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The Effect of Supervisors
' Transformational Leadership on Subordinates'
Psychological Empowerment and Work-Life Balance

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The Effect of Supervisors' Transformational Leadership on Subordinates' Psychological
Empowerment and Work-Life Balance^a

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Abstract

Research in Japan, as elsewhere, has turned to work-life balance as indicating not only the conflict between work and family, but also “a relationship where work and family mutually interact for quality improvements.” Such research, based on the novel concepts of positive spillover, enrichment, and facilitation, contemplates cases in which skills acquired at work are applied in the family, and feelings of significance and fulfillment fostered at work are transmitted to the family. This paper's research considers significance and fulfillment at work as psychological empowerment; this research inquires as to whether 1) the transformational leadership of a business superior, or below as “supervisor,” affects subordinates' work-life balance; and whether 2) psychological empowerment has mediated effects that link transformational leadership with said work-life balance. An investigation was made via questionnaire, and it was found that a supervisor's recognition increases the meaning, i.e., the feeling of significance, of subordinates' work, and this has positive effects on the realization of a work-life balance. It is asserted that the transformational leadership of a workplace supervisor and psychological empowerment are powerful concepts that have positive effects on employees' work-life balance.

Keywords: transformational leadership, psychological empowerment, work-life balance

1. Introduction

1.1 Background regarding the “work-life balance” concept

The term “work-life balance” (WLB) was increasingly promoted in the Japanese commercial world, starting in approximately 2005. WLB became a buzzword in greater Japanese society with the Japan Cabinet Office’s 2007 publication of the “White Paper on Gender Equality” (Cabinet Office, Gender Equality Bureau, 2007), which included a chapter on “Successful Women and Work-life Balance.” This had a substantial impact. Article 2 of the Basic Act for a Gender Equal Society, a Japanese law, defines “Formation of a Gender-Equal Society” as the “formation of a society in which both men and women, as equal members of society, are given opportunities to freely participate in activities in any fields of society and thereby equally enjoy political, economic, social, and cultural benefits, as well as share responsibilities.” The Cabinet Office's Gender Equality Bureau defines WLB as “a state in which both men and women at each stage of their lives can develop their work, family life, community lives, and self-development, as well as other various activities, while maintaining a balance in accordance with their wishes.” Thus, the concept of WLB achievement in Japan is strongly linked with the realization of a gender-equal society.

Japan’s waning labor force, due to a declining birthrate and progressively aging society, provides a backdrop to society’s search for gender equality. Accordingly, an indispensable need exists to promote broader gender equality, such as through the acceptance of increased flexibility and diversity in working styles, and especially for women. The realization of WLB is a strategy aimed at the achievement of these goals. WLB targets solutions for the multiple problems that arise when working people must balance their work and non-work lives; simultaneously, it seeks to change the working styles of regular company employees, who are currently bound by enforced obedience to organizational constraints, including overtime work, the changing of residence, transfer to another workplace, etc.

The WLB issue originates with how and where to divide life and work. “Life” in a broad definition has four domains: work, family, social, and personal life (Watanabe, 2010). This means that “life” is a concept within WLB that comprises domains other than work life. Balancing family life with work is especially pertinent among these four domains when observing the current state of Japanese society, in which the burdens of housework and raising children are centered on women.

1.2 Work-family conflicts

A review of academic research focused on family life among life domains other than work finds that there has been active research since the 1980s regarding the theme of work-family conflict (WFC) in psychology, sociology, and business studies, and especially in the United States. WFC signifies that when one attempts to achieve success in one's role either at work or at family life, then one is unable to fulfill the other role. Known in psychology as a type of "role conflict," WFC has been analyzed regarding its determinant attributes and effects on stress, from the perspectives of the role conflict theory. Greenhaus and Beutell (1985), pioneers in WFC research, summarized WFC as comprised of three aspects: time, strain, and behavior.

The "time" aspect of conflict is produced when the amount of time used to fulfill a role in one life domain (i.e., work/family) hinders performance of the role requirements in another life domain (i.e., family/work). Conflict based on "strain" occurs when roles at work and family become stress factors, and can evoke strain symptoms, such as tension, anxiety, depression, apathy, and frustration. "Behavior"-based conflict refers to the instance in which specific behavioral patterns expected of one role cannot be fulfilled with those expected of the other role.

Previous WLB research has focused on a search for factors that mitigate WFC, the effects of policies intended to support a work, housework, and child-rearing balance (for example, maternity leave systems, shorter working days, etc.), and the merits and demerits of WLB for companies (Dex & Scheibl, 2000).

