

Work hours, work intensity, satisfactions and psychological well-being among Turkish manufacturing managers¹

Ronald J. Burke

York University

Mustafa Koyuncu

Nevsehir University

Lisa Fiksenbaum

York University

Fusun Tekin Acar

Erciyes University

Abstract

This research examined the relationship of a newly developed measure of work intensity and of work hours on potential antecedents and work and well-being consequences. Data were collected from 877 male and female managers and professionals working in a variety of organizations in the manufacturing sector in Turkey using anonymously completed questionnaires, a 58 percent response rate. The 15 item measure of work intensity was found to have high internal consistency reliability. Work intensity was significantly correlated with work hours, but weakly. Gender and organizational level predicted both work intensity and work hours; males, and respondents at higher organizational levels indicated greater work intensity and more work hours. Hierarchical regression analyses, controlling for personal demographic and work situation characteristics, showed that work intensity but not work hours was a consistent and significant predictor of work outcomes (e.g., job satisfaction, work engagement) and psychological well-being (e.g., exhaustion). The interaction of work intensity and work hours was not a significant predictor of work or well-being outcomes. Interestingly, work

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intensity was positively related to work outcomes and negatively related to indicators of psychological well-being.

Issues related to work, including long work hours and work intensity, have been attracting increasing attention for researchers and practitioners (Bell & Freeman, 2001; Burchell & Fagan, 2004; Burke, 2007; Burke & Cooper, 2008; Dembe, Erickson, Delbos & Banks, 2005; Eastman, 1998; Filer, Hammermesh & Rees, 1996; Green 2001, 2008; Feldman, 2002; Ng, Sorenson & Feldman, 2007; Hochschild, 1997; Schor, 1991; Sparks, Cooper, Fried & Shirom, 1997; van der Hulst, 2003). This interest is not surprising given the importance of work in the lives of women and men. Work is an important economic, social and psychological element in human life. It provides income for goods and services needed by employees and their families, it helps socially by providing group identification and affiliation, and it offers a sense of meaning and purpose. Work can also provide enjoyment, satisfactions and a sense of accomplishment, achievement and success (O'Toole & Lawler, 2006). Overwork may also have negative consequences for employees, their families, organizations and society (Burke & Cooper, 2008; Dembe, Erickson, Delbos & Banks, 2005; Feldman, 2002; Sparks, Cooper, Fried & Shirom, 1997; van der Hulst, 2003).

But there is also emerging evidence that some individuals working long hours may be thriving. In a recent Harvard Business Review article, Hewlett and Luce (2006) reported on a growing trend for employees to be working 70 hour work weeks and its potential effects. This issue has attracted research attention in a few developed countries such as the US and the UK (Burchell & Fagan, 2004; Green, 2004a, 2004b; Hochschild, 1997; Schor, 1991). Hewlett and Luce (2006) found that their sample of high level executives were extremely satisfied with their jobs, satisfaction coming from the rewards, meaning and challenges inherent in their high level positions. An earlier American study of MBA alumni of a prestigious business school also found high levels of satisfaction among women and men working 61 hours a week or more (Brett & Stroh, 2003). Thus the relationship of working hours and individual satisfaction and well-being has produced some conflicting results.

The study of work hours and work intensity has both theoretical and practical interest. At the individual level, there are concerns that working long hours may have negative physiological consequences resulting in insomnia, fatigue, irritability and sickness. These consequences not only affect the individual's well-being but also that of their families and co-workers (Buell & Breslow, 1960; Dembe, Erickson, Delbos & Banks, 2005; Sparks, Cooper, Fried & Shirom, 1997; van der Hulst, 2003). The

Japanese have even coined a term to describe death from overwork – *karoshi* (Uehata, 1991, Kawahito, 1991). At the organizational level, these negative psychological and physiological responses can interfere with the smooth and efficient functioning of the organizations. Thus much of the research on the effects of long work hours has called for organizations to take note and deal with likely negative outcomes of long work hours such as stress, burnout and turnover (Burke, 2007; Burke & Cooper, 2008; Munck, 2001). But as Hewlett and Luce note (2006), among managers and professionals, working long hours can be satisfying if they are motivated by the rewards, challenges and growth inherent in their high level positions.

