

*Although reduced-hours work is widely thought to decrease distress, empirical literature relating absolute number of hours worked to distress outcomes is inconsistent. Perhaps the trade-off between giving up some aspects of work for more nonwork time is more stressful for some employees than for others. The authors tested the hypothesis that difficulty of trade-offs is a more powerful predictor of quality-of-life indicators (i.e., symptoms of anxiety and depression, job-role quality, and intention to turnover within 1 year) than is number of hours worked per se in a non-random sample of 141 reduced-hours physicians in dual-earner couples. Results supported the hypothesis.*

## Reduced-Hours Employment

### The Relationship Between Difficulty of Trade-Offs and Quality of Life

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**A**t a time marked by an increase in the number of dual-earner couples (Bond, Galinsky, & Swanberg, 1998) and in the average workweek of highly educated employees (Jacobs & Gerson, 1997), pressure has been building in the United States (Schor, 1991), the United Kingdom (Cooper, 1998), and in Europe (Buessing, 1997) for work schedules that are more amenable to the integration of work and family demands, especially among managers and professionals (Barnett & Lundgren, 1998; Carr et al., 1998;

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Epstein, Seron, Oglensky, & Saute, 1998; European Commission, 1994; Levy, Flynn, & Kellogg, 1998). Whereas several such schedules entail rearranging the standard 35-hour workweek (e.g., flextime, compressed workweek, night shifts, and weekend work), others entail a reduction in the average number of hours worked per week (i.e., part-time). Although the creation of reduced-hours work options is often motivated by the needs of employers to limit their financial obligations to employees, it is also thought that the increased flexibility associated with these options will reduce overall levels of stress on employees, with consequent beneficial health outcomes (Buessing, 1996, 1997; Klein, Hyde, Essex, & Clark, 1998; Wethington & Kessler, 1989). Yet, the empirical literature on the relationship between the absolute number of hours worked and distress outcomes is inconsistent (Barnett, 1998).

One possible explanation for this inconsistency is the failure to adequately model the indirect effects of number of hours worked via mediational processes such as fit (Barnett, Gareis, & Brennan, 1999). Another possible explanation is the failure to incorporate psychological aspects of reduced-hours work. One such aspect is difficulty of trade-offs. Especially among professional and managerial workers, the decision to decrease hours at work typically means relinquishing certain aspects of their work. Unlike many nonprofessionals who may simply do less of the same work when they cut down on their hours, doctors, for example, often have to eliminate such activities as teaching and research to reduce their hours. In essence, doctors trade-off certain professional functions for more nonwork time. For some professionals, these trade-offs may be easy to make; for others, they may be more difficult.

In this article, we estimated the relationship between difficulty of trade-offs and three quality-of-life (QOL) outcomes in a nonrandom sample of 141 married reduced-hours physicians in dual-earner couples.

## LITERATURE REVIEW

Recent data reveal (a) an increase over time in the length of the average workweek among professional employees (Jacobs & Gerson, 1997), (b) a strong preference among professional workers to substantially reduce their current work hours (Bond et al., 1998; Jacobs & Gerson, 1997), and (c) the perception that the absence of reduced-hours career options is a major obstacle to professional advancement (Carr et al., 1998). Interestingly, these sentiments were expressed by male and female employees alike and were not dependent on the presence of young children in the home.

Despite widespread belief that reduced-hours employment will have a salutary effect on QOL indicators, there is little empirical support for the hypothesis that a reduced-hours schedule is related positively to such indicators (Herold & Waldron, 1985; Hyde, Klein, Essex, & Clark, 1995; Klein et al., 1998; Ozer, Barnett, Brennan, & Sperling, 1998; Wethington & Kessler, 1989). Indeed, most comparative studies report that full-time workers experience better health than their reduced-hours counterparts (see Barnett, 1998, for a review). For example, in a longitudinal analysis, White married women in the United States who decreased their labor force participation from full-time to low part-time or homemaker reported a significant increase in distress symptoms over a 3-year period (Wethington & Kessler, 1989). Conversely, those women who increased their labor force participation from homemaker or low part-time worker to full-time worker reported a significant decrease in emotional distress. And, in a national probability sample of middle-aged women in the United States, Herold and Waldron (1985) reported a tendency for full-time workers to have the best physical health, part-time workers to have an intermediate level of health, and women who were not in the labor force to have the poorest health. Similar findings were reported by Verbrugge (1989). After controlling for a wide variety of variables in addition to social-role occupancy, she found that low levels of employment were associated with poorer physical health.

