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Meaning of Work-life Balance for Workers With Disabilities

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ABSTRACT

Background: This article aims to show that work-life balance (WLB) for workers with disabilities can have important meanings that can affect turnover intention and exclusion from the labor market.

Methods: Using the Korean Panel Survey of Employment for the Disabled (1st–8th), panel logit models were applied to analyze the effect of WLB on the voluntary turnover intention and behavior of workers with disabilities. WLB types were categorized into four groups (Work-Life Dissatisfaction Group, Only Work Dissatisfaction Group, Only Life Dissatisfaction Group, and Work-Life Balance Group) based on the integration of job satisfaction and life satisfaction.

Results: Turnover intention was significantly higher in the work-life imbalance groups (Work-Life Dissatisfaction Group, Only Work Dissatisfaction Group), which is commonly associated with job dissatisfaction. The effect of WLB on turnover intention was 1.38 times higher in Only Work Dissatisfaction Group (β : 2.25, 99% confidence interval [CI]: 1.50, 2.31), characterized by dissatisfaction solely with their job, than in Work-Life Dissatisfaction Group (β : 1.90, 99% CI: 1.97, 2.53), which was experiencing dissatisfaction with both work and life. Only Work Dissatisfaction Group resulted in actual turnover, with females (β : 0.73, 95% CI: 0.37, 1.09) more likely to exit the labor market and males (β : 0.66, 99% CI: 0.41, 0.89) showing a higher tendency to change jobs.

Conclusion: WLB policy should focus on job dissatisfaction, a key predictor of turnover intention that leads to actual turnover behavior. Furthermore, women workers with disabilities are a priority policy target group to prevent exclusion from labor.

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1. Introduction

In 2023, approximately 2.64 million people with disabilities were registered in the Republic of Korea, accounting for 5.1% of the population. The Employment Promotion for Persons with Disabilities Act, enacted in 1990 and amended in 2000, has significantly improved employment rates for people with disabilities in private companies, rising from 0.43% in 1991 to 2.91% in 2020. Despite this progress, their employment rate is still only half that of non-disabled workers. Female workers with disabilities face even greater challenges, including a voluntary turnover rate 3.6 times higher than their male counterparts.

According to the 2020 Survey of Companies Employing Workers with Disabilities [1], the main reasons for voluntary turnover are job satisfaction (JS) issues, including work intensity (32.1%) and

dissatisfaction with working hours or welfare systems (20.3%), which are closely related to work-life balance (WLB). Factors such as low wages (19.4%) and irregular work schedules (8.6%) have less influence.

WLB, the balance between work and non-work roles [2], affects turnover intention and employee behavior [3–5]. Many companies have tried to improve WLB to boost JS and productivity, but there is insufficient support for workers with disabilities [6]. This study examines WLB from the perspective of vulnerable workers, assuming it influences JS and life satisfaction (LS) based on the spillover theory [3,5,7], which emphasizes the harmony of psychological energy between work and life.

WLB is assessed using a sociopsychological approach, linking it to JS and LS, which are contextual and relational indicators [4]. JS is a subjective indicator related to disability awareness, interpersonal

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relationships, jobs, and earnings. LS is also a subjective indicator related to leisure, community, health status, and social connections. In this study, individual and occupational factors were treated as objective and exogenous factors influencing workers' turnover [8–10] and were controlled.

This study aims to examine the effect of various WLB types, focusing on work-life imbalance, on the turnover intention, and actual turnover of workers with disabilities. It highlights the need to address WLB issues for those who have succeeded in finding employment but still experience significant work-life imbalance. Addressing work-life imbalance is essential for developing inclusive employment policies that enhance JS and reduce turnover among disabled workers as a vulnerable population segment. Fig. 1 illustrates the conceptual framework of this study.

2. Materials and methods

2.1. Transparency and openness

This section describes the study's sampling plan, data exclusions and manipulations, and all measures used in the research. The first-wave raw data and the code of the Panel Surveys of Employment for the Disabled (PSED) are available at <https://edi.kead.or.kr>. Approval from the institutional review board was not sought as the data were publicly available before this study. The design and analysis of this study were not preregistered.

