviour (CWB)

Counterproductivity is defined as intentional behaviours viewed by the organization as contrary to its legitimate interests (Sackett & DeVore, 2001). Recently, Gruys and Sackett (2003) proposed that counterproductivity can be split into a number of dimensions including theft, destruction of property, poor attendance, poor work quality, misuse of time and resources, inappropriate actions, and drug and alcohol use.

CWBs are likely to be initiated by employees who are not satisfied in their workplace. To date, research into the relationship between job satisfaction and CWBs has been sparse. Significant relationships have been noted between job satisfaction and dimensions of counterproductivity, such as poor quality of work and drug use (Hollinger, 1986; Mangione & Quinn, 1975), and misuse of time and resources (Glomb, Munson, Hulin, Bergman, and Drasgow (1999). Like OCB, CWB has been defined as 'affect driven' rather than 'judgment driven' (Weiss & Cropanzano, 1996); therefore it too may be predictable directly by affective disposition (in addition to the mediated effect, via job satisfaction).

Job withdrawal behaviour

Job satisfaction has been linked to both job withdrawal behaviours (e.g. searching for another job) and work withdrawal behaviours (e.g. arriving late/leaving early). Employees with low levels of job satisfaction are more likely to quit their jobs (e.g. McCall, Cavanaugh, & Arvey, 1997; Somers, 1996; Waters & Roach, 1971) or have the intention to quit (e.g. Miller et al., 1979; Rosse & Hulin, 1985), or engage in a job search (Mobley, Horner, & Hollingsworth, 1978; Miller et al., 1979). Meta-analytic findings by Tett and Meyer (1993) also support the link between job attitudes and both turnover intentions ($\rho = -.58$) and turnover ($\rho = -.25$) (see also Carsten & Spector, 1987).

Low job satisfaction has also been linked to work withdrawal behaviours such as leaving work early (Hollinger, 1986; Iverson & Deery, 2001), arriving at work late (Adler & Golan, 1981), and absenteeism (Waters & Roach, 1971). Hackett's (1989) evaluation of three meta-analyses found moderate correlations between job satisfaction and both the frequency of absences ($r = -.21$) and the length of such absences ($r = -.23$). Some researchers view such behaviours as psychological withdrawal and, therefore, part of the overall withdrawal construct (see Hulin et al., 1985). Other researchers conceptualize work withdrawal as distinct from - albeit related to - job withdrawal (e.g. Hanisch & Hulin, 1990, 1991) and, instead, as a subset of the much broader domain of CWBs counterproductive work behaviours (Gruys & Sackett, 2003; Hollinger & Clark, 1982). We adopt the latter perspective. Further, in accordance with Weiss and Cropanzano (1996), we argue that job withdrawal is largely 'judgment driven', in addition to being highly volitional in nature. Therefore, it should be well predicted by job satisfaction.

Development of a mediated model

In their review of the job satisfaction literature, Hulin and Judge (2003) note that a comprehensive and simultaneous test of various models of job satisfaction would be difficult given the number, sources, and levels of variables that would need to be considered. While we concur with this assessment, we do believe that a mediational framework can consider multiple sources of job satisfaction simultaneously. In an attempt to be as integrative as possible, we selected indicators of job satisfaction antecedents from the four main theoretical approaches (as reviewed above) for inclusion in our model. Given that we assessed broad job satisfaction rather than a specific sub-facet of job satisfaction we also selected indicators of antecedents that represented the antecedent construct in a relatively broad manner.

First, to represent dispositional variables we used positive emotionality and negative emotionality. These two constructs are based on the extensive theoretical and empirical work by Tellegen (e.g. 1985), and Watson and Clark (Clark & Watson, 1999; Watson & Clark, 1993) who identified these broad temperamental factors comprised of extraversion and positive affect, and neuroticism and negative affect, respectively. Use of these two constructs is particularly useful in this context given that they are likely to not only be related to job satisfaction but also to OCBs and CWBs, respectively, thereby allowing us to test the mediational nature of job satisfaction. Second, to represent job characteristics we combined skill variety and job autonomy ratings of job categories into a job complexity measure as suggested by Dunham (1976) and Fried and Ferris (1987). Third, to represent the macro-economic environment we used employee's perceptions of alternate job opportunities in line with the Cornell Model of Job Attitudes (Hulin, 1991). Finally to represent employees' affective and cognitive reactions to workplace events we used measures of stress and perceived workplace discrimination. Our use of two negative affective and cognitive reactions as opposed to positive reactions was based on findings that the influence of negative events on job satisfaction is stronger than the influence of positive events (Taylor, 1991).