Even if one did not predict positive outcomes of part-time work for workers in general, one would imagine that the benefits of part-time work would be felt most strongly in those populations under the most acute work/family stress. Two such populations in the United States have been studied: (a) women who have returned to work within a year of having given birth (Klein et al., 1998) and (b) employed married mothers of preschoolers or mothers of three or more children (Herold & Waldron, 1985). In a sample of women interviewed 1 year postpartum, number of hours employed was not significantly related to any of the study's four mental health indicators (i.e., depression, anxiety, anger, and self-esteem). The scores of the homemaker, part-time, and full-time mothers were indistinguishable on these measures. And, in concluding their study of physical health, Herold and Waldron (1985) noted,

No advantage for part-time workers relative to full-time workers was observed even for married mothers of preschoolers or mothers of three or more children, for whom one could expect full-time employment to create the greatest role conflicts and time pressures. These results parallel previous findings that part-time workers may have better psychological health than women who are out of the labor force, but differences between part-time workers and full-time workers are inconsistent, even for mothers of young children. (p. 411)

These findings seem counterintuitive in light of the strong underlying assumption that long hours are related to increased distress and that therefore shorter hours should be associated with less distress. However, just as short hours are not necessarily or universally associated with better outcomes, neither are long hours necessarily or universally associated with negative ones (Barnett & Shen, 1997; Ozer et al., 1998). Indeed, several problems with this literature have been identified and need to be addressed before we have a clear idea of the relationship between number of hours worked per se and health quality-of-life indicators.

#### **METHODOLOGICAL AND CONCEPTUAL PROBLEMS IN THE LITERATURE**

The failure to find the expected relationships between work hours and quality-of-life indicators may be due to several methodological and conceptual problems, some of which apply particularly to between-group studies comparing full- and part-time employees and others to within-group studies of part-time workers (see Barnett, 1998, for a review). First, definitions of *full-time* and *part-time* vary from study to study; in some studies, full-time is defined as 35 or more hours per week, following the Bureau of Labor Statistics' (1995) definition; in other studies, the cutoff is 30 or 32 hours per week. This problem is particularly acute in studies of the professions in which the standard workweek may exceed 50 hours and reduced hours may actually exceed the typical 35-hour workweek. Moreover, most studies are cross-sectional and do not inquire about the duration of the reduced or full-time schedule. It is therefore possible that employees who are working reduced hours are doing so as a temporary adaptation to a life crisis rather than as a stable career choice. In the present study, we define *reduced hours* as working no more than the median number of hours worked per week by other physicians of one's own gender, or 50 hours per week for men and 40 hours per week for women (Yoon, 1997), and as working the reduced schedule for at least the preceding 3 months. In addition, the physicians had to consider themselves to be working reduced hours.

Second, most full-time jobs are "good" jobs, whereas most part-time jobs are "bad" jobs (Tilly, 1992). Compared to full-time jobs, conventional or old-concept part-time jobs are those that require few skills, are poorly paid, offer few (if any) fringe benefits, provide few opportunities for advancement, provide less job security, and are more likely to be routine boring jobs that require little training and demand little creativity. New-concept good part-time jobs, in contrast, are viewed as permanent, they have career potential, their earnings package includes fringe benefits, and their rate of pay is

prorated relative to that of comparable full-time jobs. These part-time jobs began to appear in the late 1960s and are typical of reduced-hours options in the professions. Examples are job sharing, work sharing, and phased retirement. These forms of part-time work resemble full-time jobs more than they do conventional part-time jobs. The physicians in this study all had good part-time jobs.

Third, some part-time workers are involuntarily employed less than full-time, whereas other workers choose to work part-time. According to Negrey (1993), about three fourths of part-time workers in the United States were employed part-time by choice. The remaining one fourth were employed part-time because their hours had been reduced due to slack work or because they were unable to find full-time employment. All physicians in the present study had voluntarily reduced their hours.