2.2. Sampling

The data used in this study were acquired using the PSED (1st–8th), a dataset provided by the Employment Development Institute, an organization affiliated with the Korea Employment Agency for Persons with Disabilities in Korea. In 2008, the first PSED collected data from 5,092 individuals aged 15–75 years who were registered with the Disabled Person Welfare Law. Follow-up surveys were conducted yearly, and the 8th panel survey was completed in 2015 with 3,983 participants. All study participants provided their informed consent. A stratified sampling method was used with variables including province, type of disability, and age. The survey method was a computer-assisted personal interview by trained investigators to ensure data reliability and accuracy.

The final sample for this study was limited to wage workers with disabilities aged 15–60 years who responded that their employment is sustainable. The sample included full-time and indefinite contract term workers. This was to minimize the possibility of involuntary turnover due to exogenous factors (e.g., a forced layoff, contract expiration, and retirement) and to focus on voluntary turnover. Since an individual's employment status fluctuates, the sample to be analyzed for each period (1st–8th) also changes. Unbalanced panel data were used. The number of observations in the sample data to analyze the effect of the type of WLB of workers with disabilities at the current time (t) on the "turnover intention" at the current time (t) was 6,450 (1,511 individuals). For the "turnover behavior" tracked with a 1-year time lag ($t+1$), the number of observations was 5,140 (1,379 individuals). WLB was assumed to affect turnover intention in the short term, but actual turnover was assumed to occur within one year, consistent with previous studies [11,12]. Because of current data limitations, the employment status of workers with disabilities was tracked at yearly intervals. However, WLB may influence actual turnover with various time lags within a year.

2.3. Methodological analysis

In this study, STATA 14.0 was used for analyses. Furthermore, the effect of WLB on the voluntary turnover intention of workers with disabilities was estimated using a randomized panel logit model. The effect on the path of voluntary turnover was estimated using a randomized multinomial-panel logit model that accounted for panel heterogeneity and the characteristics of the unordered dependent variable. A panel logit model can be used to estimate panel data with a binary variable, as expressed in Eqs. (1) and (2):

$$y_{it} = \begin{pmatrix} 1, y_{it}^* > \mu_1 (= 0) \\ 0, y_{it}^* \leq \mu_1 (= 0) \end{pmatrix} \quad (1)$$

For ease of analysis, normalization to $\mu_1 = 0$ was used.

$$y_{it}^* = \alpha + \beta x_{it} + u_i + e_{it} \quad (2)$$

In Eq. (2), y_{it}^* refers to the latent response variable for the choice made by a worker with a disability i in period t , and y_{it} is the observed value of y_{it}^* . As illustrated in Eq. (1), μ_1 is a threshold value

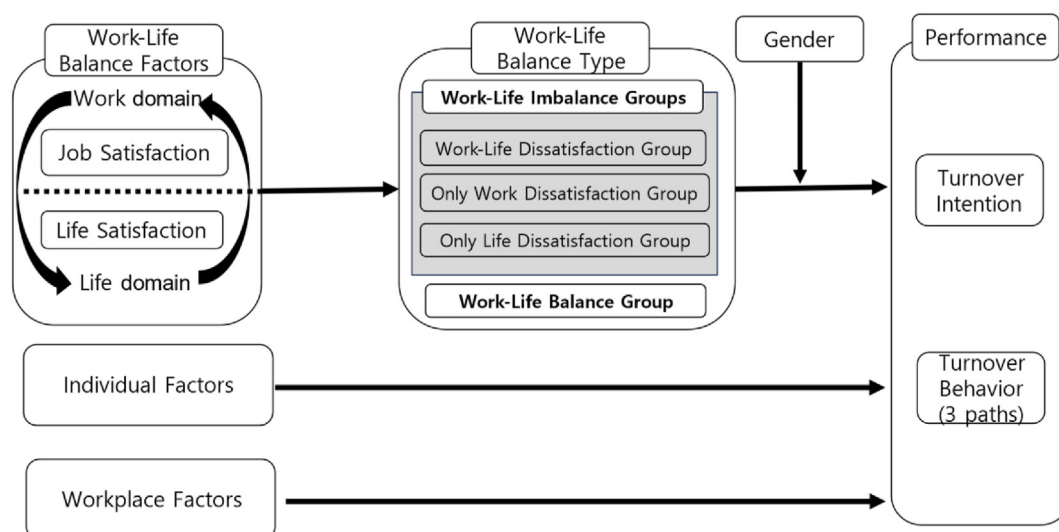


Fig. 1. Conceptual framework of this study: Schema of the relationship between variables.

that is a criterion for whether the choice of a worker with a disability fits into a particular category, and x_{it} is an explanatory variable that covers the period t of a worker with a disability i and affects the y_{it}^* value. Furthermore, the analysis considered u_i a random variable following a normal distribution to reflect the heterogeneity of the panel group. The analysis used the best-estimate method, assuming that the error e_{it} followed a logistic rather than normal distribution.