Job satisfaction itself was operationalized as an overall construct composed of various facets (Hulin & Judge, 2003; Locke, 1976). For this study, scores from the satisfaction with work, coworkers, supervisor, and pay facet subscales were used as indicators of overall job satisfaction. Finally, we selected measures of job withdrawal, OCBs, and CWBs as indicators of volitional workplace behaviours. The hypothesized relationships between the indicators are presented in Figure 1.

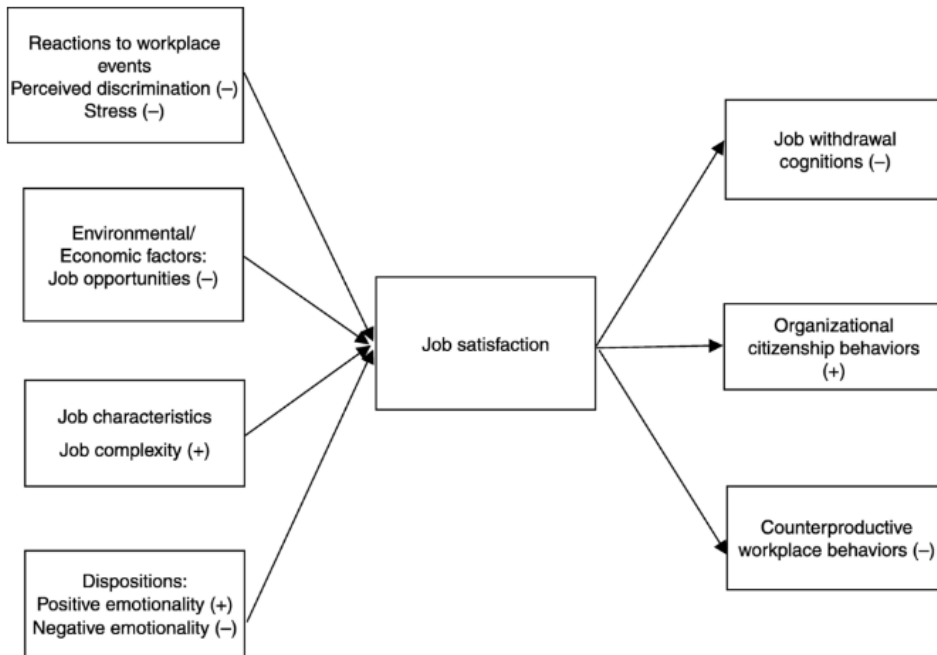


Figure 1. Summary of hypothesized relationships for fully-mediated model.

We did not expect job satisfaction to necessarily fully mediate all of these relationships. Existing theoretical and empirical work suggests that job satisfaction may only function as a partial mediator of at least two of the antecedent-consequence relationships. Research by Penner and colleagues (e.g. Penner, Craiger, Fritzsche, & Freifeld, 1995; Penner et al., 1997), Organ and Ryan (1995), and Spector and Fox (2002), has highlighted the importance of dispositions in determining contextual behaviours such as OCBs and CWBs suggesting that job satisfaction will not fully mediate the relationship between positive dispositions and OCBs and negative dispositions and CWBs, respectively. Despite likely direct effects of dispositions on behaviours we began our analysis with a test of the fit of the fully mediated model for two reasons. First, parsimonious models (i.e. complete mediation with no direct effects) are inherently desirable and the fit of such a parsimonious model should be examined, especially when such a model is theoretically plausible. Second, the fit of the fully mediated model provides a base line against which to compare models that include direct paths from antecedents to consequences.

Method

Participants

The sample for this study consisted of 1,497 non-academic employees from 12 departments of a large university with a total of 1,149 (76.7%) of these employees responding to the measures described below, well above the 50% response rate advocated by Church and Waclawski (1998). Seventy-six percent of respondents were male, 85% were white, the average length of tenure was 11.3 years (SD = 8.2), and the average age was 44.5 (SD = 9.5). Employees could be classified into 9 distinct job categories: semi-skilled employees (6.9%); protective professions employees (2.1%); crafts employees (26.8%); professional employees (12.2%); managers (5.7%); building service workers (26.4%); vehicle operators (1.6%); clerical employees (6.8%); supervisors (6.6%); and

employees classifying themselves as falling into none of these categories (4.9%). Complete self-report data were available for 959 employees.