Fourth, there is the issue of selection. Women and men who select part-time work may differ from women and men who select full-time work in ways that relate systematically to their ability to manage stress. For example, compared to full-time workers, part-time workers are, on average, younger or older, less educated, female, married, and if married, married to a full-time employed partner. In the present study, we limited the sample to married physicians 30 to 65 years of age and controlled for gender.

Finally, the focus on number of hours per se ignores several psychological factors. For example, not all part-time workers are employed at their preferred number of hours. In a 1991 study of Canadian employees, Kahn and Lang (1992) found that 48% reported that they were working too few hours, 16% were working too many hours, and 36% were working optimal hours. In the present study, we inquired into the discrepancy between the physician's actual and preferred work hours and used it as a control in our analyses.

#### **TRADE-OFFS**

In addition to the limitations discussed earlier, which we address in the present analysis, there is another conceptual problem that has not been noted previously. In most cases, physicians (and other professionals) who decide to reduce their work hours have to give up certain professional activities.<sup>1</sup> Thus, few part-time doctors spend much time in such pursuits as research and teaching. Reduced-hours physicians apparently trade away these activities for more nonwork time. In a preliminary qualitative study of 24 reduced-hours physicians conducted on this sample (Lundgren & Barnett, 1997), the overwhelming majority reported having to give up some professional responsibilities when they decreased their work hours. In contrast, many nonprofessional employees who reduce their hours merely do fewer of the same tasks.

For example, a sales clerk who cuts down on work hours would simply spend fewer hours behind the sales counter.

The idea that we commonly make trade-offs—that is, that we often have to choose to do one thing rather than another—is not new. For example, the realization that long work hours require that one trade-off time at home for time at work has been conceptualized as one component of work-family conflict (Frone, Russell, & Cooper, 1992, 1997; Gutek, Searle, & Klepa, 1991; Hughes, Galinsky, & Morris, 1992; Netemeyer, Boles, & McMurrian, 1996). More generally, the notion that the demands of one role may preclude the adequate performance of a second role has been discussed in terms of interrole conflict. Indeed, several studies on nonstandard work schedules in the United States and in Europe (Buessing, 1996, 1997; European Commission, 1994) have focused on interrole conflict, namely on the nonwork (i.e., family and leisure) implications of various work schedules. For example, Buessing (1997) in a study of 482 German nurses found that family- and leisure-related arguments dominated the pros and cons nurses gave regarding five major nonstandard working time schedules including part-time. Moreover, these findings were largely comparable to those from a representative German sample of 2,577 employed persons. Furthermore, these various forms of work-family conflict have been associated with such QOL outcomes as depression, psychological distress, life satisfaction, and marital-role quality (Adams, King, & King, 1996; Frone et al., 1997; Greenhaus & Parasuraman, 1994; Netemeyer et al., 1996).

In contrast, almost no research in the United States or Europe has explored a second type of conflict that can coexist with interrole conflict: namely, intrarole conflict. We conceptualize trade-offs as a type of intrarole conflict in which the incumbent has to relinquish some aspects of the work role because they cannot all be performed in the reduced time now allocated to work. However, the concept of trade-offs is not adequately captured by a focus on conflict. Some physicians who give up particular professional activities may experience difficulty, whereas others may not. In the present analysis, we conceptualize difficulty of trade-offs as a continuum ranging from *not at all* to *very distressing* and estimate the relationship between this variable and three QOL indicators. This conceptualization may help clarify several previous findings indicating that long work hours are related to better mental health in certain samples (Barnett & Shen, 1997; Ozer et al., 1998).

The concept of trade-offs may also have relevance for full-time employees, in particular specialists who advance to administrative or managerial positions. Such specialist-to-generalist transitions entail similar trade-offs of certain work responsibilities for others, and successful transitions may be predicted by difficulty of trade-offs. There is some literature on this aspect of

career transitions among full-time employees (Dalton, 1989; Hill, 1992; Schein, 1978); however, most of it is descriptive in nature.

Among full-time employed physicians, the new realities of practicing medicine in the era of health maintenance organizations (HMOs) are creating changes that are reshaping the profession and forcing doctors to make trade-offs previously unimagined. As described by Hoff and McCaffrey (1996), doctors who maintain a solo or group practice now have to “become more conscientious business owners” (p. 177) who have to accept an administrator-manager role and develop management-oriented beliefs to stay in business. On the other hand, physicians who work for HMOs trade-off a guaranteed income for less control and independence. This loss of control results in large part from the increased role now played by third parties.

