

## **Benefits of Recovery after Work among Egyptian Managers**

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*An increasing body of research findings has consistently shown that work stressors are associated with lower levels of work satisfaction and psychological well-being. It has been suggested that recovery after the work day may reduce fatigue, restore mood, and improve well-being. This study examined predictors and consequences of four recovery experiences (psychological detachment, relaxation, mastery, control) identified by Sonnentag and Fritz (2007) to replicate and extend their work. Data were collected from 242 men and women managers and professionals working in various organizations and industries in Egypt using anonymously completed questionnaires, a 48% response rate. The four recovery experiences were, with one exception, positively and significantly correlated. Personal demographic variables (e.g., gender, age, level of education, marital status) had relationships with use of particular recovery experiences. Both workaholic job behaviors and job demands were negatively associated with use of psychological detachment and relaxation. Use of particular recovery experiences had complex relationships with work outcomes, sometimes being associated with positive work outcomes and sometimes with negative work outcomes. Somewhat surprisingly, use of recovery experiences were unrelated to four indicators of psychological well-being. These*

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*findings provided only partial support for previous results obtained in Germany and reported by Sonnentag and Fritz.*

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Research on the effects of work stressors on individual and organizational health have consistently shown that work stressors are associated with lower levels of employee satisfaction, performance, and psychological well-being (see Barling, Kelloway, & Frone, 2005; Schabracq, Winnubst, & Cooper, 2003, and Antoniou & Cooper, 2005, for reviews). Commonly examined work stressors include workload, job insecurity, bullying, poor interpersonal relationships including one's relationship with supervision (Beehr & Glazer, 2005; Kelloway, Sivanathan, Francis, & Barling, 2005). An important question then became how does one ameliorate the potentially negative effects of workplace stressors?

These findings led to a related stream of research that examined the management of and coping with these work stressors to minimize their effects on individual and organizational well-being (Lazarus, 1991; Lazarus & Folkman, 1984; Hobfoll, 1988). This research has identified some potentially useful coping responses (e.g., problem solving, social support, proactive coping) and other coping responses that seemed to have little value (withdrawal, medication use, anger). In addition, conflicting findings have been reported on the buffering effects of various coping responses (Cohen, 1987). As often happens in organizational research, as studies accumulate, the complexity of the phenomenon under study becomes more evident. It is clear, however, that it is difficult to cope with some work stressors (e.g., job insecurity, abusive bosses); coping responses may in some cases have limited value.

A more recent body of work has suggested that the inability to rest and recover from these work stressors also has been found to have negative effects on both satisfaction and health (Meijman & Mulder, 1998; Sonnentag & Zijlstra, 2006). In addition, the benefits to both work and health from adequate recovery whether during a long vacation period or respite (Eden, 2001; Westman & Eden, 1997; Westman & Etzion, 2001; Etzion, Eden, & Lapidot, 1998) or during time after work or on weekends (Sonnentag, 2001; Sonnentag & Krueger, 2006) have also been noted. Research on the benefits of vacation time or respite has shown, however, that the benefits of this time away from work are relatively short-lived; they quickly fade (Binneweis & Sonnentag, 2008; Westman & Eden, 1997). It would appear that the amount of time available for recovery and respite as well as the nature and quality of this time would both be important for the recovery process.

The experience of workplace stressors involves a process in which these stressors are associated with fatigue, distress, and related emotional

and physiological responses. Recovery and respite experiences then become opportunities to reverse the stressor-strain process (Meijman & Mulder, 1998).

Efforts have been made to identify and evaluate particular recovery or respite experiences. One respite experience, psychological detachment, has received some attention. Psychological detachment from work involves not thinking about one's work during off-the-job time (Eden, 2001). Etzion, Eden, and Lapidot (1998) reported that psychological detachment was found to have value on psychological well-being during vacations. Unfortunately the benefits of longer respites have been shown to be short-lived (Fritz & Sonnentag, 2005, 2006; Westman & Eden, 1997).

As a result, researchers have turned their attention to the potential benefits of psychological detachment, as well as other recovery processes, over short time periods (e.g., during evenings or weekends off the job). Sonnentag and Bayer (2005) collected data from 87 individuals in a variety of occupations using both questionnaires and daily diaries over a three-day period. They found that workload was negatively related to use of psychological detachment from work during evening hours, and that use of psychological detachment was associated with positive mood and lower fatigue. In addition, the relationship between psychological detachment and fatigue was stronger on high time pressure days. Individuals are usually tired at the end of a work day and need to recover. People spend mental and physical energy while at work. They have a chance to recover at home (e.g., rest, unwind, recharge their batteries). Recovery involves reversing the negative effects from stress at work (less fatigue, positive moods).