Work hours and work intensity

Working hard can be thought of as having a time component (e.g., hours worked) and an intensity component (e.g., how intense is the effort during the time worked). Work has traditionally been viewed as the amount of hours a person spends on the job. The time aspect has itself generated considerable debate (Brett & Stroh, 2003; Maume & Bellas, 2001; Schor, 1991). While the average time worked in the typical week has been relatively stable (Galarneau, Maynard & Lee, 2005), it is unevenly distributed among workers; the longer work hours of some employees, particularly managers and professionals (Golden, 2007), are balanced by increases in the number of employees working fewer hours per week either by choice or hourly limits set by contractual arrangements (Zeytinoglu & Cooke, 2005; Cranford, Vosko & Zukevich, 2003). Blue-collar workers now tend to work fewer hours while white collar employees are working longer hours. The time aspect of “working hard” has received most of the research attention to date (see Burke, 2007; Burke & Cooper, 2008, for reviews).

Work intensity, on the other hand is a construct that is not yet well-developed. There is also no overarching theory that underlies research on work intensity. Researchers from different backgrounds and disciplines have used different frameworks to address work intensity (Bell & Hart, 1999; Eastman, 1998; Filer, Hammermesh & Rees, 1996; Hewlett & Luce, 2006; Hochschild, 1997). Work intensity is sometimes viewed as an effort-related activity. In this regard, it is similar to the “work effort” concept discussed in the economics literature. Green (2001; 56) described work effort as “the rate of physical and/or mental input to work tasks performed during the working dayin part, effort is inversely linked to the ‘porosity’ of the working day, meaning those gaps between tasks during which the body or mind rests.” It is obviously difficult to measure such effort objectively, it can only be assessed through self-reports, or well-

designed and controlled laboratory experiments. Burchell and Fagan (2004) used “speed of work” to capture work intensity, and reported that Europeans were working more intensely in 2001 compared to 1991. Green (2001) focused on “effort change” in which respondents were asked to compare their current jobs with those they held five years earlier.

Green and McIntosh (2001) found that, among European countries, Britain experienced the fastest rise in work effort in the early to mid-1990s, while in Germany, Denmark and Greece, there was little effort intensification. Effort was higher in jobs that used computers more frequently, and except for Britain, higher in private sector than public sector jobs. Effort had also increased in counties where union membership had declined (Green & McIntosh, 1998).

Green (2004a, 2004b) found that in Britain in the 1990s, both technological and organization changes were important sources of work intensification. And Burchell, Day, Hudson, Lapido, Mankelow, Nolan, Reed Wichert and Wilkinson (1999) found an association between levels of job insecurity and feelings of work intensification among workers in Britain. Finally, Green and McIntosh (2001) suggested that work intensification was likely to be associated with physical exhaustion and mental stress.

Burke, Singh and Fiksenbaum (2008) conducted an exploratory study of a newly developed measure of work intensity and potential antecedents and consequences. They collected data from 106 respondents enrolled in three university business courses using anonymously completed questionnaires. They found that their measure of work intensity had high internal consistency reliability. Work intensity was significantly related to respondent’s organizational level and work status (full-time versus part-time). In addition, respondents individuating higher levels of work intensity also reported working more hours, a higher workload, and greater job stress. Work intensity was unrelated to organizational values supporting work-personal life imbalance, to three workaholism components or to measure of job satisfaction or work engagement. They concluded that work intensity was more reflective of one’s job and its demands than stable individual difference factors or aspects of one’s organizational culture.

The present study, building on the Burke, Singh and Fiksenbaum work (2008), reports on the further development and evaluation of a measure of work intensity, some of its properties, and its relationship with potential antecedents and work and well-being consequences. It was hypothesized that individuals reporting higher levels of work intensity would be less satisfied and indicates lower psychological well-being.

In addition, the relationship of work hours with the same antecedents and consequences was examined. It was hypothesized that individuals working more hours would be less satisfied and indicate lower psychological well-being. The effects of work intensity were hypothesized to be stronger than those of work hours. Finally, the interaction of work hours and work intensity was also considered to determine whether the effects of work intensity increased the more hours one worked.