Many doctors who try to maintain the ideal of the solo practitioner experience the loss of an “important part of their professional freedom” (Hoff & McCaffrey, 1996, p. 176) as well as “extreme anger and resentment at the organizational and financial changes occurring within the health care market” (p. 175). Although they chose to maintain their independence and avoid one type of trade-off, they experienced another type of trade-off: They had to take on new financial and administrative responsibilities that were associated with distress. In contrast, doctors employed by HMOs experienced some distress over the rules of the game they were now expected to follow. For example, they could only prescribe medications on the HMO’s approved list. Some doctors experienced this constraint as a trade-off between their particular practice styles and those mandated by their employers.

More generally, professional career development often entails a series of transitions marked by taking on new responsibilities and giving up others. If the new responsibilities are compatible with one’s career anchors—that is, with one’s self-perceived talents and abilities, motives and needs, and attitudes and values (Schein, 1978)—then progress will be far smoother than if they are not.

The individual-level reactions of professionals to changing work conditions that were reported by Hoff and McCaffrey (1996) and that are extended in the present study help flesh out our understanding of the personal ramifications of changes that are occurring as professions undergo transformations.

#### POTENTIAL MODERATORS

Although there is no previous literature to draw on, it is reasonable to believe that in this sample, the relationship between difficulty of trade-offs and QOL indicators may vary by age, gender, and medical specialization. Conceivably, older physicians who have taught and done research for several

years might be less disturbed about giving up those activities than their younger counterparts. Also, certain widely held gender theories, although challenged in the empirical literature, suggest that the relationship between trade-offs and QOL indicators may be stronger among men than among women. Specifically, difficulty of trade-offs might be more strongly related to QOL indicators for men than for women because the work role and work experiences are thought to be more central to men's core identity than to women's (Barnett, Carr, et al., 1998). Finally, certain medical specialties may more easily accommodate reduced-hours schedules than others (Barnett & Lundgren, 1998), thereby either attenuating or amplifying the relationship between trade-offs and QOL indicators.

#### **NEGATIVE AFFECTIVITY**

Serious questions have been raised about the common practice of relying on self-report measures to assess the relationship between subjective role experiences on one hand and QOL indicators on the other (Burke, Brief, & George, 1993). Such self-report measures may reflect a common underlying dimension of negative affectivity (NA), thereby leading to spurious relationships, particularly in cross-sectional analyses. Following recent caveats in the literature (Brennan & Barnett, 1998), we include trait anxiety (Spielberger, 1983), a recognized measure of negative affectivity, as a control variable.

In sum, in a sample of married physicians who are working reduced hours and whose spouses are employed, we test the hypothesis that difficulty of trade-offs will be significantly associated with three stress-related QOL outcomes. Specifically, we test this hypothesis by estimating the relationship between difficulty of trade-offs on one hand and intention to leave one's current job in 1 year, current job-role quality, and self-reported symptoms of anxiety and depression (together comprising an index of psychological distress) on the other. We also estimate the two-way interaction effects of gender, age, and medical specialization on these relationships.

## **METHOD**

#### **SAMPLE**

One hundred and forty-one Boston-area physicians who were employed on a reduced-hours schedule (116 women and 25 men) and their employed spouses were interviewed as part of a larger study of the anticipated and



unanticipated consequences of reduced-hours work on physicians, their spouses, and their employing organizations (Barnett et al., 1999; Hartwell, Barnett, Borgatti, & Lundgren, 1999; Lundgren, Gareis, Fleisher-Cooperman, & Fitzgerald, 1998).

Reduced hours was defined as (a) working no more than the median number of hours worked per week by other physicians of one's own gender, or 50 hours per week for men and 40 hours per week for women (Yoon, 1997), for at least the preceding 3 months; and (b) considering oneself to be working reduced hours. Although both physicians and spouses were interviewed, only the data from the 141 physicians were used in the present analyses.

We used several strategies to develop the sample including random sampling of area part-time physicians from the registry of the Massachusetts Board of Certification in Medicine, requesting nominations from project participants, and contacting every area HMO, hospital, and practice partnership and inviting their participation either by nominating eligible staff physicians or by publicizing the study and asking interested physicians to contact us. Because the registry data did not include total work hours, we used patient care hours as a proxy selection variable.