Binneweis and Sonnentag (2008) review three theoretical frameworks related to recovery: (1) the Allostatic Load model (McEwen, 1998; 2004), (2) the Effort-Recovery model (Meijman & Mulder, 1998) and (3) the Conservation of Resources theory (Hobfoll, 1989). Each considers possible elements of the recovery process.

## WHAT FACILITATES RECOVERY?

Sonnentag (2003) makes a distinction between activities freely chosen by an individual and those done out of duty, the former more likely to be helpful in recovery. Time spent on physical activities has been found to be supportive of recovery, as has time spent in social activities.

Sonnentag and Fritz (2007) proposed four psychological experiences to be associated with recovery and developed measures of each, as follows:

1. Psychological detachment: refraining from job related activities and thoughts;
2. Relaxation: activities involving low activation and positive affect;

3. Mastery: activities that provide opportunities to acquire new skills and knowledge in nonwork activities;
4. Control: being able to control one's off-the-job time activities, what activities to undertake, and when.

Sonnentag and Fritz (2007) reported that job stressors (e.g., time pressure, role ambiguity, hours of overtime) were negatively related to use of these recovery experiences, particularly psychological detachment. Time pressure and hours of overtime were also found to be negatively related to relaxation and control during leisure. Job stressors were not related to mastery experiences after work, however. Interestingly, individual difference and personality factors were inconsistently or only weakly related to the use of the four recovery experiences.

### Personality Factors and Use of Recovery Experiences

Sonnentag and Fritz (2007) found weak or inconsistent relationships between the Big 5 personality factors and use of the four recovery experiences. Openness and Extraversion were both significantly and positively related with use of Mastery; all other correlations were not statistically significant.

### Job Stressors

Sonnentag and Fritz (2007) found that time pressures were negatively correlated with use of psychological detachment, relaxation and control; hours of overtime negatively correlated with use of psychological detachment and relaxation; role ambiguity was negatively correlated with use of both psychological detachment and control; situational constraints were negatively correlated with use of both psychological detachment and control; and job control was positively correlated with use of the control recovery experience.

### Research on Recovery Experiences

The Sonnentag and Fritz study (2007) was carried out in Germany and involved a medium-sized sample ( $N = 271$ ) of women and men working in a variety of organizations and jobs; the sample comprised almost equal numbers of men and women with about two-thirds in nonsupervisory positions. Germany is a developed country with historically strong economic performance. An interesting question is whether their results would be found in countries and cultures having different values on the importance of work and of family.

Burke, Koyuncu, & Fiksenbaum (2009) examined predictors and consequences of these four recovery experiences in a large sample of men and women working in managerial and professional jobs in the manufacturing

sector in Turkey. Managers at higher organizational levels made more use of both mastery and control. Personality factors (need for achievement, workaholic job behaviors) were also positively correlated with use of mastery and control. Hierarchical regression analyses controlling both personal demographics and work situation characteristics showed generally positive relationships with use of recovery experiences and more favorable work and well-being outcomes. Psychological detachment, however, was found to have negative relationships with some of these outcomes, suggesting more complex relationships with use of this recovery experience. These Turkish findings were consistent with those reported by Sonnentag and Fritz (2007) in some cases but not in others.

The present study examined the use of recovery experiences among managers in Egypt. It seemed important therefore to first describe the Egyptian culture and values to put our work in a larger context.

### EGYPTIAN CULTURAL VALUES

Increasing research attention has been devoted to business in the Middle East over the past two decades. The Middle Eastern economy has flourished partly as the result of oil and partly as the result of a young and growing population (Ali, 1999; Budhwar & Mellahi, 2007). Egypt is similar to other Middle Eastern countries in some ways but different in others (Ali, 1999, 2005; Muna, 1980). Hofstede (1980) found that all Middle Eastern countries shared similar societal and cultural values. These countries indicated large power differences, scored high on uncertainty avoidance, scored low on individualism (or high on collectivism) and scored only slightly above average on masculinity. Egypt is a patriarchal society with boys more highly valued than girls (El-Ghannam, 2001, 2002), and strict gender roles with women responsible for home and family (Ali, 2005; Metcalfe, 2006, 2007, 2008; Mostafa, 2003). Hofstede (1980) concluded that the small number of women in the workforce generally and their absence at senior levels of management and in politics reflected religious values (Islam) more than masculine values (see also El-Saadawi, 1982; Sidani, 2005).

Unfortunately we know relatively little about the work and career experiences of men and women in Egypt. Women have only recently moved into the workforce in sizeable numbers. Work has traditionally been seen as a male activity associated with the provider and breadwinner role (Ali, 2005; Metcalfe, 2007), and the society places a high value on the family (Metcalfe, 2006). It has been difficult to undertake both human resource management and women in management research in Egypt because many organizations are not interested in such research and many managers do not want their subordinates to participate in research that might be critical of their performance (Ali, 2005; Budhwar & Mellahi, 2007).