Method

Procedure

Data were collected from organizations in 16 Turkish cities (e.g., Denizli, Mersin, and Nevsehir). Members of the research team contacted organizations in the manufacturing sector in these cities requesting their participation in the research. Cooperating organizations then provided a list of their managers and professionals. Approximately 1500 managers and professionals were contacted; 945 returned questionnaires to the research team of which 877 provided reasonably complete data, a 58% response rate. Questionnaires were completed anonymously. Measures originally developed in English were translated into Turkish using the back translation method.

Organizations fell into a variety of industries including agricultural machinery, textiles, health products, construction, food processing, furniture, metal, carpet production and electrical products. The respondents are best described as a large sample of Turkish managers and professionals in the manufacturing sector.

Respondents

Table 1 presents the demographic characteristics of the sample. Most respondents were male (77%), married (72%), were between 26 and 35 years of age (47%), had children (74%), had 2 children (44%), were college/university graduates (63%), held supervisory jobs (82%), worked between 41-50 hours per week (49%), earned between US\$10,000 –US\$14,000 income (24%), had 5 years or less of organizational tenure (45%) and 5 years or less of job tenure (62%), worked in organizations having 250 or fewer employees (77%), and worked in production or accounting and finance (30% and 28%, respectively). There was a tendency for a higher proportion of males to work in production and management and a lower percentage of males to work in marketing or accounting and finance.

Table 1. Demographic Characteristics of Sample

<u>Gender</u>	<u>N</u>	<u>%</u>	<u>Age</u>	<u>N</u>	<u>%</u>
Male	637	77.4	25 or younger	79	9.7
Female	186	22.6	26 – 35	382	46.7
			36 – 45	254	31.0
<u>Marital Status</u>			46 – 55	93	11.4
Single	234	28.4	56 or older	10	1.2
Married	591	71.6			
			<u>Parental Status</u>		
<u>Length of Marriage</u>			Children	511	73.6
5 years or less	177	29.8	No children	183	26.4
6 – 10	137	23.2			
11 – 15	102	17.2	<u>Number of children</u>		
16 – 20	85	14.3	1	157	30.4
21 or more	92	15.5	2	229	44.4
			3	97	18.8
<u>Education</u>			4 or more	33	6.4
Elementary	38	4.6			
High school	208	25.3	<u>Hours worked</u>		
College	521	63.3	40 or less	92	11.3
Masters/PhD	56	6.7	41 – 50	401	49.3
			51 – 60	211	26.0
<u>Supervision</u>			61 or more	109	13.4
Yes	662	82.4			
No	141	17.6	<u>Income</u>		
			\$9,999 or less	179	21.7
<u>Organizational tenure</u>			\$10,000 - \$14,999	197	23.9
5 years or less	393	48.3	\$15,000 - \$19,999	147	17.8
6 – 10	232	28.5	\$20,000 - \$24,999	115	14.0
11 – 15	89	10.9	\$25,000 - \$29,999	53	6.4
16 or more	100	12.3	\$30,000 or more	133	16.1
<u>Job Tenure</u>			<u>Department</u>		
2 years or less	245	29.8	Production	252	29.8
3 – 5	265	32.8	Marketing	133	15.7
6 – 10	199	24.0	Human Resources	72	8.5
11 years or more	113	13.7	Research & Develop.	32	3.8
			Account. & Finance	234	27.7
<u>Organizational Size</u>			Information Systems	14	1.8
50 or less	318	39.0	Management	109	12.9
51 – 250	311	38.2			
251 or more	186	22.8			

Measures

Work Intensity

Work Intensity was assessed by a 15 item scale ($\alpha=.85$). Some items were taken from Hewlett and Luce (2006), while other items were developed by the researchers. Items included "an unpredictable flow of work", "availability to clients 24/7", and "a large scope of responsibility that amounts to more than one job".

Personal and Work Situation Characteristics

A number of personal demographics (e.g., age, gender, level of education, marital and parental status) and work situation characteristics (e.g., hours worked per week, job and organizational tenure, organizational level, organizational size) were measured by single items (see Table 1).

Outcome Variables

A wide range of outcome variables were included in this study covering both work and extra-work domains. These variables were consistent with those typically used in studies of work and well-being more generally (e.g., Barling, Kelloway & Frone, 2005 ; Schabracq, Winnubst & Cooper, 2003).