The conservatively calculated response rate was 35.5% among the randomly sampled physicians and 43.0% among the nominated physicians; these response rates compare favorably with those reported in previous studies of physicians (Parsons, Warnecke, Czaja, Barnsley, & Kaluzny, 1994; Sobal et al., 1990).<sup>2</sup>

## PROCEDURES

Each physician was interviewed separately by a trained interviewer. The interviews took approximately 1 hour and were conducted at a time and place convenient to the participant. Prior to the interview, each participant received a mailed survey that took about 20 minutes to complete and was collected at the time of the interview. The interviews covered the quality of the participants' major social roles—partner, employee, and where appropriate, parent—along with QOL indicators. The measures of interest were administered during the face-to-face data collection.

## MEASURES

*Trade-offs.* As an initial effort to operationalize difficulty of trade-offs, we asked the physicians to indicate on a 5-point scale from 1 (*none*) to 5 (*a great deal*) the degree of distress experienced due to the discrepancy between the

professional activities they would like to perform and their current work arrangement. This item was preceded by one asking participants to estimate the percentage of time they were currently spending in each of five professional activities (i.e., patient care, research, teaching, administration, and other) and a second item asking them to indicate the degree to which they were satisfied with the percentage of time they were currently spending on each professional activity.

*Anxiety and depression (i.e., psychological distress).* Respondents indicated on a 5-point scale from 0 (*not at all*) to 4 (*extremely*) how often in the past week they were bothered by each of 10 symptoms of anxiety and 14 symptoms of depression (Derogatis, 1975). Anxiety items include “feeling fearful” and “trembling”; depression items include “feeling blue” and “poor appetite.” Anxiety and depression scores were combined to create a measure of psychological distress (Barnett, Marshall, Raudenbush, & Brennan, 1993). The combined score has excellent internal consistency, with Cronbach’s alphas of .90 in a previous study (Barnett, Marshall, & Singer, 1992) and .91 in the present sample. These figures are similar to those reported by Derogatis (1983).

Turnover was operationalized as a single item asking participants to indicate the likelihood that they will voluntarily terminate employment with their organization within the next 12 months using a 7-point scale from 1 (*extremely unlikely*) to 7 (*extremely likely*).

Job-role quality was assessed by a 28-item measure on which respondents were instructed to think about their job as it is right now and to indicate on a 4-point scale from 1 (*not at all*) to 4 (*extremely*) to what extent each of the items was currently rewarding or of concern (Barnett & Brennan, 1995, 1997). The items covered job conditions in areas such as skill discretion, decision authority, schedule control, job demands, pay adequacy, job security, and relations with supervisor. Concern items were negatively weighted and reward items positively weighted in constructing the role-quality score, which was the weighted average of the item scores (Barnett et al., 1993). Internal consistency is good, with Cronbach’s alphas of .79 for rewards and .83 for concerns in the present sample.

Work hours was assessed by asking respondents to estimate the number of hours worked in an average workweek.

Age is self-explanatory.

Gender was coded as a dummy variable (1 = female, 0 = male).

Medical specialization was operationalized as a dummy variable (1 = medical specialty, 0 = else).

Household income per capita was calculated by dividing household income by the number of children in the home plus two. Household income here is the sum of the two partners' salaries plus their unearned income. Because the distribution of this variable is highly skewed, we used the natural log of per capita income.

Number of children younger than 18 years of age living at home is self-explanatory.

Negative affectivity was assessed by the Trait Anxiety Scale (Spielberger, 1983), a 10-item frequency of feelings scale. Test-retest correlations ranged from .73 to .86 in college populations over a 2-year period (Spielberger, 1983) and was .77 over a 1-year period in a sample of full-time employed dual-earner couples (Barnett, Brennan, Raudenbush, Pleck, & Marshall, 1995).

Preferred work hours was assessed by asking respondents to rate their current hours compared to those they would ideally like to work as (1) "too few," (2) "roughly the right number," and (3) "too many." For purposes of these analyses, responses were dichotomized into a dummy variable (1 = ideal, 0 = not ideal).