Egypt, however, is in transition. Researchers (El-Kot & Leat, 2008, Leat & El-Kot, 2007) have shown that human resource practices in Egypt tend to reflect a combination of those based on traditional cultural values and newer practices developed in the Western world. An increasing number of women are now in the workforce (Al-Lamky, 2007; Jamali, Safieddine, & Daouk, 2006). And though found to not do a good job of preparing young Egyptian women and men for the realities of the workforce (Tyler & Holmes, 2008), efforts are being made to improve the educational system. As a consequence of these and other factors, Egypt has shown only slow economic development (Ali, 2005; Budhwar & Mellahi, 2007).

### THE ISLAMIC WORK ETHIC AND WORK VALUES

Very little research attention has been given to understanding the Islamic work ethic and work values. Ali and Al-Owaihnan (2008) reported on the development of a measure of the Islamic Work Ethic (IWE) and examined its presence. The IWE views work as a virtue, necessary for contribution to a full and balanced life. They identified four components in the IWE: effort, competition, transparency, and socially responsible conduct. Effort is held in higher regard in the IWE. These four components produce benefits for individuals, their families, and their communities.

Ali developed an IWE scale and reported data from 150 Arab Muslim students attending U.S. universities. This sample scored high on the IWE, having a mean of 4.3 on a 5-point scale. He then administered a shorter version of the IWE to managers in some Arab countries (Kuwait, United Arab Emirates (UAE), Arabia) and again reported high scores, the means in these countries being greater than 4.0. Thus individuals in the Middle East indicated generally higher scores on the self-report IWE. Work has a positive meaning in Islam. However, the Islamic work ethic is different from the Protestant work ethic in that the former emphasizes intention and the latter emphasizes outcomes.

One must approach these data with some caution. Because managers in the Middle East and Arab university students in the United States score high on the IWE does not mean that they work hard or work effectively in their jobs and organizations in their home countries, or that rewards and opportunities from hard work are readily available to them. Given these concerns, however, the concept of working hard seemed consistent with the IWE and suggested that recovery after work would be a meaningful topic in our Egyptian sample.

### THE PRESENT STUDY

This research both replicates and extends the original Sonnentag and Fritz (2007) investigation. It uses their measures of recovery experiences and

includes additional measures of work outcomes and well-being indicators. In addition, it extends previous research by employing respondents in managerial and professional jobs in various organizations and industries in Egypt, a large and developing and industrializing country having a population that is almost exclusively Muslim. Egypt also has values and cultural factors that place a high priority on family (Metcalf, 2006), a priority that might influence the use of particular recovery experiences.

The following hypotheses, based on previous research on the use of the four recovery experiences, were considered.

1. The measures of recovery experiences would be highly reliable and positively inter-correlated.
2. There would be weak or at best small and inconsistent correlations between personal demographic (e.g., age, education) and work situation characteristics (e.g., organization size, job tenure) and use of the recovery experiences.
3. Managers scoring higher on Need for Achievement and the two workaholic job behaviors (Nonrequired Work, Control of Others) would make less use of both psychological detachment and relaxation, and more use of mastery and control.
4. Managers working more hours a week and in jobs having greater work intensity would make less use of psychological detachment and relaxation and greater use of both mastery and control.
5. Managers making greater use of the recovery experiences would report more positive work outcomes.
6. Managers making greater use of the recovery experiences would report higher levels of psychological well-being.

## METHOD

### Procedure

Data were collected between October 2008 and January 2009 from service and manufacturing organizations in two Egyptian cities (Alexandria and Cairo). Members of the research team contacted about 50 organizations in these cities requesting their participation in the research. The 24 cooperating organizations then provided a list of managers and professionals to the researchers. Service organizations included telecommunications, banks, educational institutions, and a maritime service provider. Manufacturing organizations included pharmaceutical, petroleum companies, and production companies focusing upon production of milk, juice, and food. Approximately 500 managers and professionals were contacted; of which 242 provided completed questionnaires, a 48% response rate. Questionnaires were completed anonymously in English. The respondents are best described as

a large convenience sample of Egyptian managers and professionals in a variety of industries.

