

# MISMATCH IN WORKING HOURS AND WORKAHOLISM IN PERMANENT WAGED WORKERS

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## Abstract

**Objectives:** A cross-sectional study was conducted to investigate whether working hours mismatch is associated with workaholism. **Material and Methods:** This study used the data from the 17th wave (2014) of the nationwide Korean Labor and Income Panel Study. Workaholism was evaluated using the *Workaholism Analysis Questionnaire*. The final study involved 3157 subjects who answered questions regarding both workaholism and working hours mismatch. To identify the association between working hours mismatch and workaholism according to weekly working hours, a stratification analysis was conducted by dividing the number of working hours/week into 3 groups ( $\leq 40$  h, 41–59 h, and  $\geq 60$  h). The odds ratios were calculated using a multiple logistic regression model, which was adjusted for potential confounders. **Results:** The workers working more hours than desired showed the greatest frequency of workaholism. As regards workaholism, in all weekly working hours groups, the odds ratios of the group working more hours than desired were 4.28, 95% CI: 2.29–7.99 ( $\geq 40$  h), 2.14, 95% CI: 1.34–3.43 (41–59 h), 3.40, 95% CI: 1.60–7.21 ( $\leq 60$  h), which were statistically significant compared to the reference (matched) group. There was no statistically significant relationship between working hours and workaholism when stratified according to the mismatch in working hours. **Conclusions:** The workers' working hours mismatch can be significantly related to workaholism. Int J Occup Med Environ Health. 2020;33(2):187–94

## Key words:

workaholism, working hours mismatch, waged worker, workaholic, mismatched, weekly working hours

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## INTRODUCTION

The term “workaholism” was first introduced by Oates [1,2], who defined it as an addiction to work and “the compulsion or the uncontrollable need to work incessantly.” Although considerable attention has been paid to the definition and techniques of measuring workaholism, disagreements still exist on these issues beyond the core feature of “heavy work investment” [1,2]. A workaholic appears to be a person who experiences an internal compulsion to work, and tends to consistently think about work [1,2]. Working for an extended duration daily is considered as the main characteristic of workaholism [3,4]. On average, North American workaholics work for 50–60 h/week [5,6]. Positive correlations have been found between long working hours and workaholism [7,8]. However, expending more time on the job is not necessarily a workaholic’s attribute. External factors (e.g., financial issues, organizational culture, and pressure exerted by superiors), rather than the obsessive internal drive evinced by a typical work addict, may force certain people to invest more time in their jobs [9]. It may, thus, be misleading to understand workaholism only in terms of excessive working hours, considering that the condition is an addiction to work that exerts an internal pressure compelling a person to continue undertaking official duties.

Recent concerns have been expressed with regard to the mismatch between the actual and desired working hours [10]. The mismatch in working hours refers to the lack of correspondence between the preferential weekly working time and the actual hours spent weekly on work, whether a person desires to work more or fewer hours every week [11]. Many studies have demonstrated the negative outcomes of such a mismatch in working hours:

- Bell et al. [12] found damaging effects on health satisfaction and self-assessed health;
- Constant and Otterbach [13] detected unconstructive consequences on self-assessed mental health measures;

- Cornelißen [14] provided evidence on the decline in job satisfaction corresponding to an increase in mismatched hours;
- Wilkins [15] found that underemployed male full-time employees reported lower life satisfaction compared to matched male full-time employees;
- Green and Tsitsianis [16] revealed a large and statistically significant negative impact on job satisfaction in Britain and both parts of Germany due to the mismatch in working hours.

The authors of this study hypothesized that not only long working hours but also the mismatch between the actual and desired working times could be related to workaholism. However, no research has been conducted in this regard.

In the current study, the association between workaholism and the abovementioned mismatch in working hours was investigated using a representative sample of Koreans from the nationwide Korean Labor and Income Panel Study (KLIPS).

## MATERIAL AND METHODS

### Data

In this study, data from the 17th wave (2014) of the nationwide KLIPS were used, which included the selection of a representative panel sample of Korean households and individuals aged  $\geq 15$ , residing in urban areas. The first survey was launched in 1998, and since then, data have been collected annually.

The 17th wave (2014) of the survey was the first to include questions on both workaholism and the mismatch in working hours. As a person’s employment status can be an important related factor that influences working hours and workaholism, permanent waged workers were selected for this investigation.