Measures

Job satisfaction

Satisfaction with the work itself, supervisor, coworkers, and pay and benefits were assessed using Roznowski's (1989) revision of the Job Descriptives Index (JDI, Smith et al., 1969). For each subscale respondents are asked to indicate the degree to which each of nine adjectives accurately describes their work situation. A three-point scale ('Yes', '?', 'No') is used for responses. Reliability estimates were $\alpha = .89$ (Work), $\alpha = .89$ (Supervisor), $\alpha = .91$ (Coworkers), and $\alpha = .81$ (Pay), respectively.

Positive affect and negative affect

Positive (PA) and negative (NA) trait affect was measured via the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Higher scores indicate higher levels of positive or negative affect. Reliability estimates for the present sample were $\alpha = .81$ (PA) and $\alpha = .79$ (NA).

Neuroticism and extraversion

Neuroticism and extraversion were assessed using two 10-item measures from the International Personality Item Pool (Goldberg, 1999). Reliability estimates were $\alpha = .87$ (Neuroticism) and $\alpha = .86$ (Extraversion).

Work discrimination

Perceived discrimination was assessed using a 10-item modified version of the gender work discrimination scale (GRWD scale; Chernyshenko, Cohorn, & Fitzgerald, 2002), that includes items measuring the degree to which employees have been the target of a variety of discriminatory behaviours including being denied resources and promotions and being physically threatened. References to gender were removed, so that the items could tap discrimination based on age, gender, ethnicity or any other relevant category. The reliability estimate was $\alpha = .90$. Items are listed in the appendix.

Work stress

General work stress was assessed using the 15-item Stress in General scale (SIG; Stanton, Balzer, Smith, Parra, & Ironson, 2001) that uses the same response format as the JDI. The internal reliability estimate was $\alpha = .91$.

Job opportunities

Perceived job opportunities were assessed using an 8-item scale (Bergman, 2002). Responses to the scale had an internal reliability of $\alpha = .79$. Items are listed in the appendix.

Job complexity

Five raters who were familiar with the organization from which the data were collected provided a job complexity rating for each of the nine job categories on a scale of 1 to 10 (1 = low complexity; 10 = high complexity). Average inter-rater reliability was acceptably high ($r = .75$) and an average of the complexity ratings for each job was therefore used. A single indicator of objective job characteristics was chosen because the five dimensions proposed in the Job Characteristics Model (Hackman & Oldham, 1976) have often not shown discriminant validity (e.g. Fried & Ferris, 1986) and because a simple additive index of job complexity has been

shown to be a better predictor of work outcomes than more complex models of objective job characteristics (Dunham, 1976; Fried & Ferris, 1987).

Organizational citizenship behaviour

A 17-item OCB scale consisting of items adapted from Smith et al. (1983) and Borman and Motowidlo (1997) was used. A five-point Likert-type scale with a behavioural frequency response format ('Never or Very Rarely' to 'More than Once a Week') was used. The reliability estimate was $\alpha = .84$. Items are listed in the appendix.

Counterproductivity

A 19-item CWB scale consisting of items adapted from Bennett and Robinson (2000) and Sackett and DeVore (2001) was used with the same response-format as the OCB scale. The reliability of responses to the CWB scales in this study was $\alpha = .88$. Items are listed in the appendix.

Job withdrawal

The 5-item Job Withdrawal Scale (Hanisch & Hulin, 1991) assesses employees' attempts to remove themselves from their job through turnover or early retirement by asking respondents to indicate how often they think about quitting and engage in behaviours related to quitting. Responses to the Job Withdrawal Scale had an internal consistency estimate of $\alpha = .83$.

Results

All structural equations analyses were conducted using the LISREL 8 computer programme (Jöreskog & Sörbom, 1993). Table 1 presents the correlations among the examined variables. All but one of the antecedent-consequence relationships were statistically significant ($p < .05$), and the relationship of job satisfaction with all other variables was also statistically significant ($p < .05$), thereby fulfilling initial requirements for mediation tests.

Variable name	# of items	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. JDI total	36	72.30	20.88	.91									
2. Positive disposition	15	31.46	8.26	.33	.84								
3. Negative disposition	15	24.00	7.66	-.34	-.33	.89							
4. Stress	15	17.81	12.94	-.34	-.13	.46	.91						
5. Discrimination	10	16.55	8.04	-.48	-.08	.30	.39	.90					
6. Job complexity	5*	3.29	1.93	.31	.16	-.03	.16	-.04	.92				
7. Job opportunity	8	21.54	4.86	.29	.12	-.12	-.15	-.24	.10	.79			
8. OCB	15	3.03	.81	.17	.37	-.14	.16	.10	.26	.05	.84		
9. CPWB	19	1.62	.52	-.49	-.25	.42	.34	.42	-.09	-.21	-.11	.88	
10. Job withdrawa	5	1.47	.72	-.51	-.25	.33	.32	.40	-.09	-.15	-.09	.43	.83

Note. *represents number of raters.
 N = 959. $p < .05$ if $r > .06$; $p < .01$ if $r > .08$; OCB = organizational citizenship behaviours; CWB = counterproductive work behaviour. Alpha reliabilities are given along the diagonal.