A multinomial logit panel model can estimate panel data with an unordered dependent variable (with three or more options). First, it can be assumed that if individual i chooses j at time t , utility can be represented by Eq. (3):

$$U_{itj} = x_{it}\beta_j + u_{ij} + e_{itj} \tag{3}$$

In Eq. (3), u_{ij} is an individual-choice characteristic factor and e_{itj} is an individual-time-choice characteristic factor. In this case, e_{itj} assumes a type I extreme value distribution that is independent.

2.4. Determinants

The independent variable is the WLB factor, and the control variables were composed of the individual and occupational factors commonly associated with turnover [8,13]. Table 1 summarizes the basic statistics of the three cluster factors.

First, WLB was embodied as the integration of JS and LS (WLB types). WLB was clustered, focusing on whether dissatisfaction is experienced in one or more areas of work or life. Those who reported being “very dissatisfied” or “dissatisfied” with JS or

LS (options 1 or 2 on a 5-point Likert scale) were regarded as work and life imbalanced. The WLB type could also change according to respondents’ employment status in the annual follow-up. WLB types were embodied in four ways: Work-Life Dissatisfaction Group was dissatisfied with work and life (low JS and LS). Only Work Dissatisfaction Group was dissatisfied with work but satisfied with life (low JS and high LS). Only Life Dissatisfaction Group was dissatisfied with life but satisfied with work (high JS and low LS). Finally, the Work-Life Balance Group was used as the reference group, representing a balanced group with satisfaction in both work and life. The average of JS and LS for each type, and values below (above) a normal level (option 3 on a 5-point Likert scale) were regarded as low (high).

Second, individual factors reflect demographic and disability-specific characteristics identified as influential in the existing literature [8,10]. These include variables reflecting human resources and vocational capabilities such as possession of professional qualifications (e.g., engineer, craftsperson) and education level.

Third, occupational factors include variables such as industry sector, occupational segment, full-time work, and job tenure. Based on the 10th Korean Standard Industrial Classification, the industrial sector was reclassified (using industry codes) into four industries: manufacturing, service I, service II, and other. “Service I” includes wholesale and retail trade, accommodation, and food services. “Other” includes agriculture, forestry, fishing, mining, electricity, gas, steam and water, and construction. The “service II” industry refers to the remaining companies.

Table 1
Descriptive statistics for observable variables

Variables		Measurement	Statistics <i>n</i> (%), Mean (sd)	
WLB factors	WLB type	Work-life imbalance groups	(Work-Life Dissatisfaction Group)	
			Group dissatisfied with work and life (Only Work Dissatisfaction Group)	
			Group dissatisfied with work only (Only Life Dissatisfaction Group)	
			Group dissatisfied with life only	
			Group satisfied with work and life	
	Work-life balance group (ref.)			
Individual factors	Gender	Male = 1	4,754 (73.7%)	
		Female = 0 (ref.)	1,696 (26.3%)	
	Age	Mean (sd)	49.78 (0.13)	
		Marital status	Marriage = 1	4,289 (66.5%)
	Residence (area)		Other = 0 (ref.)	2,161 (33.5%)
			Gyeongsang = 1	1,935 (30.0%)
			Chungcheong = 2	658 (10.2%)
			Gangwon = 3	310 (4.8%)
			Jeolla = 4	806 (12.5%)
	Household income		Metropolitan (Seoul, Gyeonggi) = 0 (ref.)	2,741 (42.5%)
			Mean (sd) in (monthly gross net income)	5.04 (0.01)
	Education level		High school graduate = 1	2,445 (37.9%)
			University graduate = 2	1,026 (15.9%)
			Junior high school graduate = 0 (ref.)	2,979 (46.2%)
	Professional qualifications		Yes = 1	2,019 (31.3%)
			No = 0 (ref.)	4,431 (68.7%)
	Degree of disability		Severe = 1	1,664 (25.8%)
		Other = 0 (ref.)	4,786 (74.2%)	
Disability type		Neuropsychiatric disability = 1	1,941 (30.1%)	
		Internal organ disability = 2	568 (8.8%)	
		Other = 0 (ref.) (physical, sensory, and other disabilities)	3,941 (61.1%)	
Occupational factors	Industry sector	Manufacturing = 1	1,561 (24.2%)	
		Service industry I = 2	710 (11.0%)	
		Service industry II = 3	3,109 (48.2%)	
		Other = 0 (ref.)	1,070 (16.6%)	
	Occupational segment	Primary jobs = 1	1,038 (16.1%)	
		Secondary jobs = 0 (ref.)	5,412 (83.9%)	
	Full-time work	Yes = 1	2,973 (46.1%)	
		Other = 0	3,477 (53.9%)	
	Job tenure	Mean (sd) Working years in current job	10.93 (0.10)	