1.3 Novel concepts regarding the work-life relationship

The first decade of the 2000s involved a shift in much of American research, from this "conflict between work and family" to a novel view that work and family can combine for mutual quality improvement (Greenhaus & Powell, 2006; Fujimoto, 2011). Poelmans, Stepanova, and Masuda (2008) presented concepts to describe the positive relationships between work and family: "positive spillover," or when the moods, skills, values, etc., flow between respective roles, which increases the overall quality of life; "work-family enrichment," in which the experiences in one role lead to an improved quality of experiences in the other role; and "work-family facilitation," in which the

resources gained in connection with one role have synergistic effects, so as to facilitate easier execution of the other role.

These concepts, which focus on the complementary nature of each of the work and family domains, share these analytical standpoints: 1) they consider the individual as a single unit for analysis; 2) they are divided into two vectors, one “from work to life,” and the other “from life to work”; and 3) they analyze the activities and characteristics of each domain from instrumental and affective aspects (Wayne, Grzywacz, Carlson, & Kacmar, 2007). Instrumental aspects involve skills and abilities acquired in one life domain (i.e., work/family) being applied in another life domain (i.e., family/work). Affective aspects involve feelings (of happiness, fulfillment, etc.) in one life domain (i.e., work/family) being transferred to in another life domain (i.e., family/work).

The emergence of this concept, whereby experiences at work and family mutually synergize to improve the quality of each, was linked to companies incorporating employees’ family lives within their scope, and in companies finding greater significance in their engagements to support the realization of their employees’ WLB. It was also indicated that informal support within individual employees’ workplaces was essential for WLB realization. Much research especially focused on the effects of WLB on supervisors’ workplace behavior, and employees’ perceptions of this behavior (e.g., Allen, 2001; Hammer, Kossek, Zimmerman, & Daniels, 2007).

1.4 Leadership of supervisors and work-life balance

Research focused on a supervisor’s behavior and the WLB of subordinates in the workplace has indicated the importance of family-supportive supervisory behaviors (FSSB). FSSB is a concept devised by Hammer et al. (2007), and is comprised of four behavioral characteristics for supervisors: 1) emotional support, 2) instrumental support, 3) role model, and 4) creative work-family management. Their framework promotes FSSB by formal directives and policies specifying organizational support of families, or by an organizational culture of informal family support; these can be linked, in turn, with subordinates’ perception that supervisors are supportive of families, increasing work-family enrichment. Research employing Hammer et al.’s (2007) conceptual model has verified that when subordinates perceive that a supervisor exhibits supportive behavior, then the subordinates’ WLB is realizable. This series of previous research has demonstrated that when a supervisor displays supportive

behavior towards subordinates' WLB, this positively affects those subordinates' realization of WLB.

What is sought, however, is not only the support of a supervisor for subordinates' WLB, but also the supervisor's assistance in finding meaning in their work, and in the supervisor's inspiring greater work efforts in their subordinates. If the cultivation of skills and positive feelings in the work domain are extended to positive life effects outside of work, then leadership by the supervisor, whereby he or she strives to arrange for fulfillment in subordinates' work, should also lead to the realization of WLB.

Managerial behavior that provides goals and targets for subordinates and promotes their proactive behavior has been called "transformational leadership." This is defined as leadership whereby the leader provides intellectual stimulation to followers, is aware of their individual differences, strives to enhance followers' strengths, and promotes a greater commitment in followers to achieve their targets and goals (Bass, 1985; Ono, 2011). When a supervisor has adopted transformational leadership behavior, subordinates demonstrate more proactive attitudes and behavior towards their work (Avolio, Zhu, Koh, & Bhatia, 2004). Thus, a supervisor's transformational leadership increases subordinates' sense of fulfillment in their work, leading to the realization of WLB.

The present study, therefore, is an examination of the effects on subordinates' WLB of the transformational leadership of supervisors. Further, psychological empowerment is used as a proxy variable for subordinates' ease of working and sense of fulfillment, for an exploratory investigation as to whether psychological empowerment mediates the relationship between the realization of subordinates' WLB and transformational leadership.