Table 1. Table of correlations of variables included in path model

Contribution of antecedents

To test whether each of the four classes of hypothesized antecedents contributed uniquely to job satisfaction, we conducted four sets of hierarchical regressions. For each class of antecedents (e.g. dispositions), the three

other antecedents classes (i.e. job events, job complexity, and job opportunities), were entered into the regression equation first (step 1), followed by the final antecedent class (step 2). By repeating this analysis for each antecedent class, we were able to establish whether or not each of the hypothesized antecedents explained unique (i.e. incremental) variance in job satisfaction.

The results of these analyses (Table 2) show that dispositions ($\Delta R^2 = .049$, $\Delta F = 37.53$, $p < .001$), job events ($\Delta R^2 = .143$, $\Delta F = 110.28$, $p < .001$), job complexity ($\Delta R^2 = .073$, $\Delta F = 111.91$, $p < .001$), and job opportunities ($\Delta R^2 = .014$, $\Delta F = 21.49$, $p < .001$) all make independent contributions to the prediction of general job satisfaction. Moreover, the four classes of antecedents together accounted for 42.6% of the variance in job satisfaction.

Incremental validity of:	Variables entered	β	R	R ²	ΔR^2	ΔF
<i>Dispositions</i>						
Step 1	Job stress	-.17				
	Discrimination	-.33				
Step 2	Job opportunities	.12				
	Job complexity	.28	.62	.38		134.39*
	Negative disposition	-.07				
	Positive disposition	.20	.65	.43	.05	37.53*
<i>Perceived events</i>						
Step 1	Negative disposition	-.17				
	Positive disposition	-.33				
Step 2	Job opportunities	.12				
	Job complexity	.28	.53	.28		87.45*
	Job stress	-.07				
	Discrimination	.20	.65	.43	.14	110.38*
<i>Job complexity</i>						
Step 1	Job stress	-.17				
	Discrimination	-.33				
Step 2	Negative disposition	.12				
	Positive disposition	.28				
	Job opportunities	-.07	.60	.35		96.87*
	Job complexity	.20	.65	.43	.07	111.91*
<i>Job opportunities</i>						
Step 1	Job stress	-.17				
	Discrimination	-.33				
Step 2	Negative disposition	.12				
	Positive disposition	.28				
	Job complexity	-.07	.64	.41		124.21*
	Job opportunities	.20	.65	.43	.01	21.49*

Note. * $p < .01$; β values are standardized regression coefficients from Step 2. All beta weights are significant at $p < .01$.

Table 2. Hierarchical regression to establish incremental validity of each of the three classes of job satisfaction antecedents using JDI average to indicate job satisfaction

We also tested for the effect of all possible two-way interactions among antecedent variables using hierarchical regression but found no significant interactions at $p < .01$. This finding suggests that none of the examined variables function as moderators of the relationship between job satisfaction and other antecedent variables, contrary to the predictions made by some models of job satisfaction.

Measurement model

The measurement model of the variables was tested first using three indicators for each variable with the exception of the job satisfaction latent variable for which the four JDI subscales were used as indicators, and for

the job complexity variable for which a single indicator variable was used. The fit of the measurement model was good ($\chi^2 = 1376.59$, $df = 314$, $RMSEA = .061$, $CFI = .93$, $GFI = .90$, $NNFI = .91$). In order to test the discriminant validity of the measures we loaded the indicators of the two most strongly correlated latent factors (job satisfaction and job withdrawal) onto a common factor. A chi-square difference test showed that the resultant measurement model was a significantly worse fit ($\Delta\chi^2 = 301.14$, $\Delta df = 8$, $p < .001$), allowing us to conclude that our model is characterized by adequate discriminant validity.

Common-method variance

All variables with the exception of job complexity were assessed using self-report measures. We therefore tested for the presence of a common-method factor by controlling our measurement model for the effect of a single latent method factor using the methodology outlined by Podsakoff, MacKenzie, Lee, and Podsakoff (2003). Using this approach a multifactor measurement model is compared to a multifactor measurement model with an additional orthogonal method factor. A chi-square difference test indicated the presence of a significant method factor ($\Delta\chi^2 = 618.21$, $\Delta df = 28$). Using the methodology used by Williams, Cote, and Buckley (1989) we estimated that this common-method factor only accounted for 15% of the total variance, which is lower than the median amount of variance (25%) in studies of self-reported affect and perceptions at work (Williams et al., 1989). We therefore conclude that the common-method factor is present but unlikely to have inflated the observed relationships among variables in a manner that would make consideration of the full structural model meaningless.