Notes: ref., reference group; sd, standard deviation; WLB, work-life balance. *N* (%) is for categorical variables; mean (sd) is for continuous variables. Total *N* (%) = 6,450 observations (100 %) based on the data used for turnover intention analysis.

This study recategorized the original 10 categories of the 7th Korean Standard Occupational Classification into two occupational segments based on the dual labor market theory [9]. It classified typical clerks, managers, experts, related workers, and office workers as primary occupations. Secondary occupations included technical and mechanical processing jobs, service and sales positions, and elementary work [9].

2.5. Dependent variables

This study considered voluntary turnover intention and actual turnover as dependent variables. Turnover intention was measured based on a bivariate response (yes or no) to the question: “Do you want to continue working at your current job if there is no crisis of business closure or restructuring?” PSED annually tracks the economic activity status of workers with disabilities by applying the criteria of Statistics Korea. Based on this, turnover behavior was classified into three unordered dependent variables: job retention (reference), turnover to wage (including transfer to another paid job) or non-wage work (including self-employed/unpaid family work), and others (including unemployed/labor market exclusion).

3. Results

Table 1 summarizes the descriptive statistics of the sample population ($N = 6,450$). The key independent variable, namely WLB type, is constituted as follows: the Work-Life Dissatisfaction Group accounts for 3.2%; Only Work Dissatisfaction Group accounts for 6.8%; and Only Life Dissatisfaction Group accounts for 3.1%.

Table 2 compares the descriptive group statistics according to WLB type. Regarding the mean values of JS and LS for each WLB type, the values for Work-Life Balance Group (JS: 3.34, LS: 3.42) were above the normal level (3 on a 5-point Likert scale) for both aspects. However, the Work-Life Dissatisfaction Group (JS: 1.87, LS:

1.95) exhibits values below normal for both. The Only Work Dissatisfaction Group (JS: 1.92, LS: 3.16) demonstrated a below-normal level only for JS, and Only Life Dissatisfaction Group (JS: 3.10, LS: 1.97), only for LS. In terms of individual and occupational factors, the group statistics showed distributions roughly similar to the overall group mean values presented in Table 2.

Table 3 shows the effects of the WLB factors of workers with disabilities at time t on their turnover intentions at time t while controlling for individual and occupational factors. Turnover intention was significantly higher in the work-life imbalance groups (Work-Life Dissatisfaction Group and Only Work Dissatisfaction Group) than in reference group, which is commonly associated with job dissatisfaction. The effect of WLB on turnover intention was 1.38 times higher in Only Work Dissatisfaction Group (β : 2.25, 99% CI: 1.50, 2.31) than in Work-Life Dissatisfaction Group (β : 1.90, 99% CI: 1.97, 2.53). Turnover intentions were significantly affected by age as an individual-level factor (β : -0.04 , 99% CI: -0.05 , -0.03), and by service I industry (β : 0.97, 90% CI: 0.40, 1.54) and job tenure (β : 0.07, 99% CI: 0.04, 0.10) as occupational factors.

Table 4 presents the results of the dynamic panel analysis examining how WLB factors among workers with disabilities at time t influence their actual voluntary turnover behavior at time $t+1$ while accounting for gender effects. The results showed that men and women in Only Work Dissatisfaction Group (β : 0.66, 99% CI: 0.45, 0.87) demonstrated significant turnover behavior, whereas those in Work-Life Dissatisfaction Group, with higher turnover intentions, did not result in actual turnover. Note that male- and female-specific turnover paths showed slightly different patterns. Females in Only Work Dissatisfaction Group (β : 0.73, 95% CI: 0.37, 1.09) were significantly more likely to exit the labor market, whereas males (β : 0.66, 99% CI: 0.41, 0.89) exhibited a higher inclination to transition to wage or non-wage work.