Job Behaviors

Two job behaviors were included

1. Perfectionism ($\alpha=.84$) was measured by an 8 items scale developed by Spence and Robbins (1992). One item was "I am satisfied with nothing short of perfection in my work."
2. Non-delegation ($\alpha=.71$) was measured by a 7 item scale also developed by Spence and Robbins (1992) An item was "I'd rather do tasks by myself instead of relying on others to help do the job."

Work Engagement

Three aspects of work engagement were measured using scales developed by Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002).

1. Vigor was measured by 6 items ($\alpha=.76$). One item was "At my work I feel bursting with energy."
2. Dedication was assessed by 5 items ($\alpha=.83$). An item was "I am proud of the work that I do."
3. Absorption was measured by 6 items ($\alpha=.82$). One item was "I am immersed in my work." Respondents indicated their agreement with each item on a five-

point Likert scale (1=Strongly disagree, 3=Neither agree nor disagree, 5=Strongly agree).

Work Outcomes

Four work outcomes were included.

1. Job Satisfaction ($\alpha=.81$) was measured by a 7 item scale developed by Kofodimos (1993). An item was "I feel challenged by my work."
2. Career Satisfaction was measured by a 5 item scale ($\alpha=.86$) developed by Greenhaus, Parasuraman and Wormley (1990). One item was "I am satisfied with the success I have achieved in my career."
3. Job Stress was measured by a 9 items scale ($\alpha=.58$) developed by Spence and Robbins (1992). One item was "Sometimes I feel like my work is going to overwhelm me."
4. Intent to quit ($\alpha=.66$) was measured by two items developed by Burke (1991). An item was "Are you currently looking for a different job in a different organization?" (yes/no).

Psychological Well-Being

Four indicators of psychological well-being were included.

1. Exhaustion ($\alpha=.86$) was measured by 9 items developed as part of the Maslach Burnout Inventory (Maslach, Jackson & Leiter, 1996). One item was "I feel emotionally drained from my work."
2. Work-Family Conflict was assessed by a nine item scale ($\alpha=.85$) developed by Carlson, Kacmar and Williams (2000). Time-, strain- and behaviorally-based work-family conflict were each measured by 3 items. One item was "My work keeps me from family activities more than I would like."
3. Psychosomatic Symptoms were measured by 19 items ($\alpha=.88$) developed by Quinn and Shepard (1974). Respondents indicated how often they experienced each physical symptom (e.g., headaches, having trouble getting to sleep) in the past year.
4. Life Satisfaction was assessed by a 5 item scale ($\alpha=.84$) developed by Diener, Emmons, Larsen and Griffin (1985). A sample item was "I am satisfied with my life."

Results

Work Intensity and Work Hours

Work intensity and work hours were significantly and positively correlated ($r=.14$, $p<.001$), but only weakly.

Analysis Strategy

In order to better understand the sources of work intensity and work hours, and to examine our general hypotheses, a hierarchical regression analysis was first undertaken in which the measures of work intensity and work hours were separately regressed on two blocks of predictors entered in a specified order. The first block of predictors ($N=5$) consisted of personal demographics (e.g., age, gender, education). The second block of predictors ($N=6$) included work situation characteristics (e.g., organizational level, job and organizational tenure). When a block of predictors accounted for a significant amount or increment in explained variance on a given criterion variable ($p<.05$), individual items or measures within such blocks having significant and independent relationships with these criterion variables were then identified ($p<.05$). This analysis controls for the relationships of both personal demographics and work situation characteristics before examining the relationship of the work intensity and work hours measures and the other work and well-being outcome variables of interest.

Predictors of Work Intensity and Work Hours

Table 2 shows the results of hierarchical regression analyses in which measures of work intensity, and work hours, were regressed on two blocks of predictors: personal demographics and work situation characteristics. Personal demographics and work situation characteristics accounted for a significant amount and increment in explained variance on work intensity. Males, and respondents at higher organizational levels indicated greater work intensity ($Bs=-.12$ and $.17$, respectively).