Model fit

Having established both the unique contribution of each of the antecedent groups to the prediction of job satisfaction, as well as the adequacy of the measurement model, we assessed the fit of the general model shown in Figure 1 using structural equations modeling. The fit of this model (Figure 2) was sound ($\chi^2 = 1750.70$, $df = 348$, $RMSEA = .066$, $CFI = .91$, $GFI = .88$, $NNFI = .89$, $IFI = .91$) and all paths between latent constructs were statistically significant ($p < .01$). The path estimates for the general model illustrate that job satisfaction was related to all four proposed classes of antecedents. The paths from discrimination to job satisfaction and from job stress to job satisfaction were $-.40$ and $-.18$, respectively, indicating that higher levels of perceived discrimination and stress were associated with lower levels of job satisfaction. The positive path of $.33$ from job complexity to job satisfaction indicates that employees in more complex jobs reported higher levels of job satisfaction. Similarly, the paths of $.23$ between positive emotionality and job satisfaction, and $-.17$ between negative emotionality and job satisfaction indicate that positive dispositions and negative dispositions both have moderate relationships with job satisfaction. Interestingly, the path from job opportunities to job satisfaction was positive ($.19$) rather than negative, as suggested by the Cornell Model. This may be a result of the fact that employees who perceive alternate job opportunities to exist are likely to be highly-skilled and therefore more likely to be occupying interesting, high paying jobs. For example, employees who classified themselves as professionals perceived themselves to have significantly higher levels of alternate job opportunities than vehicle operators ($t = 2.50$, $df = 127$, $p < .01$).

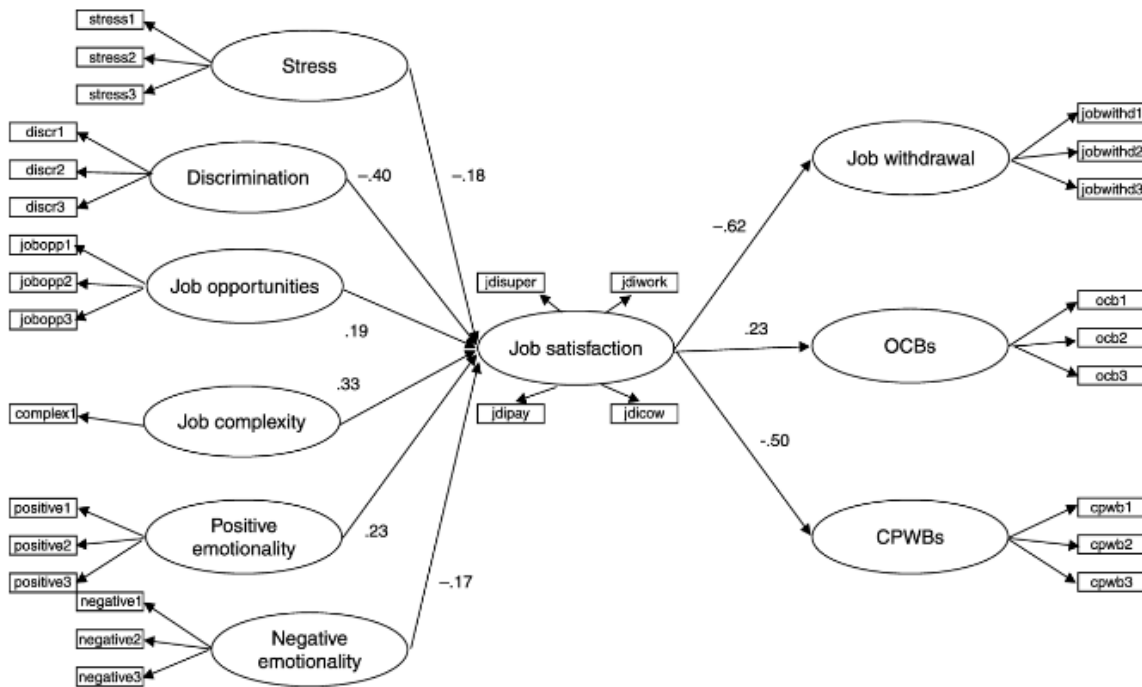


Figure 2. Path coefficients for fully-mediated model of antecedents and consequences of job satisfaction.