## RESPONDENTS

Table 1 presents the demographic characteristics of the sample. More than half were male (60%); almost all worked full-time (93%); more than half were

**TABLE 1** Demographic Characteristics of Sample

	N	%		N	%
Gender			Age		
Male	146	60.3	25 or less	73	30.2
Female	96	39.7	26–30	74	30.5
Work status			31–35	29	12.0
Full time	226	93.4	36–40	13	5.4
Part time	16	6.6	41–45	13	5.4
Marital status			46 or older	40	16.5
Married	92	38.0	Length of marriage		
Single	150	62.0	1–5 years	36	40.0
Parental status			6–10	13	14.4
Children	86	35.5	11–15	7	7.8
No children	156	64.5	16–20	19	21.1
Education			21–25	17	18.9
High school	12	5.0	26 or more	4	4.4
Bachelors	185	80.6	Number of children		
Masters	35	14.4	0	155	64.0
Hours worked			1	27	11.2
40 or less	102	42.1	2	44	18.2
41–45	51	21.1	3 or more	16	6.6
46–50	49	20.7	Income- LE\$		
51–55	7	2.9	\$10,000 or less	62	25.6
56–60	20	8.2	\$10,001–\$15,000	16	6.6
61 or more	12	5.0	\$15,001–\$20,000	22	9.1
Organizational level			\$20,001–\$25,000	30	12.4
Nonmanagement	70	28.9	\$25,001 or more	112	46.3
Lower management	56	23.1	Supervisory duties		
Middle management	80	33.1	Yes	161	66.5
Senior management	36	14.9	No	81	33.5
Organizational tenure			Job tenure		
1–2 years	90	37.2	1–2 years	145	59.9
3–5	55	22.7	3–5	51	21.1
6–10	56	23.2	6–10	43	17.8
11 or more	41	16.9	11 or more	3	1.2
Organizational size			Function		
250 or less	59	20.2	Finance	32	13.2
251–500	36	14.9	Production	26	10.7
501–1000	47	19.4	IT	23	9.5
1001–2000	34	14.1	Customer service	22	8.1
2001–5000	70	28.9	Marketing	18	7.4
5001 or more	6	2.5	Sales	17	7.0
			Logistics	17	7.0

30 years of age or younger (61%); most were single (62%); without children (64%); were university graduates (95%); worked 40 hours a week or less (42%); were in middle management (33%); supervised others (66%); earned over LE 25,000 (U.S. \$4600.00) a year of income (46%); had a relatively short job and organizational tenures (more than half having two years or less job tenure—60%, and more than one-third having two years or less of organizational tenure—37%), and worked in organizations of varying sizes, the average being about 1,000 employees. Respondents fell into several employment sectors: IT and logistics, 16%; marketing and sales, 14%; finance, 13%; production, 11%; and customer service, 9%.

## MEASURES

### Recovery Experiences

Four recovery experiences identified by Sonnentag and Fritz (2007) were considered. Respondents were asked to respond to these items on a 5-point scale (1 = I do not agree at all, 5 = I fully agree) with respect to their free evenings. The experiences were measured as follows:

1. *Psychological detachment* was measured by four items ( $\alpha = .92$ ). One item was “I don’t think about my work at all.”
2. *Relaxation* was measured by four items ( $\alpha = .85$ ). An item was “I use the time to relax.”
3. *Mastery* was also assessed by four items ( $\alpha = .75$ ). One item was “I seek out intellectual challenges.”
4. *Control* was also measured by four items ( $\alpha = .88$ ). “I determine for myself how I will spend my time.”

### Personal Demographic and Work Situation Characteristics

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

### Stable Individual Difference Personality Characteristics

Three stable individual difference personality characteristics were included, as follows:

#### NEED FOR ACHIEVEMENT

Need for Achievement (NAch) was measured by a 5 item scale ( $\alpha = .62$ ) developed by Steers and Braunstein (1976). One item was “I try very hard to improve on my past performance at work.”

#### WORKAHOLIC BEHAVIORS

Two workaholic behavior scales developed by Mudrack (2006) were included. One, *Nonrequired work*, had four items ( $\alpha = .82$ ). An item was "Thinking of ways to improve the quality of work provided to customers and/or co-workers." The other, *Control others*, also had four items ( $\alpha = .74$ ). One item was "fixing problems created by other people."

#### JOB DEMANDS

Two job demands were included. *Work hours* were assessed by a single item. Respondents indicated the number of hours they worked in a typical week. *Work intensity* was assessed by a 15-item scale ( $\alpha = .74$ ). Some items were taken from Hewlett and Luce (2006) whereas others 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."

#### Work and Well-Being Outcomes

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).

#### WORK OUTCOMES

Four work outcomes were included.

#### JOB SATISFACTION

Job satisfaction was measured by a 7-item scale ( $\alpha = .80$ ) developed by Kofodimos (1993). An item was "I feel challenged by my work."

#### CAREER SATISFACTION

Career satisfaction was assessed by a 5-item scale ( $\alpha = .88$ ) created by Greenhaus, Parasuraman, and Wormley (1990). One item was "I feel satisfied with the progress I have made in my career to date."

#### JOB STRESS

Job stress was measured by a 9-item scale ( $\alpha = .59$ ) developed by Spence and Robbins (1992). One item was "Sometimes I feel like my work is going to overwhelm me."

**INTENT TO QUIT**

Intent to quit was measured by two items ( $\alpha = .84$ ) used previously by Burke (1991). One item was "Are you currently looking for a different job in a different organization? (Yes/no).