Next, it is important to examine the variables related to socio-demographic and occupational factors that significantly affect

Table 2
Comparison of descriptive group statistics according to work-life balance types

Variables	Work-life imbalance groups			%, Mean (sd) Work-Life Balance Group (ref.)
	Work-Life Dissatisfaction Group	Only Work Dissatisfaction Group	Only Life Dissatisfaction Group	
Job or life satisfaction				
Job satisfaction	1.87 (0.02)	1.92 (0.01)	3.10 (0.02)	3.34 (0.01)
Life satisfaction	1.95 (0.02)	3.16 (0.02)	1.97 (0.01)	3.42 (0.01)
Individual factors				
Gender (male)	71.5	75.02	72.41	73.71
Age	49.67 (0.66)	49.37 (0.48)	49.75 (0.70)	49.74 (0.14)
Marriage	66.01	67.93	65.59	66.30
Residence				
Gyeongsang	35.00	28.67	35.90	29.74
Chungcheong	4.00	10.02	5.13	10.67
Gangwon	4.50	4.96	4.62	4.80
Jeolla	11.0	12.62	13.31	12.54
Income	4.96 (0.03)	4.99 (0.05)	4.97 (0.06)	5.03 (0.01)
Education				
High school	31.50	38.23	33.33	38.20
University	14.50	16.22	15.57	16.01
Professional qualifications	28.5	28.67	29.4	32.03
Degree of disability	24.00	24.24	27.26	25.86
Disability type				
Neuropsychiatc	28.00	32.03	31.79	30.09
Internal organ	8.20	8.56	8.92	8.77
Occupational factors				
Industry sector				
Manufacturing	15.23	21.40	21.24	24.95
Service industry I	15.18	14.59	13.07	10.96
Service industry II	44.37	43.77	47.81	48.73
Primary jobs	13.97	15.73	15.71	16.73
Full-time work	40.50	48.26	43.90	47.35
Job tenure	10.07 (0.43)	11.19 (10.53)	10.05 (0.45)	11.04 (0.11)
n (%)	206 (3.2%)	439 (6.8%)	200 (3.1%)	5,605 (86.9)

Notes: ref., reference group; sd, standard deviation.

Table 3
Effects of the work-life balance of workers with disabilities on voluntary turnover intention

Variables		β (s.e.)	dy/dx	
WLB factors	Work-life imbalance groups	Work-Life Dissatisfaction Group	1.90***(0.41)	0.03**(0.02)
		Only Work Dissatisfaction Group	2.25***(0.28)	0.05***(0.01)
		Only Life Dissatisfaction Group	0.39 (0.63)	0.003 (0.01)
	Work-Life Balance Group (ref.)			
Individual factors	Gender	Male (ref. Female)	-0.10 (0.26)	-0.001 (0.002)
	Age		-0.04***(0.01)	-0.001***(0.0001)
	Marital status	Marriage (ref. Other)	0.13 (0.26)	0.001 (0.002)
	Residence (area)	Gyeongsang	0.06 (0.26)	0.0004 (0.002)
		Chungcheong	-0.35 (0.43)	-0.002 (0.002)
		Gangwon	-0.59 (0.67)	-0.003 (0.003)
		Jeolla	-0.78 (0.53)	-0.004*(0.002)
		Metropolitan (ref.)		
	Income ln (monthly gross net income)		-0.08 (0.08)	-0.001 (0.001)
	Education	High school graduate	0.01 (0.28)	0.0001 (0.002)
		University graduate	-0.20 (0.42)	-0.001 (0.002)
Junior high school graduate (ref.)				
Professional qualifications	Yes (ref. No)	0.07 (.26)	0.001 (0.002)	
Degree of disability	Severe (ref. Other)	0.28 (0.28)	0.002 (0.002)	
Disability type (ref. Other)	Neuropsychiatric disability	0.29 (0.26)	0.002 (0.002)	
	Internal organ disability	-0.13 (0.51)	-0.001 (0.003)	
Occupational factors	Industry sector (ref. Other)	Manufacturing	0.28 (0.57)	0.002 (0.004)
		Service industry I	0.97*(0.57)	0.01 (0.01)
		Service industry II	0.84 (0.53)	0.01 (0.004)
	Occupational segment	Primary jobs (ref. Secondary jobs)	-0.43 (0.40)	-0.002 (0.002)
		Full-time work	Yes (ref. Other)	-0.09 (0.26)
	Job tenure	Working years in current job	-0.07***(0.03)	-0.001***(0.002)
	Constant		-2.410**(0.99)	
# of observations (groups)		6,450 (1,511)		
Log-likelihood		-455.40		
Wald chi ²		101.95***		