The participants in the study were 3275 permanent waged workers from among 7199 respondents of an additional survey on workaholism in the 17th wave of the survey.

The final study involved 3157 individuals who answered questions on both workaholism and the mismatch in working hours.

For the purpose of this study, only workers who satisfied all 4 of the following conditions were defined as permanent waged workers:

- directly hired by their employers (not subcontracted or dispatched workers);
- full-time workers (not part-time workers);
- no fixed term in their employment contract (not temporary workers);
- a high probability of maintaining the current job (having relatively reduced job insecurity and not a day laborer) [17].

As suggested in the KLIPS, the total household income was divided by the square root of the number of household members. Subsequently, the value was divided into quartiles which were scaled from the highest quartile (the number below which 75% of the data lie) to the lowest (the number below which 25% of the data lie).

Occupations were classified into 3 types: white-, pink-, and blue-collar. A pink-collar worker is a person who is mainly engaged in the service industry.

Ethical approval was not required as the KLIPS provides secondary data that are publicly available for scientific use, and do not contain private information.

### Workaholism

Aziz et al. [18] conceptualized workaholism as an addiction that is characterized by an intense work drive that leads to the neglect of other interests and brings negative consequences. They developed the *Workaholism Analysis Questionnaire* (WAQ), which emphasizes work drive and work-life balance. The WAQ was used to measure workaholism in the present investigation [18].

The WAQ consisted of 29 items rated on a 5-point Likert scale. The framing question was: “Please answer the following questions concerning how you feel about various

aspects of your work by choosing 1 of the 5 alternatives that best reflects your answer.”

The category of workaholism was assigned to respondents based on varied components that represent an addiction to work.

The designation of workaholism was calculated as the total score of the 29 items in the completed WAQ, which was then divided by 29. Each item of the survey indicated a respondent’s agreement on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The respondents who answered “agree” or “strongly agree” on average to workaholism related factors, and thus scored  $>3$ , were defined as workaholics.

### Working hours mismatch

The mismatch in the actual and desired working hours was assessed by asking the participants to respond to a question that was asked by a trained interviewer, “What do you think about the time for work or income activities in your daily life?”. The following answers to this question were possible: “working fewer hours than desired,” “working more hours than desired,” and “matched.”

### Statistical analysis

The authors performed  $\chi^2$  tests to compare the differences in workaholism associated with general characteristics. A stratification analysis was conducted with regard to weekly working hours. Following the initial analysis, a multiple logistic regression model was used to assess the association between the mismatch in working hours and workaholism while adjusting for potential confounders. To identify the association between the mismatch in working hours and workaholism according to weekly working hours, a stratification analysis was conducted by dividing the working hours/week into 3 groups ( $\leq 40$  h, 41–59 h, and  $\geq 60$  h). The odds ratios (ORs) were calculated using a multiple logistic regression model, which was adjusted for potential confounders. The authors used SPSS for Windows (version 19.0; SPSS Inc., an IBM com-

pany, Chicago, IL, USA) for all analyses. Null hypotheses of no difference were rejected if  $p$ -values were  $< 0.05$ .

## RESULTS

Table 1 indicates the relationship between the general characteristics and workaholism.

There was a tendency towards increased workaholism until the second quartile level when income was higher (for the fourth quartile, third quartile, second quartile, and first quartile incomes, respectively; workaholism  $p = 0.047$ , 4.9%, 7.1%, 8.3%, and 6.1%). The participants who worked more weekly hours tended to become more addicted to work (for  $\leq 40$  h, 41–59 h, and  $\geq 60$  h, respectively; workaholism  $p = 0.009$ , 5.3%, 7.0%, and 9.5%). The respondents who worked more hours than desired displayed the highest frequencies of workaholism (for matched, working fewer hours than desired, and working more hours than desired, respectively; workaholism  $p < 0.001$ , 4.7%, 13.6%, and 12.8%).

Table 2 indicates that there was no statistically significant relationship between the weekly working hours and workaholism when stratified according to the mismatch in working hours.

In terms of workaholism, the ORs of the group working more hours than desired was statistically significant at 4.28 (95%CI: 2.29–7.99) in comparison to the reference (matched) group when the weekly working hours were  $\leq 40$  h. At 41–59 h, the OR of working fewer hours than desired was 4.13, and the OR of working more hours than desired was 2.14, which was statistically significant compared to the reference (matched) group. For weekly work of  $> 60$  h, the OR of working more hours than desired was statistically significant at 3.40 when compared to the reference (matched) group. These results are displayed in Table 3.