2. Review of prior research

2.1 Transformational leadership and work-life balance

Transformational leadership is comprised of four elements: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass, 1985; Avolio et al., 2004). A Multifactor Leadership Questionnaire has been used in a variety of verification research studies to measure these four elements of transformational leadership. However, Wang and Howell (2010) pointed out

that no distinction had been made in prior research on transformational leadership between leadership behavior vis-à-vis individuals, and leadership behavior vis-à-vis groups. Transformational leadership focused on individuals aims to develop the potential capabilities of individual followers, strengthen their abilities and skills, and boost their feelings of self-efficacy and self-respect. When the leader is interested in followers as individuals, he or she impacts these followers by understanding their respective abilities, skills, and needs, and by providing individual coaching and mentoring. Meanwhile, group-focused transformational leadership aims to communicate the importance of group goals, deepen shared values and beliefs, and inspire bonds of unity in the group directed towards the accomplishment of group goals. The target is the group as a whole, with the leader performing the same behaviors for different members within the group, and with all group members sharing the same perceptions of this leadership behavior.

Wang and Howell (2010) further indicated that the scale used for transformational leadership was a comprehensive scale, and was also one that made no distinction between individuals and groups. Thus, our research uses a scale for transformational leadership at the personal, or individual scale, to verify leadership's effects on individuals' realization of WLB. Transformational leadership vis-à-vis individuals are comprised of four elements: 1) communicating high expectations, 2) follower development, 3) intellectual stimulation, and 4) personal recognition (Wang & Howell, 2010).

“Communicating high expectations” involves a leader's expressing expectations for excellence, quality, high-level performance, etc., in followers. “Follower development” is behavior that expands followers' skills and abilities. This means raising followers' capabilities through the leader's individual consideration of each follower. “Intellectual stimulation” indicates the promotion of creativity among followers, by stimulating them to rethink shared preconceptions, observing problems from new angles, and challenging work by using methods that differ from the ordinary. “Personal recognition” involves the leader's praising followers when they have improved their behavior or performance, or when they have achieved their goals.

Shimai (2011) states that, from a positive psychology perspective, transformational leadership increases feelings of self-efficacy and followers' motivation. Furthermore, when a supervisor demonstrates transformational leadership behavior,

the attitude and behavior of subordinates changes, resulting in self-driven, proactive engagements in their work (Avolio et al., 2004). Subordinates also find meaning, or significance, in their own work, with the leader supporting their drive to pursue that meaning, and also recognizing their achievement of each goal. This cycle fosters feelings of fulfillment in subordinates' work. It is thought that, in addition to these feelings of work fulfillment, the positive work experiences that follow these feelings are transferred to life outside of work, which leads to the realization of WLB.

Nevertheless, limited research has hitherto focused on the relationships between transformational leadership and WLB. The research of Hammond, Cleveland, O'Neill, Stawski, and Tate (2015) has solely verified the direct effects of transformational leadership on work-to-family conflict and work-to-family enrichment. Hammond et al. (2015) verified that three resources, or personal resources (positive emotions), social resources (support by management for work and family), and work resources (autonomy), impacted the relationships between transformational leadership and the conflict and enrichment flowing from transformational leadership to work and, subsequently, to family. Their study clarified that the relationship between transformational leadership and work-to-family conflict was affected by all three resources, while the relationship between transformational leadership and work-to-family enrichment was affected by both personal and social resources.

Hammond et al. (2015) stated the importance of understanding the potential impact of transformational leadership on employees' work and family management, and that further research must be accumulated regarding these points. The present study of transformational leadership includes not only "work-to-life," but also "life-to-work" vectors. Thus, it may be possible to add novel findings regarding the relationships between transformational leadership and WLB.

2.2 Transformational leadership and psychological empowerment

When a supervisor has transformational leadership behavior, subordinates demonstrate, as described above, an attitude of spontaneously or proactively engaging in their work (Avolio et al., 2004). Subordinates also find meaning or significance in their work; they obtain support from their leader necessary to pursue that meaning, and the leader's approval whenever they achieve a goal. This cycle, which originates with the supervisor's transformational leadership, improves employees' sense of

fulfillment derived from their work.

The present study focuses on psychological empowerment as a variable that illustrates this sense of fulfillment. Psychological empowerment reflects an individual's orientation towards his or her work duties, called intrinsic task motivation, which is comprised of four perceptions: 1) sense of meaningfulness, 2) sense of competence, 3) sense of self-determination, and 4) impact (Spreitzer, 1995).