Personal demographics and work situation characteristics also accounted for a significant amount and increment in explained variance on work hours. Males, younger respondents, less educated respondents, respondents at higher organizational levels, and respondents having longer job tenure worked more hours ($Bs=-.13$, $-.16$, $-.10$, $.20$ and $.12$, respectively),

Table 2. Predictors of Work Intensity and Work Hours

<u>Work Intensity (N=651)</u>	<u>R</u>	<u>R²</u>	<u>ΔR²</u>	<u>P</u>
<u>Personal demographics</u>	.15	.02	.02	.001
Gender (-.12)				
<u>Work situation</u>	.24	.06	.04	.001
Organizational level (.12)				
 <u>Work Hours (N=640)</u>				
<u>Personal demographics</u>	.21	.04	.04	.001
Gender (-.13)				
Age (-.16)				
Education (-.10)				
<u>Work situation</u>	.30	.09	.05	.001
Organizational level (.17)				

Consequences of Work Intensity and Work Hours

Predictors of Job Behaviors

Table 3 presents the results of hierarchical regression analyses in which two job behaviors were regressed on four blocks of predictors. The first two blocks of predictors were the personal demographics (n=5) and the work situation characteristics (N=6) as mentioned above. The third block of predictors (N=2) consisted of the measures of work intensity and work hours. The fourth block of predictors included the interaction term of the measures of work intensity and work hours.

The following comments are offered in summary. First, the block of measures of work intensity and work hours accounted for a significant increment in explained variance on both job behaviors. Respondents indicating higher levels of work intensity also reported greater perfectionism and more non-delegation (*B*s=.16 and .11, respectively). The interaction of work intensity and work hours failed to account for a significant increment in explained variance on either.

Table 3. Predictors of Job Behaviors

<u>Perfectionism (N=640)</u>	<u>R</u>	<u>R²</u>	<u>ΔR²</u>	<u>P</u>
<u>Personal demographics</u>	.07	.00	.00	NS
<u>Work situation</u>	.16	.03	.03	.01
Organizational level (.12)				

<u>Work intensity/hours</u>	.32	.12	.09	.001
Intensity (.16)				
<u>Intensity X Hours</u>	.33	.12	.00	NS
<u>Non-delegation (N=640)</u>				
<u>Personal demographics</u>	.18	.03	.03	.001
Marital status (.12)				
<u>Work situation</u>	.25	.06	.03	.001
Organizational tenure (-.16)				
Organizational size (-.10)				
<u>Work intensity/hours</u>	.27	.07	.01	.05
Intensity (.11)				
<u>Intensity X Hours</u>	.28	.08	.01	NS

Predictors of Work Engagement

Table 4 shows the results of hierarchical regression analyses in which three measures of work engagement were regressed on the same four blocks of predictors mentioned above. The block of predictors including work intensity and work hours accounted for a significant increment in explained variance on each engagement measure. Work intensity had a significant and independent relationship with each; respondents indicating higher levels of work intensity also reported more vigor, dedication and absorption (B s=.22, .21 and .27, respectively). The work intensity and work hours interaction accounted for a significant increase in explained variance on only one of the three engagement measures (Vigor, B =.10).

Table 4. Predictors of Work Engagement

	<u>R</u>	<u>R²</u>	<u>ΔR²</u>	<u>P</u>
<u>Vigor (N=640)</u>				
<u>Personal demographics</u>	.13	.02	.02	NS
<u>Work situation</u>	.28	.08	.06	.001
Organizational level (.21)				
<u>Work intensity/hours</u>	.35	.12	.04	.001
Intensity (.22)				
<u>Intensity X Hours</u>	.37	.14	.02	.01
<u>Dedication (N=640)</u>				
<u>Personal demographics</u>	.13	.02	.02	NS
<u>Work situation</u>	.27	.07	.05	.001
Organizational level (.21)				
Job tenure (.11)				
<u>Work intensity/hours</u>	.34	.12	.05	.001
Intensity (.21)				

<u>Intensity X Hours</u>	.35	.12	.00	NS
<u>Absorption (N=639)</u>				
<u>Personal demographics</u>	.06	.00	.00	NS
<u>Work situation</u>	.15	.02	.02	.05
Organizational level (.11)				
<u>Work intensity/hours</u>	.30	.09	.07	.001
Intensity (.27)				
<u>Intensity X Hours</u>	.31	.09	.00	NS

Predictors of Work Outcomes

Table 5 presents the results of hierarchical regression analyses in which four work outcomes (job satisfaction, career satisfaction, job stress, intent to quit) were regressed on the four blocks of predictors. The block of predictors including work intensity and work hours accounted for a significant increment in explained variance on only two of the four work outcomes (job satisfaction and job stress). Respondents indicating greater work intensity also reported higher levels of job satisfaction and higher levels of job stress ($B_s = .20$ and $.33$, respectively). None of the interactions of work intensity and work hours accounted for a significant increment in explained variance on any of the four work outcomes.