Notes: ref., reference group; s.e., standard error; WLB, work-life balance. dy/dx is a marginal effect. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

males and females' turnover behavior. Males (β : -0.24 , 90% CI: $-0.38, 0.10$), mostly as head of the household, were less likely than women to exit the labor market (being unemployed or inactive), and younger men and women were more likely to experience some form of voluntary turnover. The effects of marital status and livelihood on turnover differed slightly between the male and female groups. In the male group, married individuals (β : -0.30 , 95% CI: $-0.44, -0.16$) were less likely to exit the labor market. For males, the more severe the disability, the lower the voluntary turnover rate (β : -0.47 , 95% CI: $-0.68, -0.26$), whereas for females, there is a higher labor market exit rate (β : 0.54 , 95% CI: $0.29, 0.79$). In terms of occupational factors, males in the manufacturing industry were more likely to exit the labor market than those in other industries. However, the occupational segment did not significantly affect turnover. Males and females with full-time jobs were less likely to exit the labor market than indefinite-contract-term workers. Finally, as tenure increases, the likelihood of turnover decreases.

4. Discussion

This study suggests that WLB for workers with disabilities has significant policy implications for turnover intention and preventing exclusion from the labor market. The primary goal of employment policies for workers with disabilities has been quantitative expansion through mandatory and supported employment. Therefore, WLB after their employment has been neglected. However, workers with disabilities are more vulnerable to a work-life imbalance than those without disabilities. This is because they find it difficult to guarantee the quality of employment or job retention and because the demand for personal care due to health problems is high. Thus, organizational support in the workplace to

improve the JS of workers with disabilities should follow a different approach from that for those without disabilities.

The first finding in this study is that work-life imbalance caused by job dissatisfaction is a key factor in predicting turnover intention and behavior. Regardless of the LS of workers with disabilities, job dissatisfaction leads to high turnover intention and behavior. Previous studies on workers without disabilities focus more on improving employee retention through WLB policies. For example, family-friendly policies focus on a positive spillover from work to family and vice versa [4,5]. However, this finding highlights the importance of focusing policy attention on the negative spillover of job dissatisfaction on work-related outcomes such as turnover intention or behavior among workers with disabilities. This is consistent with the alternative perspective of the matching hypothesis, which suggests that work-family conflict primarily impacts the domain where the conflict originates [17,18].

The second key finding is that even when LS is high, persistent job dissatisfaction can result in negative spillover effects, leading to both turnover intention and actual turnover. The greater the dissatisfaction with the job relative to life is, the more likely it is to trigger turnover. This highlights important policy implications, namely that solving job dissatisfaction is the most crucial task for ensuring job stability for workers with disabilities. To address the work-life imbalance of workers with disabilities, focusing solely on reducing life dissatisfaction while overlooking job dissatisfaction may increase their turnover intention and the likelihood of actual turnover. As a simple example, the recent increase in remote telecommuting and part-time jobs appears to decrease commuting time for workers with disabilities, providing them with more leisure time and potentially increasing LS due to reduced working hours. However, a sustainable employment policy for workers with

Table 4
Effects of the work-life balance of workers with disabilities on voluntary turnover paths (total, male vs. female)

