

THESIS

WORK-LIFE BALANCE IN A JAPANESE SAMPLE:  
A PERSON-CENTERED APPROACH

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## ABSTRACT

### WORK-LIFE BALANCE IN A JAPANESE SAMPLE:

#### A PERSON-CENTERED APPROACH

Work-life balance (WLB) has been linked to one's job satisfaction, well-being, and quality of life. Despite its importance, WLB remains elusive to many working people. The present study used a person-centered methodology called Latent Profile Analysis (LPA) to answer three research questions: (1) Can people be categorized into meaningful exclusive and exhaustive latent groups of varying degree of WLB based on their experiences in work and life domains?; (2) To what extent do demographic variables predict membership in certain profile of WLB?; (3) Are identified profiles of WLB related to individuals' well-being? In a sample of over 700 middle-aged workers from Tokyo, Japan, I identified three distinct subgroups that qualitatively differed in their symptomology of balance. I referred to these as the Moderate WLB Profile that was family-oriented and partially engaged in their multiple life roles, the High WLB Profile that was fully engaged and efficient at managing their roles, and the Low WLB Profile that was partially engaged and inefficient at juggling among several life roles. Regarding demographics, age, gender, and marital status seemed to be important predictors of one's latent profile membership. Furthermore, the latent profile membership was predictive of one's well-being. In sum, the study results suggested that WLB is indeed critical to workers' well-being and hence, further efforts to boost balance are needed. One-size-fit-all policies of WLB may not work well for all employees. Understanding workers' circumstances is critical for more targeted interventions/policies to enhance balance.

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## CHAPTER 1 – SPECIFIC AIMS

Balance between work and non-work domains, often referred to as Work-Life Balance (WLB), is important for nearly all workers. The rich literature on WLB suggests that working people desire balance (Fischlmayr & Kollinger, 2010; Proost & Verhaest, 2018). Having a balanced work-life arrangement can be very beneficial, as people are less stressed, more motivated, and more productive (Byrne, 2016). Previous research has related WLB with a wide range of positive outcomes including increased job performance, life satisfaction, and well-being (Cho & Tay, 2016; Haar et al., 2014; Johari et al., 2018; Schulte et al., 2015). Conversely, a lack of balance across domains can lead to psychological distress, burnout issues, job turnover, and lower well-being (Allen et al., 2000; Boamah & Laschinger, 2016; Nyberg et al., 2018). Despite the desire for WLB and the significance of balance in people's lives, many still report that they feel out of balance (Bannai & Tamakoshi, 2014; Ezzedeen & Zikic, 2017; Knecht et al., 2011). Additional research is needed to understand the phenomenon of WLB and determine why attaining balance remains elusive to so many people. In response to this need, the present study is designed to (1) identify unique groups of people with different WLB experiences based on their individual circumstances, (2) evaluate how different demographic characteristics and personal attributes play a role in one's WLB, and (3) determine if people with higher balance report greater degree of well-being.

Researchers over the past few decades have studied WLB in earnest. While some progress has been made, there is not a clear consensus on the conceptualization of the phenomenon (Casper et al., 2018; Powell et al., 2018; Sirgy & Lee, 2016). In many cases, researchers have not conceptualized WLB based on any theoretical foundation (Casper et al.,

2018). Among those who have conceptualized WLB based on theory, many different theories have been utilized – i.e. boundary theory (Bulger et al., 2007; Clark, 2000; Sturges, 2008), role balance theory (Marks & MacDermid, 1996; Saltzstein et al., 2001), work-family enrichment theory (Greenhaus & Powell, 2006; Kim & Beehr, 2020). As a result, existing definitions and conceptualizations of WLB differ in several aspects, including dimensionality, properties, and even their underlying meanings. Regarding dimensionality, Valcour (2007) defined a unidimensional construct – a single underlying variable that captured one’s contentment in their abilities to fulfill work and life demands. On the other hand, Frone (2003) defined a multidimensional construct, alluding to work-life conflict and facilitation. In terms of properties, some have asserted that WLB is primarily psychological (unobservable, constructed in the mind of an individual, i.e. one’s satisfaction with work-family balance; Valcour, 2007). Whereas others have defined balance as relational (observable, shared between an individual and their role-related partners, i.e. fulfilment of one’s expected role requirements; Carlson et al., 2009; Grzywacz & Carlson, 2007). With regard to meaning, Lyness and Judiesch (2008) described WLB as having satisfying experiences in all work-life domains, while Marks and MacDermid, (1996) described WLB as the ability to fully engage in multiple roles and Clark (2000) described WLB as having minimalized role conflicts. The inconsistencies in how WLB is conceptualized, defined, and described impede the development of a solid theory for WLB. Jaccard and Jacoby (2009) described that a theory represents a system of relationships between two or more constructs. It is a strong theory that guides scientific inquiry. Therefore, without a strong theory, scientific progress is hampered and our systematic understanding of the surrounding world is limited. For this reason, reviewing prevalent WLB theories and identifying a comprehensive definition for WLB is important to guide further research on this topic.