## RESULTS

### DESCRIPTIVE RESULTS

The majority of the sample was White (90.0%), followed by Hispanic (4.3%), Asian (2.9%), and African American (0.7%); 2.1% described themselves as other. On average, the physicians were 42.1 years of age (men: mean = 44.5, *SD* = 9.8; women: mean = 41.6, *SD* = 5.6), had been working their current reduced-hours schedules for about 4 years (mean = 47.4 months, *SD* = 47.3), and were parents (95.7%) with 2.1 children (*SD* = 0.9). On average, the male physicians worked 33.5 hours per week (*SD* = 10.4, range = 10-45) compared to 29.4 hours (*SD* = 8.7, range = 1-50) for the female physicians.<sup>3</sup> Although these physicians voluntarily reduced their hours, only 53.9% reported working their preferred number of hours, 37.6% reported working more, and 8.5% reporting working fewer.

The sample was largely female (82.3% vs. 17.7%), reflecting the relative percentages of male and female doctors in the population. The major reason given by the women who declined to participate in the study was that their husbands, typically full-time employed doctors or other professionals, were unwilling. Thus, the sample may be biased toward women doctors whose husbands are not full-time employed doctors or other professionals or,

alternatively, are more willing than their counterparts to devote the time necessary to complete the study's requirements. We have no way of ascertaining how this bias might have affected the results.

Overall, the physicians reported moderate difficulty of trade-offs, with an average rating of 2.7 ( $SD = 0.9$ ) on a scale from 1 to 5 (men: mean = 2.4,  $SD = 1.0$ ; women: mean = 2.8,  $SD = 0.9$ ).

The intercorrelations among the study variables are shown in Table 1. As can be seen, the three outcome variables were moderately correlated and in the predicted direction (from  $r = -.39$  to  $r = .17$ ), and difficulty of trade-offs was moderately correlated in the expected direction with each of the QOL indicators (from  $r = -.54$  to  $r = .25$ ), providing some assessment of the construct validity of this single-item measure.

#### HYPOTHESIS TESTING

We estimated a series of main effects simultaneous regression models with difficulty of trade-offs as the predictor; number of hours worked, preferred work hours, age, gender, per capita household income, number of children living at home, and medical specialization as controls; and one of the three QOL indicators (i.e., psychological distress, turnover, and job-role quality) as the outcome. In addition, we tested whether these relationships were moderated by age, gender, and medical specialization. To that end, for each regression model, we entered three interaction terms of the form Difficulty of Trade-Offs  $\times$  Moderator.

Each main effects regression model was significant, and in each model, difficulty of trade-offs was a significant predictor (see Table 2). Specifically, as hypothesized, difficulty of trade-offs was positively associated with psychological distress and negatively associated with both job-role quality and intention to turnover. Moreover, after taking into account difficulty of trade-offs (and the control variables), number of hours worked per week on average was not significantly related to any of the three QOL outcomes. Furthermore, examination of the standardized regression coefficients indicates that in each model, difficulty of trade-offs accounted for approximately three to eight times the percentage of variance accounted for by work hours. Finally, the inclusion of the set of interaction terms did not result in a significant increment to  $R^2$  over and above that associated with the main effects models. Thus, the relationships between difficulty of trade-offs and distress, turnover, and job-role quality did not differ by age, gender,<sup>4</sup> or medical specialization.

To control for the possible confounding effect of negative affectivity, we repeated the analyses including NA as an additional control variable. The results (not shown) were virtually unchanged. Thus, the relationships

TABLE 1: Intercorrelations Among Measures

	HOURS	PREF	AGE	SEX	INC	KIDS	MEDSP	DISTR	JOB	TURN
TRADE	.13	.07	-.17*	.15	-.11	-.06	.03	.38***	-.54***	.25**
HOURS		.33***	-.26**	-.17*	-.06	.06	-.13	.01	-.24**	.00
PREF			-.22**	.16	-.03	.20*	-.22**	.06	-.17*	-.01
AGE				-.17*	.27**	-.21*	.05	-.11*	.14	-.05
SEX					.01	.16	-.03	.14	-.01	-.17*
INC						-.46***	-.04	-.06	.05	-.10
KIDS							-.04	-.03	.00	-.09
MEDSP								.10	-.04	.04
DISTR									-.26**	.17*
JOB										-.39***