Table 5. Predictors of Work Outcomes

	<u>R</u>	<u>R²</u>	<u>ΔR²</u>	<u>P</u>
<u>Job Satisfaction (N=639)</u>				
<u>Personal demographics</u>	.17	.03	.03	.01
<u>Work situation</u>	.29	.08	.05	.001
Organizational level (.19)				
<u>Work intensity/hours</u>	.35	.12	.12	.001
Intensity (.20)				
<u>Intensity X Hours</u>	.35	.12	.00	NS
<u>Career Satisfaction (N=640)</u>				
<u>Personal demographics</u>	.25	.06	.06	.001
<u>Work situation</u>	.34	.12	.06	.001
Organizational level (.21)				
Organizational tenure (.15)				
<u>Work intensity/hours</u>	.35	.12	.00	NS
<u>Intensity X Hours</u>	.35	.12	.00	NS
<u>Job Stress (N=640)</u>				
<u>Personal demographics</u>	.07	.00	.00	NS

<u>Work situation</u>	.16	.03	.03	.01
Organizational level (-.18)				
<u>Work intensity/hours</u>	.36	.13	.10	.001
Intensity (.32)				
<u>Intensity X Hours</u>	.36	.13	.00	NS
<u>Intent to Quit (N=638)</u>				
<u>Personal demographics</u>	.13	.02	.02	.05
Parental status (-.13)				
<u>Work situation</u>	.20	.04	.02	.05
Organizational tenure (.16)				
Job tenure (-.14)				
<u>Work intensity/hours</u>	.22	.05	.01	NS
<u>Intensity X Hours</u>	.22	.05	.00	NS

Predictors of Psychological Well-Being

Table 6 shows the results of hierarchical regression analyses in which four indicators of psychological well-being (exhaustion, work-family conflict, psychosomatic symptoms, life satisfaction) were separately regressed on these same four blocks of predictors. The block including work intensity and work hours accounted for a significant increment in explained variance on three of the four indicators of psychological well-being (not life satisfaction). Respondents indicating higher levels of work intensity also reported lower levels of well-being: more exhaustion, greater work-family conflict and more psychosomatic symptoms ($B_s = .25, .33$ and $.22$, respectively). The work intensity-work hour's interaction did not account for a significant increment in explained variance in any of these analyses.

Table 6
Predictors of Psychological Well-Being

	<u>R</u>	<u>R²</u>	<u>ΔR²</u>	<u>P</u>
<u>Exhaustion (N=640)</u>				
<u>Personal demographics</u>	.16	.02	.02	.01
Education (.11)				
<u>Work situation</u>	.22	.05	.03	.01
Organizational level (-.20)				
<u>Work intensity/hours</u>	.32	.11	.06	.001
Intensity (-.25)				
<u>Intensity X Hours</u>	.33	.11	.00	NS
<u>Work-Family Conflict (N=640)</u>				
<u>Personal demographics</u>	.10	.01	.01	NS
<u>Work situation</u>	.16	.02	.01	NS

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<u>Work intensity/hours</u>	.36	.13	.11	.001
Intensity (.33)				
<u>Intensity X Hours</u>	.37	.13	.01	NS
<u>Psychosomatic Symptoms (N=629)</u>				
<u>Personal demographics</u>	.15	.02	.02	.05
Gender (.08)				
<u>Work situation</u>	.18	.03	.01	.001
<u>Work intensity/hours</u>	.28	.08	.05	.001
Intensity (.22)				
<u>Intensity X Hours</u>	.28	.08	.00	NS
<u>Life Satisfaction (N=640)</u>				
<u>Personal demographics</u>	.21	.05	.05	.001
<u>Work situation</u>	.35	.12	.07	.001
Organizational level (-.26)				
Organizational tenure (.18)				
<u>Work intensity/hours</u>	.35	.12	.00	NS
<u>Intensity X Hours</u>	.36	.13	.01	NS

Discussion

This research makes an important contribution by considering both number of hours worked and work intensity –the nature of one’s work – simultaneously. Our measure of work intensity and work hours were significantly and positive correlated, but only weakly so.