**PSYCHOLOGICAL WELL-BEING**

Four aspects of psychological well-being were considered.

**EXHAUSTION**

Exhaustion was measured by a 9-item scale ( $\alpha = .74$ ), part of the Maslach Burnout Inventory, developed by Maslach, Jackson, and Leiter (1996). An item was "I feel emotionally drained from my work."

**WORK/FAMILY CONFLICT**

Work/family conflict was assessed by nine items developed by Carlson, Kacmar, and Williams (2000). Time-, strain, and behavior-based work/family conflict were each measured by three items (alphas = .92, .60, and .64, respectively). One item was "My work keeps me from family activities more than I would like."

**PSYCHOSOMATIC SYMPTOMS**

Psychosomatic symptoms were measured by a 19-item scale ( $\alpha = .85$ ) developed by Quinn and Shepard (1974). Respondents indicated how frequently they had experienced each physical symptom (e.g., headaches, difficulty sleeping) in the past year.

**LIFE SATISFACTION**

Life satisfaction was assessed by a 5-item scale ( $\alpha = .84$ ) created by Diener, Emmons, Larsen, and Griffin (1985). A sample item was "I am satisfied with my life."

## RESULTS

### Descriptive Statistics

The four recovery experiences were all positively correlated with five of the six correlations being significantly different from zero ( $p < .05$ ). These were: psychological detachment and relaxation, .75; psychological detachment and mastery, .05, ns; psychological detachment and control, .27; relaxation and mastery, .24, relaxation and control, .49; and mastery and control, .34. The average correlation was .36. Sonnentag and Fritz (2007) found all intercorrelations in their study to be significantly different from zero ( $p < .05$ ) with an

average of .33. The means of the four recovery experiences in the present sample were: psychological detachment, 3.1; relaxation, 3.5; mastery, 3.4; and control, 4.0. Sonnentag and Fritz reported mean values of 3.6, 3.3, 3.0, and 3.7, respectively. Thus the present sample was similar to their German sample on relaxation, but scored lower on psychological detachment and higher on mastery and control. Females made greater use of all four recovery experiences, with three of the four differences reaching statistical significance ( $p < .05$ ). Female managers made significantly greater use of psychological detachment, mastery, and control and tended to make greater use of relaxation. Sonnentag and Fritz (2007) did not report gender differences.

### Analysis Strategy

In order to better understand the predictors of use of various recovery experiences and to examine our hypotheses, hierarchical regression analyses were undertaken. First the four recovery experiences were separately regressed on two blocks of predictors: personal demographics ( $n = 5$ ) including age, gender, level of education, and work situation characteristics ( $n = 4$ ) including organizational level, organizational size, and job 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 ( $p < .05$ ). Then, to understand the role played by personality factors and job demands, hierarchical regression analyses were undertaken in which the four recovery experiences were separately regressed on three blocks of predictors: personal demographics ( $n = 5$ ); work situation characteristics ( $n = 4$ ); then in one case personality factors ( $n = 3$  need for achievement, two workaholic job behaviors), and in a second case, job demands ( $n = 2$ ), work hours and perceptions of work intensity. Finally, to determine the relationships of the four recovery experiences with both work outcomes and indicators of psychological well-being, these various outcome measures were separately regressed on three blocks of predictors: personal demographics ( $n = 5$ ); work situation characteristics ( $n = 4$ ); and use of recovery experiences ( $n = 4$ ). These analyses control for the relationships of both personal demographics and work situation characteristics before examining the relationship of use of the various recovery experiences and the work and well-being variables of interest. The sample size was 242 in all regressions reported below.

### Predictors of Recovery Experiences

Table 2 presents the results of hierarchical regression analyses in which use of each of the four recovery experiences were regressed on two blocks of predictors: personal demographic characteristics and work situation

**TABLE 2** Predictors of Use of Recovery Experiences

	Recovery experiences			
	R	R2	Change R2	P
Psychological detachment				
Personal demographics	.39	.16	.16	.001
Education level (.24)				
Marital status (.40)				
Age (-.40)				
Gender (.15)				
Work situation characteristics	.42	.18	.02	NS
<b>Relaxation</b>				
Personal demographics	.41	.16	.16	.001
Education level (.31)				
Marital status (.49)				
Gender (.20)				
Work situation characteristics	.46	.21	.05	.05
Job tenure (-.21)				
Organizational size (.14)				
<b>Mastery</b>				
Personal demographics	.28	.08	.08	.01
Gender (.26)				
Age (-.32)				
Work situation characteristics	.34	.11	.03	NS
<b>Control</b>				
Personal demographics	.35	.13	.13	.001
Gender (.30)				
Education level (.16)				
Marital status (.22)				
Work situation characteristics	.48	.24	.11	.001
Job tenure (-.50)				
Organizational level (.23)				

characteristics. Personal demographics accounted for a significant amount of explained variance on use of each of the recovery experiences. In addition, common demographic predictors were found on two or more of the recovery experiences. Thus female managers made greater use of psychological detachment, relaxation, mastery, and control ( $Bs = .15, .20, .26,$  and  $.30$ , respectively); more highly educated managers made greater use of psychological detachment, relaxation, and control ( $Bs = .24, .31,$  and  $.16$ , respectively); older managers made less use of both psychological detachment and master ( $Bs = -.40$  and  $-.32$ , respectively); and married respondents made greater use of both psychological detachment and relaxation ( $Bs = .40$  and  $.48$ , respectively).