The "sense of meaningfulness" refers to one's work goals, and the individual's value perceptions of their goals, determined through a linkage with the individual's ideals and standards. The sense of meaningfulness is heightened if there is a match among the demands of one's work duties and one's beliefs or convictions and values. The "sense of competence" is the confidence an individual has in their own abilities, and represents feelings of self-efficacy and mastery. "Impact" is the extent to which the individual has an impact on the results of work strategies, control, and operations. The "sense of self-determination" is a person's sense that he or she has a choice in initiating and adjusting their behavior, and refers to work schedules, standards, and methods.

The cognition of these four aspects of psychological empowerment represents the individual's active desires and impressions or feelings toward their work duties. They are also components of psychological empowerment, and are interlinked (Spreitzer, 1995).

An increase in psychological empowerment enables a sense of confidence in one's work, such that an individual feels that they can impact the organization (Avolio et al., 2004). Such feelings can likely be expressed as a sense of fulfillment in one's work. Thus, the effect that transformational leadership has on subordinates' realization of WLB can be explained as follows: a supervisor's transformational leadership promotes inspiration in one's work, and increases subordinates' psychological empowerment. The positive experiences promoted by this psychological empowerment impact subordinates' realization of WLB.

3. Analysis framework and hypotheses

A supervisor's transformational leadership behavior enables subordinates to find meaning in their work. Subordinates that pursue that meaning are supported by their leader, and are recognized by the leader when they achieve that goal. Subordinates, from this cycle, obtain a sense of fulfillment from their work. These

positive feelings within the workplace are transferred to life outside of work; namely, this is thought to be linked to the realization of WLB due to positive spillover. Transformational leadership is also thought to be a mechanism that increases subordinates' empowerment, which leads to their realization of WLB.

This study, based on the above, intended to verify the two hypotheses noted below:

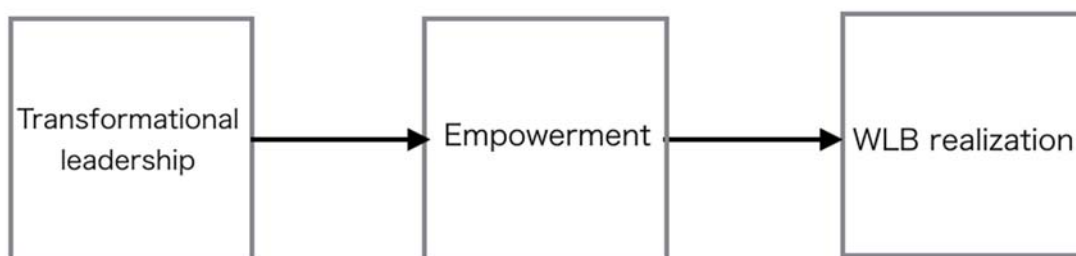
Hypothesis 1: Transformational leadership has positive effects on the subordinates' realization of WLB.

Hypothesis 2: Psychological empowerment mediates the relationship between transformational leadership and the subordinates' realization of WLB.

An analysis was performed following the framework described below, as noted in Figure 1.

Analysis procedures included the following four items: First, as a prerequisite for examining the mediating effects, an investigation was conducted to ascertain whether transformational leadership affected subordinates' realization of WLB. Second, to investigate the relationship between mediating and independent variables, an examination was conducted regarding the relationship between psychological empowerment and transformational leadership. Third, an examination was conducted regarding whether psychological empowerment impacted the subordinates' realization of WLB. Fourth, to investigate mediated effects, an examination was performed of a model incorporating transformational leadership as the independent variable, and psychological empowerment as the mediating variable.

Figure1. Theoretical framework



4. Analysis methods

4.1 Survey method and data

A quantitative analysis was performed, based on data obtained from a questionnaire survey in this study. Taking the form of joint research between the authors and the Labor Association of Prefecture “A,” with the objective of promoting the success of young, female workers, the survey was performed in October 2015. It targeted small- and mid-sized companies in Prefecture “A,” and 1,314 questionnaires were recovered. However, this report uses a sample of male and female full-time workers, aged 39 years and younger, or 995 people. Questions were regarding the surveyed persons’ individual circumstances, with the exception of demographic statistical information, such as age, sex, etc.; responses were submitted using a 5-point Likert scale: 1) Does not apply at all; 2) Does not apply; 3) Neutral; 4) Applies; 5) Strongly applies.

The questionnaire respondents were 421 women and 574 men. The mean age was 29.56 years old. Work types were as follows: office work, 251 people; planning, 39 people; technical, 206 people; sales, 186 people; production technology, 122 people; service technicians, 67 people; and others, 124 people. Of the respondents, 317 had a spouse, and there were 678 with no spouse. Respondents with children totaled 217, and respondents without children totaled 778. The mean overtime work was 19.71 hours.