NOTE:  $N=141$ . Intercorrelations among TRADE (difficulty of trade-offs), HOURS (work hours), PREF (preferred work hours), AGE, SEX (0 = male, 1 = female), INC (per capita household income), KIDS (number of children at home), MEDSP (medical specialty; 0 = other, 1 = medical), DISTR (psychological distress), JOB (job role-quality), and TURN (intention to turnover).  
 \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**TABLE 2: Relationships Between Difficulty of Trade-Offs and Three Quality-of-Life (QOL) Indices**

Variable	Psychological Distress			Job-Role Quality			Intention to Turnover		
	B	$\beta$	SE	B	$\beta$	SE	B	$\beta$	SE
Difficulty of trade-offs	4.04***	.35	1.02	-0.42***	-.57	0.06	0.62**	.30	0.19
Work hours	-0.09	-.07	0.11	-0.01	-.07	0.01	-0.02	-.11	0.02
Preferred hours	-2.16	-.10	1.82	0.10	.08	0.10	-0.06	-.02	0.33
Age	-0.05	-.03	0.15	-0.00	-.00	0.01	0.00	.01	0.03
Gender	0.35	.01	2.55	0.18	.10	0.15	-1.30**	-.26	0.47
Household income	-1.35	-.03	4.76	-0.15	-.05	0.27	-1.31	-.15	0.87
Children at home	-0.71	-.06	1.16	-0.01	-.01	0.07	-0.11	-.05	0.21
Medical specialty	2.24	.11	1.77	-0.08	-.06	0.10	-0.01	-.00	0.33
Model $R^2$									.16
Adjusted $R^2$									.10

NOTE: N = 141. Gender is coded as 0 = male, 1 = female.  
 \*\*  $p < .01$ . \*\*\*  $p < .001$ .

between difficulty of trade-offs and three QOL indicators were not affected by the tendency toward experiencing the world negatively.

## DISCUSSION

The main finding of this study of a nonrandom sample of 141 Boston-area physicians who were married to employed spouses and who were employed on a reduced-hours schedule is that difficulty of trade-offs is a much stronger predictor of three QOL indicators (i.e., current job-role quality, intention to turnover, and psychological distress) than is number of hours worked. Thus, the subjective meaning of reducing work hours has to be taken into account in assessing the QOL correlates of reduced-hours career options in the professions. Moreover, the relationship between difficulty of trade-offs and QOL indicators did not differ by age, gender, or medical specialization. It is also possible that the limited range of actual work hours affected our ability to detect a significant relationship between work hours and QOL indicators. However, previous research with full-time employed men and women also failed to find such a relationship (see Barnett, 1998, for a review). Finally, given the specialized nature of the sample, caution should be exercised in generalizing the findings.

## CONCLUSIONS

These findings extend previous research comparing the predictive validity of subjective and objective indicators of job experiences. The general consensus in this literature is that subjective indicators are stronger predictors of distress outcomes than are objective indicators. For example, several U.S. studies indicate that subjective job-role quality is a better predictor of psychological distress than is number of hours worked or occupational prestige (Barnett, 1998; Hyde et al., 1995; Klein et al., 1998). In contrast to earlier studies that focused on overall job-role quality or on subjective experiences with respect to specific job conditions (Barnett & Brennan, 1995, 1997), the focus on trade-offs draws attention to the experience of intrarole conflict. In an effort to gain flexibility and increased time for nonwork commitments, many professionals may not fully appreciate how disquieting it is to relinquish certain aspects of their professional lives. According to Schein (1978), the subjective importance of particular aspects of work may not be visible "until one faces choices" (p. 129). Alternatively, however, it may be that

physicians who are less interested in such activities as research and teaching are especially drawn to part-time work.

Results from this initial study suggest that the concept of difficulty of trade-offs has predictive validity and warrants further study. One line of future research would be to further develop the measure. A revised measure ought to reflect the fact that for some professionals, reducing work hours may be beneficial in that it allows them to relinquish aspects of their work that they experience as onerous (S. MacDermid, personal communication, September 24, 1998). One would also like to assess how satisfying or distressing were the actual activities that were given up. It is also likely that reduced-hours workers vary in the extent to which they were actually required to relinquish professional activities. Items assessing these various aspects of trade-offs should be included in any future development of this measure. Thus, to further advance the trade-offs construct, additional elaboration of the measure needs to be done.