Strong standardized path coefficients were found for the links between job satisfaction and job withdrawal ($-.62$) and counterproductive behaviour ($-.50$). These findings suggest that low levels of job satisfaction are associated with a greater intention to quit and a higher frequency of counterproductive behaviour. A weaker link of $.23$ was found between job satisfaction and OCBs, indicating that higher levels of job satisfaction are associated with a slightly greater tendency to engage in OCBs.

Tests of mediation

Our model (Figure 1) places job satisfaction as a mediator of the relationship between the six antecedents and three consequences. In order to test the degree to which job satisfaction acts as a mediator of the relationship between all possible antecedent-consequences relationships, we added direct paths from each antecedent to each consequence and compared the fit of each model to the original model with no direct paths. Mediation requires that the direct antecedent-consequence relationship be significant and an examination of the correlation matrix (Table 1) shows significant relationships ($p < .01$) for all antecedent-consequence pairs except for the job opportunity-OCB relationship. Mediation tests were therefore conducted for all relationships other than the job opportunity-OCB link.

Table 3 presents the change in Chi-square for all mediation tests as well as the strength of the direct antecedent-consequence path when a direct path is included in the model. A joint consideration of the change in Chi-square statistics and the strength of the direct path suggest that job satisfaction acts as a nearly complete mediator of many of the antecedent-consequence relationships. Results also suggest that job satisfaction only acts as a partial mediator of a number of the relationships. Job complexity appears to retain significant direct effects on all three consequences, possibly because jobs with high levels of complexity (e.g. managers, professionals) offer a higher opportunity to engage in contextual behaviours and more alternate employment

opportunities¹. Perhaps most importantly, the results also suggest that OCBs are directly influenced by positive dispositions, and that CWBs are directly influenced by negative dispositions. Two other direct paths also appear to be viable although these results appear to be somewhat counterintuitive. Both stress and perceived discrimination appear to directly affect OCBs in a positive direction, although further exploratory analyses suggest that job satisfaction acts as a suppressor variable of the relationship between OCBs and both stress and perceived discrimination. These suppressor effects were not interpreted given the high likelihood of artifactual suppressor effects in structural models with latent variables (Maasen & Bakker, 2001). Including the two direct paths, from negative emotionality to CWBs and from positive emotionality to OCBs substantially improved the fit of the model (Figure 3, $\chi^2 = 1602.64$ $df = 346$, $RMSEA = .063$, $CFI = .92$, $GFI = .89$, $NNFI = .90$, $IFI = .92$).

Antecedent	Consequence	$\Delta\chi^2$	Direct path
Stress	Job withdrawal	7.49	.11
	OCB	115.77	.44
	CPWB	1.89	.06
Discrimination	Job withdrawal	9.17	.14
	OCB	124.12	.65
	CPWB	.01	.00
Job opportunities	Job withdrawal	.25	.02
	CPWB	.10	.01
Job complexity	Job withdrawal	12.72	.13
	OCB	59.88	.31
	CPWB	25.29	.20
Positive disposition	Job withdrawal	.44	.02
	OCB	99.30	.40
	CPWB	3.03	-.07
Negative disposition	Job withdrawal	.22	.02
	OCB	12.34	-.19
	CPWB	48.35	.27

Note. $df = 1$ for all mediation tests. Critical value = 6.63 ($P < .01$). Direct path refers to the standardized path coefficient of the direct path between the antecedent and consequence.

Table 3. Chi-square difference tests of the degree to which job satisfaction functions as a mediator of all possible antecedent-consequences relationships

¹ We did not anticipate this particular effect of job complexity and therefore do not include it in our model but do note that the inclusion of the three direct paths (complexity-CWB, complexity-OCB, complexity-job withdrawal) would significantly improve the fit of the model ($\chi^2 = 1494.38$, $df = 343$, $\Delta\chi^2 = 108.26$, $\Delta df = 3$, $RMSEA = .060$, $CFI = .92$, $GFI = .90$, $NNFI = .91$).