Variables	Turnover to wage or non-wage work versus job retention (ref.)			Others versus job retention (ref.)		
	Total	Male	Female	Total	Male	Female
WLB Factors						
Work-Life Imbalance groups (ref. Work-Life Balance Group)	Work-Life Dissatisfaction Group	0.13 (0.37)	0.08 (0.59)	0.19 (0.31)	0.28 (0.40)	-0.05 (0.50)
	Only Work Dissatisfaction Group	0.66*** (0.21)	0.64 (0.45)	0.27 (0.22)	0.115 (0.28)	0.73** (0.36)
	Only Life Dissatisfaction Group	0.37 (0.33)	-0.07 (0.56)	0.08 (0.30)	-0.35 (0.51)	0.62 (0.38)
Individual factors	Male	-	-	-0.24* (0.14)	-	-
Gender (ref. female)		0.09 (0.16)		0.01* (0.01)		0.03*** (0.01)
Age	Marriage	-0.02** (0.01)	-0.03* (0.02)	0.01* (0.01)	0.03*** (0.01)	-0.02 (0.01)
Marital status (ref. Other)		0.29* (0.16)	0.02 (0.25)	-0.30** (0.14)	-0.83*** (0.18)	0.37* (0.21)
Residence (area, ref. Metropolitan)	Gyeong-sang	0.25* (0.15)	0.05 (0.27)	-0.18 (0.15)	-0.09 (0.18)	-0.44* (0.23)
	Chung-cheong	0.25 (0.22)	-0.34 (0.45)	0.02 (0.21)	0.13 (0.27)	-0.26 (0.34)
	Gangwon	0.22 (0.32)	0.84* (0.50)	-0.11 (0.30)	-0.39 (0.41)	0.29 (0.47)
	Jeolla	0.21 (0.25)	0.42 (0.29)	-0.496* (0.261)	-0.711* (0.377)	-0.06 (0.36)
Income	High school graduate	-0.10** (0.04)	-0.59 (0.57)	-0.04 (0.04)	-0.06 (0.06)	-0.05 (0.062)
Education (ref. Junior high school graduate)	University graduate	0.07 (0.16)	0.29 (0.20)	-0.25* (0.15)	-0.28 (0.18)	-0.38 (0.25)
Professional qualifications (ref. No)	Yes	-0.22 (0.23)	-0.05 (0.27)	-0.63*** (0.24)	-0.62** (0.29)	-0.85* (0.47)
Degree of disability (ref. Other)	Severe	0.24 (0.15)	0.23 (0.17)	-0.08 (0.15)	-0.22 (0.18)	0.22 (0.28)
Disability type (ref. Others)	Neuropsychiatric	-0.20 (0.17)	-0.47** (0.21)	0.16 (0.15)	-0.09 (0.19)	0.54** (0.25)
	Internal organ	0.33** (0.15)	0.38** (0.18)	0.03 (0.14)	-0.15 (0.19)	0.24 (0.215)
	Manufacturing	0.22 (0.34)	0.36 (0.41)	0.25 (0.29)	0.29 (0.35)	0.17 (0.51)
Occupational factors	Service I	-0.12 (0.26)	0.05 (0.29)	0.42 (0.27)	0.69** (0.31)	-0.60 (0.65)
	Service II	0.02 (0.29)	0.09 (0.34)	0.34 (0.29)	0.132 (0.37)	-0.10 (0.66)
	Primary jobs	-0.12 (0.24)	-0.001 (0.26)	0.36 (0.25)	0.50* (0.28)	-0.34 (0.64)
Occupational segment	Yes	0.12 (0.20)	0.17 (0.23)	0.17 (0.21)	0.35 (0.26)	-0.18 (0.37)
Full-time work (ref. No)	Yes	-0.09 (0.15)	-0.13 (0.18)	-0.60*** (0.14)	-0.66*** (0.17)	-0.46** (0.23)
Job tenure		-0.07*** (0.01)	-0.07*** (0.01)	-0.04*** (0.01)	-0.03*** (0.01)	-0.08*** (0.03)
Constant		-0.89 (0.54)	-0.99 (0.61)	-1.82*** (0.54)	-2.51*** (0.65)	0.12 (1.01)
# of observations (groups)		5,140 (1,379)	3,786 (993)	5,140 (1,379)	3,786 (993)	1,354 (386)
Log likelihood		-1,346.6	-914.1	-1,346.6	-914.1	-409.8

Notes: WLB, work-life balance; s.e., standard error; ref., reference group. dy/dx is a marginal effect. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

disabilities is only possible through achieving WLB while eliminating factors that cause job dissatisfaction.

Future studies should examine the sociopsychological factors affecting job dissatisfaction among workers with disabilities. The results of a regression analysis that included detailed JS factors with overall JS as the dependent variable indicate the top three factors with the highest-influence coefficients as understanding and acceptance of workers with disabilities, communication, and interpersonal relationships. These are followed by wages, welfare benefits, working hours, and the physical working environment. Here, there is a need for a dynamic analysis to examine the influence of WLB and the mediating and moderating roles of socio-psychological factors on turnover intention and the subsequent transition to actual turnover considering various time lags.