4.2 Scales

An exploratory/explanatory factor analysis was performed to determine each of the scales used for analysis—WLB realization, transformational leadership, and empowerment—and scales were comprised according to the analysis results.

The scale used to measure WLB was comprised of four items. One factor was extracted from these four items, which is labeled the “WLB realization rate” ($\alpha = 0.889$), as noted in Table 1. Composite variables obtained from simple arithmetic means were used for the analysis.

Table 1. Exploratory factor analysis of Work-Life Balance (maximum likelihood method, promax rotation)

	Factor loadings
	I
I can play a role both in work and non-work life.	.836
I can play active roles both in work and non-work life.	.834
I can balance my time both in work and non-work life.	.828
I am satisfied with both work and non-work life.	.773
	contribution=66.98%

The transformational leadership scale was comprised of 18 items, conducted in Japanese, and referenced questions from the work of Wang et al. (2010). Questions included the following: 5 items concerning the demonstration of high expectations, 5 items concerning follower education/development, 4 items concerning intellectual stimulation, and 4 items regarding “personal recognition.” It was hypothesized that four factors would be obtained, but after repeating the factor analysis, two factors different from the hypothesis were extracted, as a result. The first factor extracted, Factor 1, was “behavior of the supervisor that inspired subordinates in their work.” The second factor extracted, Factor 2, was “Recognition and trust of the supervisor regarding the work of subordinates.” Factor 1, regarding the questions that comprised these factors, was called “work-related development” ($\alpha = 0.953$), and Factor 2 was called “personal recognition” ($\alpha = 0.915$). Composite variables obtained from simple arithmetic means for each item were used for the analysis, as noted in Table 2.

Table 2. Exploratory factor analysis of Transformational leadership (maximum likelihood method, promax rotation)

	Factor loadings	
	I	II
Challenges me to think about old problems in new ways.	.941	-.095
Gets me to look at problems from many different angles.	.869	-.029
Challenges me to be innovative in my approach to work assignments.	.864	-.004
Provides coaching to help me improve my job performance.	.775	.076
Provides feedback to help me develop my abilities.	.742	.140
Suggests training to improve my ability to carry out my job.	.701	.169
Provides me with developmental experiences.	.676	.218
Encourages me to be an independent thinker.	.675	.094
Helps me develop my strengths.	.640	.262
Encourages me to set high goals for myself.	.543	.132
Gives me special recognition when my work is very good.	-.048	.952
Acknowledges improvement in my quality of work.	-.023	.877
Commends me when I achieve my goals.	.051	.802
Gives me positive feedback when I perform well.	.189	.729
Demonstrates total confidence in me.	.112	.516
Shows confidence in my ability to meet performance expectations.	.225	.503
	Factor correlations	
	I	—
	II	.767

The empowerment scale was comprised of 12 items that were translated to Japanese from the questions in the work of Spreitzer (1995). Questions included three items concerning each of the following: meaning, competence, self-determination, and impact. Factor analysis results extracted the four factors hypothesized a priori, namely, “self-determination” ($\alpha = 0.846$), “competence” ($\alpha = 0.885$), “impact” ($\alpha = 0.929$) and “meaning” ($\alpha = 0.932$). Composite variables obtained from simple arithmetic means for each item were used for the analysis, as noted in Table 3.

Table3. Expratory factor analysis of Empowerment (maximum likelihood method, promax rotation)

	Factor loadings				
	I	II	III	IV	
I can decide on my own how to go about doing my work.	.867	-.059	-.060	.032	
I have significant autonomy in determining how I do my job.	.740	.098	.028	-.010	
I have considerable opportunity for independence and freedom in how I do my job.	.628	.120	.139	-.010	
I am self-assured about my capabilities to perform my work activities.	-.002	.955	-.036	.001	
I am confident about my ability to do my job.	-.085	.952	.026	.030	
I have mastered the skills necessary for my job.	.178	.594	-.002	-.033	
I have a great deal of control over what happens in my department .	-.065	-.031	.976	-.021	
I have significant influence over what happens in my department.	-.023	-.009	.945	.029	
My impact on what happens in my department is large.	.117	.042	.774	-.008	
My job activities are personally meaningful to me.	-.002	-.018	-.002	.970	
The work I do is meaningful to me.	-.025	-.009	.021	.956	
The work I do is very important to me.	.050	.036	-.022	.787	
	Factor correlations	I	II	III	IV
		—	.689	.630	.280
			—	.456	.327
				—	.225
					—

“Age,” “sex (female dummy),” “work type,”¹ “existence/non-existence of spouse (existence of spouse dummy),” “existence/non-existence of a child (existence of a child dummy),” and “overtime work hours” were used as control variables. Many previous research studies cite overtime work hours as a factor that compromise WLB (e.g., Milkie & Peltola, 1999). As the aim of the present research is to discover variables that have an impact on WLB aside from the length of working hours, overtime hours was the control variable used in the analysis. Table 4 illustrates the correlation analysis results for the chief variables used in the analyses.