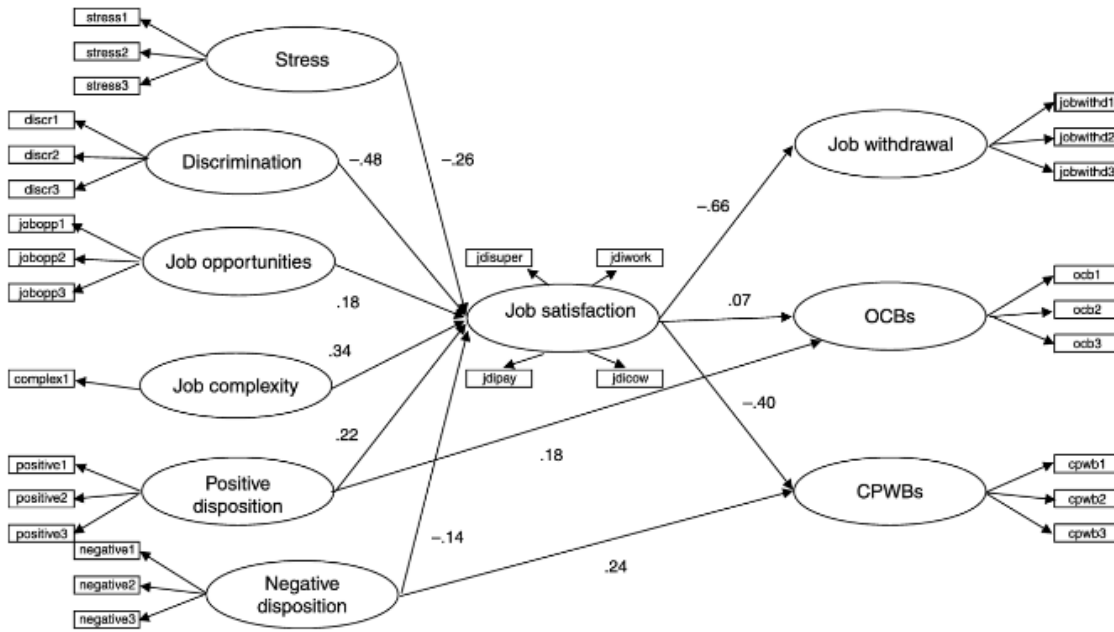


Figure 3. Path coefficients for model of antecedents and consequences of job satisfaction with direct paths between CWBs and negative emotionality and OCBs and positive emotionality.

Discussion

This paper makes four contributions to our understanding of the position of job satisfaction within the nomological network. First, we have shown that the influence of employees' perceptions of their job situation and of employees' dispositions on volitional workplace behaviours are largely mediated through job satisfaction. This is an important confirmation of job satisfaction's implicit position within the nomological network. Second, our findings represent an extension of social exchange frameworks in that we have shown that employees' behaviours and attitudes are not only influenced by objective job characteristics but also by factors that reflect employees' dispositions and perceptions of the job situation (i.e. the psychological environment in which the objective job is located). Third, meta-analytic evidence (e.g. Iaffaldano & Muchinsky, 1985) has suggested that job satisfaction bears little influence on job performance; especially when considering the primacy of other influences such as motivation, and procedural and declarative knowledge. This paper presents evidence that job satisfaction can successfully be repositioned as an antecedent of more specific facets of job performance, in particular negative workplace behaviours that employees engage in at their discretion. Interestingly, two important modifications to our initial model suggest that OCBs are driven by pro-social dispositions rather than job satisfaction and that CWBs are driven by a combination of anti-social dispositions and negative job attitudes.

Fourth, our findings contribute to the theory of job attitudes by illustrating the relative importance of dispositions, in combination with job attitudes, in predicting volitional behaviours. As our paper demonstrates OCBs appear to be primarily driven by a pro-social disposition and not by job attitudes. While the finding that OCBs are related to dispositional variables is not new (e.g. Penner et al., 1995; Spector & Fox, 2002), our results suggest that the link between job attitudes and OCBs is near zero when including the direct influence of disposition. Our findings also replicate findings that negative dispositions are related to CWBs (e.g. Fox & Spector, 1999; Fox, Spector, & Miles, 2001), but also show that job attitudes remain an important determinant

of CWBs even after accounting for the non-trivial direct effect of dispositions. These two findings suggest to us that the role of job attitudes in relation to workplace behaviour may require some reconceptualization. In particular, it appears that OCBs, unlike undesirable work behaviours such as CWBs and job withdrawal, are not strongly driven by job attitudes.

The results of our paper also have at least one important practical implication. Attempts to improve the job attitudes of employees based on any one of the four approaches to job satisfaction are likely to exhibit only limited effectiveness given that job satisfaction is determined by internal factors as well as multiple levels of external variables. It is evident from our results that the conceptual antecedents of job satisfaction do not act in a fully compensatory manner but rather explain unique variance in job satisfaction. For example, a positive disposition cannot fully compensate for work that is boring or dull; and interesting work cannot fully compensate for a workplace that is stressful or characterized by discrimination. Interventions aimed at improving job satisfaction thus need to simultaneously address as many of these diverse variables as possible in order to ensure effectiveness (e.g. job enrichment and reduction in workplace discrimination).