Future research is also needed to determine whether other subjective indicators might also be important to study. For example, many researchers have suggested that there are special rewards and concerns associated with part-time compared to full-time work. Major among the rewards often mentioned are: having more time for yourself, your children, and your partner; feeling less exhausted at work; and being better able to integrate the demands of work and those of family. Often-mentioned concerns include: lower pay, less job security, and lower probability of being promoted. A measure of the degree to which such aspects of part-time work were experienced as rewarding or of concern might be another fruitful indicator to examine.

Although this analysis of trade-offs was limited to reduced-hours workers in the medical profession, it seems plausible that the findings would generalize to other professionals and to certain full-time employees who may also experience intrarole conflict as a result of having to trade away valued aspects of their professional work for others. Among reduced-hours lawyers, working on high-profile cases and being on a partnership track are traded off for more nonwork time (Epstein et al., 1998). And, accountants working reduced hours trade the development of in-house relationships, which are often key to partnership, for more nonwork time (Levy et al., 1998). Moreover, several studies indicate that full-time specialists in industry or the academy who move into management or administration experience considerable intrarole conflict. They too must trade-off certain professional activities for others, and it seems likely that difficulty of trade-offs for these employees might predict QOL outcomes just as it does for part-time employees who have made trade-offs to reduce their hours.



For example, in a richly detailed study of the early career transition of 19 new sales and marketing managers, Hill (1992) suggested that the change from being an individual producer, a doer, to being a manager requires giving up certain professional activities, especially those associated with prior success and self-esteem, and acquiring new less familiar and less valued activities. New managers have to trade time in direct performance of technical work for time in people management (i.e., supervising and coordinating others' efforts), building a cooperative relationship with the boss, network building, and managing office politics. Perhaps because of their discomfort over the trade-offs they have to make, "many new managers never adjust successfully to managerial responsibilities" (p. 2) in spite of their established qualifications as individual contributors.

Finally, previous research by Hoff and McCaffrey (1996) indicated that the emergence of HMOs has forced many full-time physicians to make intra-role trade-offs that are often experienced as distressing. Taken together, these findings indicate that the trade-offs concept may well be applicable to a range of occupational transitions, some of which are entered into voluntarily, others of which are imposed by external circumstances.

## NOTES

1. Demographic data suggest that physicians who plan to work reduced hours select particular areas of medical specialization and not others. For example, more than half of the reduced-hours physicians were medical specialists as opposed to surgeons or general practitioners. Of those with medical specialties, the largest single group, accounting for approximately 44%, was psychiatrists. This percentage is roughly eight times as high as the comparable percentage (5.4%) nationally (American Medical Association, 1997).

2. A response rate cannot be calculated for those physicians ( $n = 22$ ) who contacted us. However, among the randomly sampled physicians ( $n = 82$ ), the completion rate (interviews divided by the sum of interviews and refusals) was 49.1%, whereas the more conservatively calculated response rate for potentially eligible participants (interviews divided by the sum of interviews, refusals, and estimated eligibles among uncontactable respondents) was 35.5%. The comparable figures for the nominated sample ( $n = 40$ ) were 78.4% and 43.0%. Previous studies of physicians report response rates from about 60% to 65%. However, these studies, which usually involve much shorter surveys than the present study (Parsons, Warnecke, Czaja, Barnsley, & Kaluzny, 1994; Sobal et al., 1990), required only the physician to agree to participate rather than requiring the spouse's agreement as well. The majority of the physicians in our sample (60.3%) were married to other physicians, most employed full-time, with the same notoriously high refusal rates as found in most physician studies. The probability that two spouses will agree to participate, assuming independent participation likelihoods ranging from .60 to .65, is only .36 to .42. These figures approximate the conservatively calculated overall response rates achieved in this study, with cooperation rates substantially higher.

3. Close examination of the survey protocols indicated that 9 female physicians who reported during the screening that they worked 40 or fewer hours per week and considered themselves to

be working reduced hours indicated during the interview that they were working more than 40 hours yet still considered themselves to be working reduced hours. We retained them in the sample after rerunning the analyses with these cases excluded and determining that the results were not affected by their inclusion.

4. It is important to note that the relatively small number of male physicians in our sample may have reduced our ability to detect any but large gender effects.

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