Furthermore, this study demonstrated that workers with the dual vulnerability of being women and having disabilities are more likely to exit the labor market due to WLB imbalance, rather than change jobs. Gender inequality in employment exists even for workers without disabilities. Based on the patriarchal culture of Korea, women are more likely than men to leave jobs because of childcare and housework [14–16]. In general, regarding WLB, it might be rational (in the sense of utility maximization) for workers dissatisfied with their current job to seek a better one. However, it is noteworthy that the likelihood of attrition resulting from voluntary turnover, leading to long-term unemployment or exclusion from the labor market, is higher for women than for men. Thus, it is necessary to prioritize women workers with disabilities as a target group in the WLB policy to prevent a forced exit from the labor market, even if it appears voluntary.

This study highlights the WLB policy addressing job dissatisfaction for workers with disabilities as an important and urgent task that extends beyond increasing LS through quantitative benefits or reducing working hours. However, this quantitative study has limitations as it does not compare the WLB characteristics of workers with and without disabilities, and their impact on turnover, because of the absence of accurately matched data. Thus, more rigorous quantitative and qualitative comparative follow-up studies should be conducted to meet the policy demands of workers with disabilities and develop more effective WLB policy.

Data availability

The raw data and the code used in this study are available at <https://edi.kead.or.kr>.

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Institutional review board approval

I have not obtained institutional review board approval because the data used in this article are publicly available datasets provided

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CRedit authorship contribution statement

Jiwon Kim: Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Formal analysis, Conceptualization.

Conflicts of interest

There are no conflicts of interest to declare.

References

- [1] Ministry of Employment and Labor [Internet]. Survey on companies employing workers with disabilities. 2020 [accessed 2021 Aug 23]. Available from: <http://moel.go.kr>.
- [2] Talukder AKMMH. Supervisor support and organizational commitment: the role of work-family conflict, job satisfaction, and work-life balance. *J Employ Couns* 2019;56:98–116.
- [3] Brue KL. Work-life balance for women in STEM leadership. *Educ Leadersh* 2019;18(2):32–52.
- [4] Christoph N, Meier L, Sonntag K, Michel A. The chicken or the egg? A meta-analysis of panel studies of the relationship between work-family conflict and strain. *J Appl Psychol* 2015;100(2):522–36.
- [5] Wayne JH, Butts MM, Casper WJ, Allen TD. In search of balance: a conceptual and empirical integration of multiple meanings of work-family balance. *Pers Psychol* 2017;70:167–210.
- [6] Brucker D, Henly M. Job quality for Americans with disabilities. *J Vocat Rehabil* 2019;50(2):121–30.
- [7] Braun S, Peus C. Crossover of work-life balance perceptions: does authentic leadership matter? *J Bus Ethics* 2018;149(4):875–93.
- [8] David P, David MJ, Sergio F. So Hard To Say Goodbye? Turnover intention among US federal employees. *Public Adm Rev* 2011;71(5):751–60.
- [9] Gordon D, Edwards R, Reich M. *Segmented work, divided workers: the historical transformation of labor in the United States*. Cambridge: Cambridge University Press; 1982.
- [10] Wynn J, de Beeck SO, Hondeghem A. Interorganizational mobility within the U.S. Federal Government: examining the effect of individual and organizational factors. *Public Adm Rev* 2013;73(6):869–81.
- [11] Chordiya R. Organizational inclusion and turnover intentions of federal employees with disabilities. *Rev Public Pers Admin* 2022;42(1):60–87.
- [12] Martin Jr TN. A contextual model of employee turnover intentions. *Acad Manage J* 1979;22(2):313–24.
- [13] Lambert E, Hogan NL, Barton S. The impact of job satisfaction on turnover intent: a test of a structural measurement model using a national sample of workers. *Soc Sci J* 2001;38(2):233–50.
- [14] Method J, LePine J. Too close for comfort? Investigating the nature and functioning of work and non-work role segmentation preferences. *J Bus Psychol* 2016;31(1):103–23.
- [15] Ragins BR, Lyness KS, Williams LJ, Winkel D. Life spillovers: the spillover of fear of home foreclosure to the workplace. *Pers Psychol* 2014;67:763–800.
- [16] Trzebiatowski T, Triana M. Family responsibility discrimination, power distance, and emotional exhaustion: when and why are there gender differences in work-life conflict? *J Bus Ethics* 2020;162(1):15–29.
- [17] Amstad FT, Meier LL, Fasel U, Elfering A, Semmer NK. A meta-analysis of work-family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *J Occup Health Psychol* 2011;16(2):151–69.
- [18] Shockley KM, Singla N. Reconsidering work-family interactions and satisfaction: a meta-analysis. *J Manage* 2011;37(3):861–86.