Limitations and suggestions for future research

The three primary limitations of this paper are ones common to survey-type research. Firstly, a common-method factor was shown to be present although this effect was smaller for this study than for other studies of workplace affect and perceptions (e.g. Williams et al., 1989). Secondly, the use of a cross-sectional design makes it impossible to assess the causal nature of the relationships shown in our model or the possible presence of recursive effects. Third, the specific characteristics of the organization in which the research was conducted prevented the collection of supervisor ratings of performance. While supervisor ratings would have reduced concerns regarding common-method variance it should be considered that supervisors are often not privy to many of the behaviours that are characteristics of OCBs, CWBs, or turnover intentions, and that supervisor ratings are therefore likely to be more reflective of task performance. Also, recent meta-analytic research in the academic performance domain (Kuncel, Credé, & Thomas, 2005) has shown that self-ratings of performance are largely accurate reflections of actual performance.

Although the fit of the fully-mediated model and the revised model with direct links between dispositions and their corresponding contextual behaviours was good, further work on the general framework is required. Specifically, it would be of value to examine further variables within the objective, event, and dispositional classes of antecedents; broaden the domain of consequences to include more objective data; to examine possible recursive effects between job satisfaction and both antecedents and consequences, and to replicate our effects in other settings and cultures. Furthermore it would be interesting to investigate how the observed relationships differ across job types, or the degree to which specific job satisfaction facets function as mediators in this particular model. Finally, while this paper focused largely on the influence of perceptions of the job situation, we believe that it would also be useful to examine whether job satisfaction mediates the relationship between more objective indicators of the job situation and workplace behaviours.

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Appendix:

Items used to assess OCBs, CWBs, Perceived Job Opportunities, and Work Discrimination

Counterproductive workplace behaviours	Organizational citizenship behaviours
Please use the following scale to indicate how frequently you have engaged in each of the behaviours	Please use the following scale to indicate how frequently you have engaged in each of the behaviours
<ol style="list-style-type: none"> 1. Talked badly about supervisor or coworkers 2. Made an excuse to miss a meeting 3. Did not provide someone at work with required information 4. Pretended to be busy 5. Spent time in idle conversation with coworkers 6. Purposely damaged equipment or work process 7. Ignored a supervisor's instructions 8. Did not work to the best of ability 9. Attempted to pass on own work to others 10. Used office supplies without permission 11. Refused to talk to a coworker for a period of time 12. Took an extended coffee or lunch break 13. Wasted time 14. Spent time on personal tasks 15. Worked slower than necessary 16. Took an extra break 17. Spook poorly about the organization to others 18. Got into an argument at work 19. Made excuses to go somewhere to avoid the work task 	<ol style="list-style-type: none"> 1. Helped coworkers or supervisor 2. Suggested improvements in functioning of organizational unity 3. Assisted people with heavy work loads 4. Shared personal resources with others 5. Volunteered to orient or train others 6. Covered for people who are absent 7. Attempted to improve morale in organizational unit 8. Helped others by pointing out errors or omissions 9. Volunteered to do something that wasn't part of the job 10. Complied with orders and regulations 11. Attempted to meet deadlines 12. Displayed loyalty to the organization 13. Attempted to be punctual 14. Complied with organizational values and policies 15. Did things a 'good' employee would do 16. Displayed respect for authority 17. Followed informal rules designed to maintain order
Job opportunity scale	Work discrimination scale
How would you describe the job opportunities that you have?	During the time that you worked for the organization were you ever in a situation in which . . .
<ol style="list-style-type: none"> 1. There are a lot of job opportunities in this area. 2. It would be very easy to get a different job if I wanted to 3. If I lost my job, I would probably be out of work for a while 4. It seems like everyone who wants a job around here can get one 5. There are several jobs for people with my job skills and experiences 6. I worry that I might be unemployed for a while if I quit my job 7. There are many job opportunities for me at the University 8. It would be easy to transfer to another department at the University 	<ol style="list-style-type: none"> 1. You were denied important opportunities 2. You were denied a promotion that made appropriate use of your skills 3. You were denied important training 4. You were given stricter performance goals than other employees 5. You were excluded from networking opportunities 6. Restrictions were placed on your working conditions that were not placed on other employees 7. Your performance was unjustly criticized 8. Someone made offensive remarks 9. Someone made threatening comments 10. Someone physically threatened or intimidated you