Let us begin with an overview of the findings. The measure of work intensity shared two common predictors (Table 2): males and respondents at higher organizational levels worked more hours and indicated greater work intensity.

The results of hierarchical regression analysis in which work intensity and work hours were simultaneously entered as predictors of job behaviors, work engagement, several work outcomes and various indicators of psychological well-being indicated no effects for work hours (see Tables 3 through 6). And the interaction of work intensity and work hours did not emerge as a significant predictor of these criterion variables.

The results of these same analyses, however, indicated several significant effects of work intensity. Respondents reporting greater work intensity also indicated higher levels of potentially problematic job behaviors (perfectionism, non-delegation), and lower levels of psychological well-being (more job stress, exhaustion, work-family

conflict, and psychosomatic symptoms). In addition, respondents indicating higher levels of work intensity also reported higher levels of work engagement –a positive work outcome–and more job satisfaction, suggesting the complexity of relationships of work intensity with various outcomes (see Tables 3 through 6).

Work intensity and work hours were unrelated to other aspects of work (e.g., career satisfaction, intent to quit) or psychological well-being (life satisfaction), each of these likely affected by other factors more central to them than either work intensity or hours worked.

There are perhaps two important implications of these findings that need to be highlighted. First, work intensity emerged as a considerably more powerful and consistent predictor of work and health outcomes than hours worked. Future research needs to include both assessments of work intensity and work hours if the effects of work hours are to be more fully understood. Second, the results highlight the complex interplay of work intensity and work and well-being outcomes. Managers reporting higher levels of work intensity were more job satisfied and engaged in their work while at the same time reporting lower levels of psychological well-being. These findings are somewhat consistent with those reported by Hewlett and Luce in their study of “extreme jobs”. They found very high levels of satisfaction and engagement in work among their senior level executives and managers working 60 or more hours a week in intense jobs. These individuals however, did express some concern as to the effects of these investments on their families and on their health. Most indicated a preference to work a few hours less a week in the not too distant future. This pattern of findings highlights the difficulty individuals have in making choices in whether or not they want to work fewer hours (Burke & Cooper, 2008).

Limitations of the research

Most research has limitations and this study is no exception. The following limitations should be acknowledged to put the findings in context. First, all data were collected using self-report questionnaires raising the slight possibility of response set tendencies and common method variance. Second, all data were collected at one point in time making it difficult to address issues of causality. Third, some of the measures had a level of internal consistency reliability below the generally accepted level of .70. Fourth, some of the outcomes were themselves significantly but moderately inter-correlated. Fifth, although the sample was large, it was not possible to determine its representativeness. Sixth, it is not clear the extent to which these

findings would generalize to other occupational samples in other cultures and countries.

Future research directions

Our knowledge of the effects of work hours and work intensity would be increased by including a wider array of potential individual and organizational antecedents (need for achievement, job insecurity, use of technology, competitive pressures) and consequences (burnout, job performance). In addition, conducting this research in other cultures and countries would determine whether there were any boundary conditions limiting the generalizability of the findings.

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About the authors:

Ronald J. Burke is currently Professor of Organizational behavior Schulich School of Business, York University. His research interests include corruption in organizations, occupational health and safety and corporate reputation.
E-mail: rburke@schulich.yorku.ca

Mustafa Koyuncu is P rofessor of Management, Faculty of Commerce and Tourism Education, Nevsehir University. His research interests include tourism education, human resource management in the tourism and hospitality sector, and cross cultural research in tourism.

Lisa Fiksenbaum is currently a PhD candidate in the Department of Psychology, York University. Her research interests include work and family. stress and health and statistical methods.

Fusun Acar is a Professor of Management at Erciyes University in Turkey. His research focuses on the hospitality and tourism sector.