### Personality Predictors of Use of Recovery Experiences

Table 3 shows the results of hierarchical regression analyses in which the four recovery experiences were regressed on three blocks of predictors: personal

**TABLE 3** Personality Predictors of Use of Recovery Experiences

Psychological detachment	Recovery experiences			
	R	R2	Change R2	P
Personal demographics	.39	.16	.16	.001
Marital status (.50)				
Age (-.50)				
Education level (.19)				
Gender (.15)				
Work situation characteristics	.42	.18	.02	NS
Personality	.62	.38	.20	.001
Non-required work (-.36)				
Control of others (-.21)				
<b>Relaxation</b>				
Personal demographics	.41	.16	.16	.001
Marital status (.56)				
Education level (.26)				
Age (-.30)				
Gender (.19)				
Work situation characteristics	.46	.21	.05	.05
Job tenure (-.23)				
Organization size (.1)				
Personality	.55	.31	.10	.001
Non-required work (-.23)				
Control of others (-.17)				
<b>Mastery</b>				
Personal demographics	.28	.08	.08	.01
Gender (.22)				
Age (-.28)				
Work situation characteristics	.34	.11	.03	NS
Personality	.39	.15	.04	.05
Non-required work (.20)				
<b>Control</b>				
Personal demographics	.37	.14	.14	.001
Gender (.341)				
Education level (.17)				
Marital status (.29)				
Work situation characteristics	.50	.25	.11	.001
Job tenure (-.55)				
Organization level (.25)				
Personality	.50	.26	.01	NS

demographics, work situation characteristics and three personality characteristics. Personality characteristics accounted for a significant increment in explained variance on use of three of the four recovery experiences. Workaholic job behaviors (Non-required work, Control of others) were associated with less use of both psychological detachment and relaxation ( $B_s = -.36, -.21, -.23,$  and  $-.17,$  respectively); Non-required work was positively associated with use of mastery ( $B = .20$ ). More work-invested managers were less able to detach from work and relax.

## Job Demands and Use of Recovery Experiences

Table 4 shows the results of hierarchical regression analyses in which the use of four recovery experiences were regressed on three blocks of predictors: personal demographics, work situation characteristics, and two job demands (work hours, perceptions of work intensity). Job demands accounted for a significant increment in explained variance on use of two of the four recovery experiences: psychological detachment and relaxation. Managers scoring higher on work intensity made less use of both psychological detachment and relaxation ( $Bs = -.41$  and  $-.41$ ); managers scoring higher on work hours made greater use of relaxation ( $B = .15$ ).

**TABLE 4** Job Demands and Use of Recovery Experiences

	Recovery experiences			
	R	R2	Change R2	P
Psychological detachment				
Personal demographics	.39	.16	.16	.001
Age ( $-.47$ )				
Marital status (.36)				
Education level (.15)				
Work situation characteristics	.42	.18	.02	NS
Job demands	.56	.31	.13	.001
Work intensity ( $-.41$ )				
<b>Relaxation</b>				
Personal demographics	.41	.16	.16	.001
Marital status (.46)				
Education level (.21)				
Age ( $-.31$ )				
Work situation characteristics	.46	.21	.05	.05
Job demands	.59	.34	.13	.001
Work intensity ( $-.41$ )				
Work hours (.15)				
<b>Mastery</b>				
Personal demographics	.28	.08	.08	.01
Gender (.32)				
Age ( $-.30$ )				
Work situation characteristics	.34	.11	.03	NS
Job demands	.36	.13	.02	NS
<b>Control</b>				
Personal demographics	.37	.14	.14	.001
Gender ( $-.32$ )				
Education level (.17)				
Marital status (.30)				
Work situation characteristics	.50	.25	.11	.001
Job tenure ( $-.55$ )				
Organization level (.24)				
Job demands	.50	.25	.00	NS

## Use of Recovery Experiences and Work Outcomes

Table 5 shows the results of hierarchical regression analyses in which four work outcomes were separately regressed on the same three blocks of predictors. Use of recovery experiences accounted for a significant increment in explained variance on all work outcomes. Managers making greater use of control and less use of relaxation indicated higher levels of job satisfaction ( $B_s = .32$  and  $-.122$ , respectively). Managers making greater use of mastery indicated higher levels of career satisfaction ( $B = .30$ ). Managers indicating the greater use of psychological detachment and master indicated lower levels of job stress ( $B_s = -.48$  and  $-.20$ , respectively). Finally, managers making more use of control indicated less intent to quit ( $B = -.16$ ).