## DISCUSSION

In this study, the association between the mismatch in the actual and desired working hours, and the condition of workaholism among permanent waged workers in South

Korea was investigated. In comparison to the workers whose real and preferred weekly working times matched, those who declared a mismatch in working hours were more likely to be workaholics as per the definition of this term. The outcomes of the present investigation suggest that a mismatch between the actual and desired weekly working hours may be related to workaholism in waged workers.

These findings indicate that people who work more hours than desired, regardless of their actual weekly working time, are statistically significantly more likely to become addicted to work than matched workers. Workaholics tend to think about their work after work because of their obsessive nature [19], so they are likely to feel as if they work more hours than desired, regardless of their actual working time.

Among the workers with a weekly working time of 41–59 h, those who worked fewer hours than desired displayed more statistically significant tendencies of workaholism compared to matched workers. Those who worked  $\leq 40$  h/week or  $\geq 60$  h/week displayed similar trends but were not statistically significant. It is considered that the workers with 41–59 h/week occupied the largest number of study participants and displayed statistically significant results. Further studies with large sample sizes are, nonetheless, needed.

The authors presume that people with a strong work drive are likely to feel as if they work fewer hours than desired, regardless of their actual working time, and tend to become addicted to work.

From the addictive perspective, the condition of workaholism is evidenced by a more intensive internal compulsion to work, a consistent contemplation of work, and an excessive involvement with work compared to that observed in an average worker [18,20]. Workaholics may spend their time in a manner that is beyond their control. However, discerning the association between mismatched working times and workaholism based on the concept of

**Table 1.** The relationship between general characteristics and workaholism in the study on the association between working hours mismatch and workaholism, using data on a representative sample of Koreans<sup>#</sup> from the 17th wave of the Korean Labor and Income Panel Study (2014)

Variable	Participants [n (%)]		p
	no workaholism	workaholism	
Age			0.112
≤29 years	359 (94.7)	20 (5.3)	
30–39 years	1051 (92.5)	85 (7.5)	
40–49 years	897 (92.5)	73 (7.5)	
50–59 years	532 (95.2)	27 (4.8)	
≥60 years	108 (95.6)	5 (4.4)	
Sex			0.907
male	1939 (93.3)	139 (6.7)	
female	1008 (93.4)	71 (6.6)	
Marital status			0.403
single	624 (93.1)	46 (6.9)	
married	2172 (93.6)	148 (6.4)	
divorced	115 (89.8)	3 (10.2)	
widowed	36 (92.3)	3 (7.7)	
Income			0.047
fourth quartile	759 (95.1)	39 (4.9)	
third quartile	786 (92.9)	60 (7.1)	
second quartile	686 (91.7)	62 (8.3)	
first quartile	683 (93.9)	44 (6.1)	
Education			0.214
elementary or lower	51 (96.2)	2 (3.8)	
middle school	108 (89.3)	13 (10.7)	
high school	836 (93.9)	54 (6.1)	
college or higher	1951 (93.3)	141 (6.7)	
Occupation			0.079
white collar	1676 (92.5)	136 (7.5)	
pink collar	384 (95.0)	20 (5.0)	
blue collar	884 (94.2)	54 (5.8)	
Weekly working time			0.009
≤40 h	1098 (94.7)	62 (5.3)	
41–59 h	1191 (93.0)	89 (7.0)	
≥60 h	430 (90.5)	45 (9.5)	

**Table 1.** The relationship between general characteristics and workaholism in the study on the association between working hours mismatch and workaholism, using data on a representative sample of Koreans<sup>#</sup> from the 17th wave of the Korean Labor and Income Panel Study (2014) – cont.

Variable	Participants [n (%)]		p
	no workaholism	workaholism	
Working hours mismatch			0.000
matched	2287 (95.3)	113 (4.7)	
working fewer hours than desired	38 (86.4)	6 (13.6)	
working more hours than desired	622 (87.2)	91 (12.8)	

<sup>#</sup> N = 3157. These are the individuals who answered questions on both workaholism and the mismatch in working hours from among 3275 permanent waged workers included in a group of 7199 respondents of an additional survey on workaholism in the 17th wave of the Korean Labor and Income Panel Study.