Table4. Descriptive statistics and correlations for the chief variables

	M	SD	1	2	3	4	5	6	7
1 work-related development	3.30	0.79	1.000						
2 personal recognition	3.33	0.76	.792 **	1.000					
3 meaning	3.55	0.87	.340 **	.354 **	1.000				
4 competence	3.04	0.80	.034	.163 **	.309 **	1.000			
5 self-determination	3.15	0.76	.055 †	.189 **	.270 **	.645 **	1.000		
6 impact	2.37	0.95	.114 **	.223 **	.216 **	.425 **	.591 **	1.000	
7 WLB realization	3.11	0.81	.176 **	.218 **	.282 **	.186 **	.178 **	.135 **	1.000

** $p < .01$, * $p < .05$, † $p < .10$

¹ With “other work types” as a reference group, office work dummy, planning dummy, sales dummy, engineer dummy, production technology dummy, and service technician dummy were used as control variables.

5. Analysis results

A multiple regression analysis was performed upon verifying the hypothesis, according to the four analysis procedures described above. The analysis results for each of the procedures are discussed below, and are displayed in Table 5.

First, an examination was performed in Model 1 regarding the effects on the WLB realization rate regarding a transformational leadership's "work-related development" and "personal recognition." The results of Model 1 demonstrate that "work-related development" did not affect the WLB realization rate. Meanwhile, "personal recognition" had significant positive effects on the WLB realization rate, at 1% significance. Hypothesis 1 was partially supported by these results, and the supervisor's transformational leadership did impact WLB realization.

Second, to examine the relationships between mediating variables (parameters) and independent variables, an analysis was conducted for Models 2 through 5 to determine the relationships between any of the four dimensions of meanings of empowerment, competence, self-determination, and impact.

"Meaning" is used as an independent variable in Model 2, and an analysis of this model demonstrated that both "work-related development" and "personal recognition" had significant positive effects on meaning.

"Competence" is used as an independent variable in Model 3, and an analysis of this model demonstrated that while "work-related development" had significant negative effects on competence, "personal recognition" had significant positive effects.

"Self-determination" is used as an independent variable in Model 4, and an analysis of Model 4 demonstrated that while "work-related development" had significant negative effects on self-determination, "personal recognition" had significant positive effects.

"Impact" is used as an independent variable in Model 5, and an analysis of this model demonstrated that while "work-related development" had significant negative effects on impact, "personal recognition" had significant positive effects.

The second procedure notes a relationship between psychological empowerment and transformational leadership. Regarding transformational leadership, "work-related development" had significant positive effects on the meaning dimension of psychological empowerment, while "work-related development" had significant negative effects on the psychological empowerment dimensions of competence,

self-determination, and impact. “Personal recognition” also had significant positive effects on all dimensions of empowerment in transformational leadership.

Third, Model 6 examined the effects of psychological empowerment towards the WLB realization rate. The “realization rate of WLB” is used as an independent variable to examine the respective effects of the four dimensions of psychological empowerment. The analysis of Model 6 demonstrates that “meaning” had significant positive effects, at 1% significance, on the WLB realization rate. The two dimensions of “self-determination” and “impact” also had significant positive effects on the realization rate of WLB, at 10% significance each.

Fourth, Model 7 examined the mediated effects (parameters) of psychological empowerment within the relationship between the WLB realization rate and transformational leadership. The Model 7 analysis indicated that the “meaning” of psychological empowerment introduced as a mediated variable (parameter) had significant positive effects on the WLB realization, at 1% significance. “Impact” also had meaningful positive effects on the WLB realization rate, at 10% significance. Additionally, among transformational leadership aspects, “personal recognition” had significant positive effects on the WLB realization rate, at 10% significance. Hypothesis 2 was partially supported by these results; namely, it was clarified that transformational leadership has an impact on the realization rate of WLB, as partially mediated by psychological empowerment.