**TABLE 5** Use of Recovery Experiences and Work Outcomes

Job satisfaction	Work outcomes			
	R	R2	Change R2	P
Personal demographics	.24	.06	.06	.05
Age ( $-.34$ )				
Marital status (.39)				
Education level ( $-.13$ )				
Work situation characteristics	.44	.20	.14	.001
Organization size ( $-.121$ )				
Organization level (.21)				
Organizational tenure (.21)				
Recovery experiences	.53	.28	.08	.001
Control (.32)				
Psychological detachment ( $-.22$ )				
<b>Career satisfaction</b>				
Personal demographics	.21	.04	.04	NS
Work situation characteristics	.29	.08	.04	.05
Organizational level (.18)				
Recovery experiences	.39	.16	.08	.001
Mastery (.30)				
<b>Job stress</b>				
Personal demographics	.20	.04	.04	NS
Work situation characteristics	.26	.07	.03	NS
Recovery experiences	.50	.25	.18	.01
Psychological detachment ( $-.48$ )				
Mastery ( $-.20$ )				
<b>Intent to quit</b>				
Personal demographics	.36	.13	.13	.001
Education level (.23)				
Age ( $-.32$ )				
Work situation characteristics	.39	.16	.03	NS
Recovery experiences	.45	.20	.04	.05
Control ( $-.16$ )				

**TABLE 6** Use of Recovery Experiences and Psychological Well-Being

Exhaustion	Psychological well-being			
	R	R2	Change R2	P
Personal demographics	.33	.11	.11	.001
Gender (.17)				
Work situation characteristics	.38	.14	.03	NS
Recovery experiences	.40	.16	.02	NS
<b>Work-family conflict</b>				
Personal demographics	.21	.04	.04	NS
Work situation characteristics	.32	.10	.06	.01
Organizational level (-.20)				
Organizational size (.16)				
Recovery experiences	.37	.14	.04	NS
<b>Psychosomatic symptoms</b>				
Personal demographics	.31	.10	.10	.001
Age (.62)				
Work situation characteristics	.39	.16	.06	.01
Organizational level (-.24)				
Organization size (-.17)				
Recovery experiences	.43	.19	.03	NS
<b>Life satisfaction</b>				
Personal demographics	.24	.06	.06	.05
Marital status (.24)				
Work situation characteristics	.28	.08	.02	NS
Recovery experiences	.32	.10	.02	NS

### Use of Recovery Experiences and Psychological Well-Being

Table 6 presents the results of hierarchical regression analyses in which the use of four recovery experiences were regressed on the same three blocks of predictors. Recovery experiences failed to account for a significant increment in explained variance on any of the four indicators of psychological well-being.

## DISCUSSION

Considerable attention has been devoted to understanding the influence of various work experiences, especially job demands or stressors, on important work outcomes and indicators of psychological health. This work has contributed to considerable progress in identifying work experiences associated with dissatisfaction and distress. Less attention has been paid, however, to determining what individuals, their families, and employing organizations can do to reduce the negative effects of these job demands

Two bodies of work designed to assist employees emerged soon after research findings began to show fairly consistently show the adverse consequences of job stress. One body of work considered individual coping

response; the other body of work attempted to identify organizational interventions that would reduce the experience of job demands (see Barling, Kelloway & Frone, 2005, for examples of both). Unfortunately the coping research produced both inconsistent findings and suggested that some job demands were difficult to cope with. In addition, organizational interventions were found to be costly, time-consuming, and sometimes difficult to implement.

Experiencing job demands or stressors is a process that ultimately leads to fatigue, negative moods, and physiological responses associated with illness. Some writers have proposed that the reversal of this process would return individuals to a healthy base-line. One line of work has examined the effects of vacations or respites from work as a way of fostering recuperation. Although initially promising, the accumulating research evidence has shown that the effects of vacations or respites, while helpful in the short term, fade over time. This has led to a line of research that considers the recovery experiences of individuals when they return home after their work day. Sonnentag and her colleagues have been in the forefront undertaking pioneering research in this area, identifying both theories that help to explain the depletion and recovery processes, and identifying potentially useful recovery experiences and developing measures of these as they attempted to identify benefits from their use (see Binneweis & Sonnentag, 2008, for a partial review).