**Table 2.** The relationship between weekly working hours and workaholism when stratified by working hours mismatch in the study on the association between working hours mismatch and workaholism, using data on a representative sample of Koreans<sup>#</sup> from the 17th wave of the Korean Labor and Income Panel Study (2014)

Weekly working time	Participants [n (%)]			
	workaholism in the matched group*		workaholism in the mismatched group**	
	no	yes	no	yes
≤40 h	999 (95.9)	43 (4.1)	99 (83.9)	19 (16.1)
41–59 h	899 (94.4)	53 (5.6)	292 (89.0)	36 (11.0)
≥60 h	206 (95.4)	10 (4.6)	224 (86.5)	35 (13.5)

<sup>#</sup> Explanations as in Table 1.

\* p = 0.321; \*\* p = 0.324.

addiction seems quite restrictive. A further study is essential to replicate the current findings on this association, and to explain the underlying mechanisms of the observed association using discrete theoretical frameworks pertaining to workaholism.

In congruence with the previous studies [1,21], this investigation also established that workaholism tended to intensify with an increasing number of working hours. However, long working hours were not associated with workaholism when stratified according to the mismatch in working hours. The mismatch in an employee's working hours can exert a significant impact on workaholism. However, since

the present study is cross-sectional, it cannot confirm any progress or change. In the future, cohort studies or meta-analytic investigations should be conducted to arrive at more definitive conclusions.

The current study is the first to establish a significant association between workaholism and the mismatch between the actual and preferred weekly working hours, regardless of whether the actual work duration corresponds to fewer or more hours than desired per week. Admittedly, preliminary results are provided in this paper to report the observed association, and it is, thus, difficult to demonstrate the underlying mechanisms

**Table 3.** Odds ratios (ORs) for workaholism by working hours mismatch according to weekly working hours mismatch in the study on the association between working hours mismatch and workaholism, using data on a representative sample of Koreans<sup>#</sup> from the 17th wave of the Korean Labor and Income Panel Study (2014)

Weekly working time mismatch	Participants [n (%)]		p	OR (95%CI)	
	no workaholism	workaholism		crude	adjusted <sup>a</sup>
≤40 h			0.000		
matched	999 (95.9)	43 (4.1)		1	1
working fewer hours than desired	13 (86.7)	2 (13.3)		3.57 (0.78–16.34)	3.67 (0.72–18.67)
working more hours than desired	86 (83.5)	17 (16.5)		4.59 (2.51–8.40)	4.28 (2.29–7.99)
41–59 h			0.002		
matched	899 (94.4)	53 (5.6)		1	1
working fewer hours than desired	14 (82.4)	3 (17.6)		3.64 (1.01–13.04)	4.13 (1.10–15.43)
working more hours than desired	278 (89.4)	33 (10.6)		2.01 (1.28–3.17)	2.14 (1.34–3.43)
≥60 h			0.004		
matched	206 (95.4)	10 (4.6)		1	1
working fewer hours than desired	7 (87.5)	1 (12.5)		2.94 (0.33–26.28)	2.72 (0.28–26.21)
working more hours than desired	217 (86.5)	34 (13.5)		3.23 (1.56–6.70)	3.40 (1.60–7.21)

<sup>#</sup> Explanations as in Table 1.

<sup>a</sup> Adjusted by age, sex, marital status, income, education, and occupation.

of the rationale of workaholism being associated with the discrepancy of the actual and preferred working time among individuals.

Although this preliminary study offers novel insights into the associations between workaholism and the mismatch in working time, some of its limitations should be acknowledged. Most importantly, this investigation is cross-sectional, and it cannot identify the causal link of the observed association. The authors did not use the weight in the statistical analyses, and the finding cannot be generalized to a general population.

Personal and environmental factors may have influenced workaholism and the mismatch in working times, but the KLIPS data did not include all potential confounding variables; therefore, the effect of residual confounding cannot be ruled out from the currently observed outcomes. Finally, the study population was limited to permanent waged workers to minimize the effects of the em-

ployment environment on the mismatch in working hours. The employment environment of irregular workers can affect both the mismatch in working hours and workaholism [22,23]. Thus, it is problematic to generalize the association between the mismatch in working time and workaholism in all workers.

## CONCLUSIONS

A significant association between the mismatch in working time and workaholism was observed among permanent waged employees in South Korea. This preliminary result should be confirmed by a further study using a sample size that has sufficient statistical power.

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