Table5. Hierarchical regression results: Transformational leadership, Empowerment, WLB realization

	model1	model2	model3	model4	model5	model6	model7
<Independent variable>	WLB realization	empowerment (meaning)	empowerment (competence)	empowerment (self-determination)	empowerment (impact)	WLB realization	WLB realization
<Dependent variable>	β	β	β	β	β	β	β
age	-.040	.100**	.194**	.207**	.243**	-.114**	-.097**
female dummy	-.047	.006	-.058	-.095**	-.103**	-.032	-.034
office work dummy	.039	.012	-.017	.039	-.009	.031	.034
planning dummy	.047	.082*	.032	.019	.054	.020	.023
engineer dummy	.015	.063	.032	.002	-.044	.005	.001
sales dummy	.011	.022	-.003	.047	-.055	.018	.006
production technology dummy	.019	-.093*	-.006	.024	.031	.036	.038
service technician dummy	.016	.095**	.051	.063†	.053	-.019	-.015
existence of spouse dummy	.108**	.031	.040	.033	.009	.101**	.096*
existence of a child dummy	-.004	.036	.035	-.016	.050	-.018	-.015
overtime work hours	-.343**	.033	-.021	.023	.083**	-.360**	-.355**
<transformational leadership>							
work-related development	.029	.178**	-.238**	-.243**	-.147**		.022
personal recognition	.196**	.206**	.359**	.390**	.361**		.090†
<empowerment>							
meaning						.264**	.228**
competence						.042	.043
self-determination						.069†	.068†
impact						.067†	.047
N	995	995	995	995	995	995	995
R2	.174	.184	.118	.127	.171	.234	.244
adj. R2	.163	.173	.107	.115	.160	.222	.230
F-statistics	15.878**	16.960**	10.137**	10.935**	15.544**	19.957**	18.513**

†p<.100; *p<.05; **p<.01

6. Discussion

This research posited three suppositions: 1) that supervisors' transformational leadership would promote inspiration towards work, and heighten subordinates' psychological empowerment; 2) positive work experiences that heighten psychological empowerment would be transmitted to life outside of work; and 3) such an environment would have positive effects toward the realization of WLB. These were formed into two hypotheses; namely, Hypothesis 1: Transformational leadership would have positive effects on subordinates' realization of WLB; and Hypothesis 2: Psychological empowerment would mediate the relationship between transformational leadership and subordinates' realization of WLB.

This study's analysis results regarding the relationship between supervisors' transformational leadership and subordinates' psychological empowerment can be generally summarized as follows: Among the aspects of a supervisor's transformational leadership, "personal recognition" had positive impacts on the sub-dimensions of psychological empowerment, or meaning, competence, self-determination, and impact. Further, the WLB realization rate is heightened when mediated by meaning and self-determination. "Work-related development," another aspect of transformational

leadership, had a positive effect only toward meaning, and a negative effect toward competence, self-determination, and impact. It could be said that in this sense, Hypothesis 1 and Hypothesis 2 were partially supported.

Psychological empowerment becomes gradually formed over one's career by incorporating the elements of meaning in work and impact on society. This is a concept that reflects not only how an individual views their work, but also a sense of their values. Thus, the researcher should be able to consider fulfillment in work aspects—one side of the realization of WLB—as a proxy variable. The supervisor, to cultivate work-related fulfillment, must provide thrilling work experiences for subordinates to make them aware of the social significance of their work, integrate organizational goals with subordinates' individual beliefs and values, and display leadership behavior that will make work seem rewarding. This kind of managerial behavior corresponds to the concept of “work-related development,” as discussed in the research.

Meanwhile, in the leader-member exchange (LMX) theory, differences in the quality of social exchange relationships between the leader and subordinates are thought to define the behaviors and attitudes of both leaders and members. Specifically, a leader will have a high-quality relationship that involves special considerations and trust with subordinates that the leader likes or favors, whereas with subordinates that the leader does not particularly like or favor, the leader has indifferent or dispassionate relationships, limited to the worksite. Research exists that has verified that differences in LMX quality brought about by transformational leadership heightens psychological empowerment (e.g., Liden, Wayne, & Sparrowe, 2000). Wakabayashi, Minami, and Sano (1980) found that vertical dyad linkages, or exchanges of high role expectations between supervisors and subordinates, the expansion of discretionary leeway, etc., spur subordinates' career development. The “personal recognition” aspect of transformational leadership used in the present study signifies positive feedback from a supervisor for goal attainment and work quality improvements, etc. One may also consider such “personal recognition” as an aspect of LMX. Thus, this study's results, which indicate that “personal recognition” raises psychological empowerment in subordinates, is consistent with the findings of prior research.