Sonnentag and Fritz (2007) suggested four potentially helpful recovery experiences: psychological detachment, relaxation, mastery, and control. They reported a study examining predictors of the use of these four recovery experiences and benefits. They found that personality factors and coping responses were weak or inconsistent predictors of use of these four recovery experiences. Job demands, on the other hand, were associated with less use of particular recovery experiences. Finally, they found that use of recovery experiences was associated with higher levels of psychological well-being.

The present study attempted to replicate and extend the Sonnentag and Fritz (2007) research. It used the same measures of recovery experiences but included additional predictors and consequences of their use. The former included three aspects of personality (need for achievement, two workaholism behaviors); the latter included additional work outcomes and indicators of psychological well-being. In addition, the study was conducted in Egypt, a large developing country with a predominantly Muslim population and Islamic work ethic, and employing a large sample of men and women working in various organizations and industrial sectors. Sonnentag and Fritz carried out their study in Germany, a country with different values and culture than that of Egypt (Hofstede, 1980).

Our results only partially replicate and extend the original Sonnentag and Fritz conclusions. The measures of recovery experiences were found in both the Egyptian and German studies to be highly reliable and positively and significantly intercorrelated. In addition, the mean values on the four

recovery experiences were similar in two cases (relaxation and mastery) with the Egyptian sample reporting higher values on a third (control) and lower values on a fourth (psychological detachment).

Contrary to the Sonnentag and Fritz study, both personal demographics and stable personality measures were generally associated with the use of various recovery experiences (see Tables 2 and 3). Women, more educated managers, younger managers, and managers who were married made greater use of particular recovery experiences. More specifically, personality factors likely linked with greater work investment were associated with less use of psychological detachment and relaxation. But consistent with the Sonnentag and Fritz study, managers indicated higher job demands (e.g., greater work intensity) made less use again of psychological detachment and relaxation (see Table 4). These findings suggest that perhaps managers having the greatest need for detachment and relaxation because of the high job demands actually made less use of them.

Our results showed (see Table 5) that use of recovery experiences had some positive benefits as far as work outcomes were concerned, again supportive of the earlier Sonnentag and Fritz conclusions. However, contrary to the findings from their German study, use of recovery experiences were not associated with any of our indicators of psychological well-being (see Table 6). The Burke, Koyuncu, and Fiksenbaum (2009) study conducted in Turkey found that use of recovery experiences were beneficial to both work outcomes and psychological health. We can only speculate as to why use of recovery experiences were not associated with psychological health in the Egyptian study. It may be that sample characteristics need to be taken into account. The Egyptian sample was young, mostly single, mostly without children, and worked few hours a week in less work-intense jobs than was the case in the Turkish sample, and differed from the German sample on some of these dimensions as well. All three studies suggest, however, that further research on the use and benefits of particular recovery experiences could make an important contribution to improving and maintaining individual satisfaction, performance and health in the workplace.

### Practical Implications

Although relatively little research has to date been conducted on recovery experiences, some preliminary practical suggestions can be drawn. First, individuals need to get adequate sleep, both in terms of sleep length and sleep quality. It is recommended that individuals get eight hours of sleep per day. Second, individuals need to think about their own recovery experiences and the need to restore, replenish, and reinvigorate their intellectual and physical energy. Third, organizations should include content on recovery and sleep in stress management and well-being training, and in management development courses more generally.

### Limitations of the Research

This research, like most others, has some limitations. First, all data were collected using self-report questionnaires raising the small possibility of responses being affected by use of a common method. Second the data were collected at one point in time making it difficult to establish causal relationships. Third, a few of the measures had levels of internal consistency reliability below the generally accepted level of .70. Fourth, although the sample was relatively large, it was not likely a representative sample of Egyptian managers and professionals. Fifth, the sample was relatively young, single, and without children; it is not clear the extent to which these results would generalize to an older married sample having both children, longer work hours, and greater organizational tenure. Sixth, the extent to which these findings would generalize to respondents working in other industrial sectors or respondents in other countries is yet to be determined. (see Aycan, 2001; Aycan et al., 2000; Wasti, 1998; for suggestions on the role played by country and culture).

### Future Research Directions

There has been relatively little research on recovery experiences to date. As a consequence, several future research issues need attention. First, the role of sleep duration and quality of sleep needs to be better understood. Second, both personality factors and coping responses need to continue to be included in recovery experience studies. Psychological detachment and relaxation, for example, have been previously considered in mainstream coping research. Third, gender differences and family status factors should be more fully explored. In our study, male and female managers were similar in their use of mastery and control, whereas females tended to make greater use of psychological detachment and relaxation ( $p < .10$ ). Fourth, the use of diary studies and surveys need to be integrated in the same investigation. In addition observations of and interviews with individuals and couples might identify additional after work recovery experiences. Fifth, more use needs to be made of longitudinal studies. Finally the inclusion of variables more reflective of the positive experiences on work, family, and health (e.g., joy, optimism, resilience) should be included (see Cameron, Dutton, & Quin, 2003).

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