However, this study's survey results illustrated that another sub-dimension of transformation leadership, “work-related development,” had positive effects only on meaning, with negative effects on competence, self-determination, and impact. These

results indicate that when a leader helps subordinates develop their work skills, this is linked with those subordinates finding meaning in their work. However, such work-related development can simultaneously lead to subordinates' loss of a sense of fulfillment toward their work. Meanwhile, the "personal recognition" sub-dimension of transformational leadership had positive effects on meaning, competence, self-determination, and impact. These results suggest that to foster subordinates' feelings of work fulfillment, it is indispensable that the leader displays appreciation of the subordinates' work while assisting them in work-related development. Not all work is rewarding to subordinates, and no matter how much the supervisor may encourage subordinates' work, if the work does not match their skills and abilities, or if this work involves following predetermined procedures, it will be difficult for subordinates to find satisfaction in that work. It is thought that in such cases, the supervisor's role supervisor is to supplement a sense of fulfillment in that work through demonstrating recognition and approval. The supervisor's recognition, in this manner, is indispensable to the realization of a work-life balance.

7. Summary and conclusions

This study concludes the following: "Positive supervisory recognition increases subordinates' psychological empowerment, which then works to raise the WLB realization rate." We would like to close this paper with some brief comments regarding the academic and practical implications of this conclusion.

Carlson, Kacmar, Wayne, and Grzywacz (2006) divided the contents of work-family enrichment (WFE) into two vectored directions, "from work to family," and "from family to work," and found four aspects: affect, development, capital, and efficiency. The enrichment of "from work to family" notes "affect" as its first aspect, which notes that the good feelings or mood fostered from work-related experiences leads to improved relationships within the family. The second aspect, development, occurs when the skills, abilities, and behaviors cultivated through work improve family relationships. The third aspect, capital, involves the resources garnered through work (stability, confidence, sense of achievement, etc.) fostering improved family relationships. The enrichment of "from family to work" shares the same aspects of affect and development, while the third is efficiency, and not capital. Namely, such concepts as the ability to concentrate, and the elimination of wasteful time required to fulfill home

and family duties, are linked with making the individual a better employee.

Additionally, prior WFE research has included verification studies of various promotional (effective) factors; these include factors related to individual personality, for example, positive affect, self-efficacy, or work identity; and factors related to environmental resources, such as satisfying job duties, growth opportunities, support of colleagues and supervisors, a work climate supportive of families, the renown inherent in one's job, etc. However, insufficient theoretical underpinnings have accumulated for the mechanisms that engender such relationships (Wayne et al., 2007).

The "transfer of positive experience" is one explanatory principle of the enrichment effect (Greenhaus & Powell, 2006); this is a mechanism whereby vitality obtained from experience in one domain is transferred to responsibilities in another domain, which then generates new experiences and results. Incorporating the concept of psychological empowerment from this study can provide reinforcement of this principle's explanatory power. Namely, the gist of the "capital" aspect, or the positive feelings regarding one's competence and the meaningfulness of one's work, is concretely captured in the concept of psychological empowerment. This point is the theoretical implication of this study.

One practical implication of this study is that material has been provided for counterarguments to policies that minimize the problem of WLB realization by considering only the reduction of working hours. The inclusion of human resources management issues within the scope of WLB-related decisions serves to increase working persons' "autonomy" (Morita, 2013). A core issue in the WLB concept, in other words, is determining where and how to set boundaries, to find where the two work and life systems best interface. Recognizing the autonomous nature of work and life beyond these properly established boundaries is essential to securing the freedom so perturbed when one's top priority must be work. The realization of WLB means not only reduced working hours, but also the granting of freedom to work as long as one needs. Psychological empowerment as used in this study is a concept that includes "self-determination," or autonomy toward one's work. Increasing psychological empowerment would also be likely to increase one's autonomy in determining where to set time boundaries that divide work and life. This study has the practical implication of having again verified that the security of a sense of fulfillment in one's work is a key aspect in the realization of WLB.

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ⁱ This research is conducted based on Kishino & Hirano(2016), which investigated the influence of supervisors' behavior on subordinates' work-life balance, by using Japanese engineering company data. We make a further investigation into employees who work in small- and mid-sized companies in Prefecture "A".

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