Beyond the difficulties associated with a missing theoretical framework, work-life dynamics have shifted remarkably and such changes have not been adequately taken into account in WLB research (Darcy et al., 2012; Fischlmayr & Kollinger, 2010; Jackson et al., 2016). Kelliher et al. (2019) pointed out that WLB research has focused too much on “restricted” life activities (dual-earner couples with childcare responsibilities) and “traditional” working conditions (full-time, permanent employment). The extant literature has largely left out the work-life concerns of a growing proportion of people – including those in a childfree family (Rick & Meisenbach, 2017), single parents, unmarried people (Janasz et al., 2013; Kelliher et al., 2019; Languilaire & Carey, 2017), as well as those with marginalized identities (e.g., people of color, LGBTQ), and intersectional identities (e.g., African American women, older LGBT employees (Ryan & Briggs, 2019). These understudied groups of people still have other non-work commitments they attend to that contribute to their well-being, which include hobbies, social engagements, and religious practices. Failure to include these facets of life in WLB research may result in an incomplete understanding of the phenomenon. Additionally, with regard to the work domain, the way people communicate and collaborate to complete a job has dramatically changed because of smart phones and other mobile information technology devices (Adisa et al., 2017; Taskin & Edwards, 2007). Flexible work-time-place arrangements (i.e. working remotely from home, employee-designated work time) have become an option for many working people as a means to help them improve WLB (Hegewisch, 2009). However, previous studies have not consistently supported the effectiveness of these policies in improving WLB (Brannen, 2005; Uglanova & Dettmers, 2018). A more holistic and modern approach to both work and non-work life may provide more insights for better informed policies and interventions to improve WLB for working people.



Another potential factor that stymies WLB research from having a larger impact on the field and on the lives of individuals is the exclusive focus on variable-centered approaches to the measurement of the construct. A variable-centered approach focuses on the association between certain variables of interest (i.e. work-life imbalance is related to lower life satisfaction) and assumes that such relationships are similar for all people. In other words, a variable-centered approach relies on the assumption that participants are sampled from one homogenous population and that a single set of parameters can be estimated to describe the characteristics of that population (Howard & Hoffman, 2018). Since variable-centered research methods only generate one set of parameters, their results are often very simple, and easy to meaningfully decipher (this is commonly referred to as parsimony; Muthén & Muthén, 2000). To demonstrate, consider a few recent WLB studies that have taken a variable-centered approach. Dettmers (2017) utilized structural equation modeling to demonstrate that prolonged work availability was associated with psychological detachment and work-family conflict, which in turn resulted in emotional exhaustion over time. In another study, Cho and Tay (2016) utilized multiple regression and path analysis to find that negative work-to-family spillover was related to reduced life satisfaction in a 9-year follow-up, and this relationship was mediated by job and marital satisfaction. It is notable that while these methods allow for simple and easy-to-interpret results, they sacrifice specificity – the extent to which the results can precisely describe subjects in the study. A person-centered approach, which includes mixture modeling, cluster analysis, latent class/profile analysis, and latent transition analysis, focuses on identifying emergent subgroups in a sample (Collins & Lanza, 2009; Howard & Hoffman, 2018) and may be more helpful in explaining individual differences in how people experience WLB.

To address the challenges of WLB research just outlined, I conducted a study with three specific aims. First, I identified subgroups of Japanese workers with different WLB experiences using a person-centered approach called latent profile analysis. To do this, I screened the literature for a comprehensive definition of WLB that reflects contemporary characteristics of the work and non-work domains. This definition was then used to guide a search for indices of WLB measured in an archival dataset called Midlife in Japan (MIDJA). Based on the patterns of responses on these WLB indicators, I identified the number and characteristics of emergent subgroups in this sample of urban Japanese workers and drew inference on their WLB. Second, I considered covariates (i.e. gender, age, marital status, and family status – whether the participant had any children) that may influence the latent profile membership in particular WLB profiles. Specifically, I examined profile prevalence across different levels of these covariates, and thereby identified individual characteristics that may predispose an individual to membership in a certain WLB latent profile. Lastly, I also examined how different WLB latent profiles relate to people’s well-being. To study these potential consequences of WLB, I tested for the statistical significance in the mean difference of distal outcomes (i.e. well-being) between these latent WLB profiles. Results from the current study have the potential to bridge the gaps in WLB theories and practices through probing how different facets of an individual’s life (i.e. work characteristics, home demands, and other social responsibilities) contribute to their experience of balance and how WLB may impact an individual’s perception of well-being. More importantly, these findings may be used to inform policy makers about how to best support and promote WLB for their employees through more targeted interventions. For example, if the study results show that people in the low balance profile tend to report high degree of negative work-to-family spillover, an organization that already offers flexible work arrangement may

need to put together a workshop or training to help employees manage their daily work schedule, increase productivity, and wrap up their work for the day before heading home.

The following sections discuss in more details the relevant literature that serves as the premise for the current study. First, I reviewed dominant theories on WLB with a focus on attitude and person-environment (P-E) fit theories. These theories undergrid the comprehensive definition of WLB that I used throughout this paper:

Employees' evaluation of the favorability of their combination of work and nonwork roles, arising from the degree to which their affective experiences and their perceived involvement and effectiveness in work and nonwork roles are commensurate with the value they attach to these roles. (Casper et al., 2018, p. 197)

Second, I discussed relevant tools that have been used to quantify WLB, including various variable-centered approaches and available measures of WLB. Third, I explained how a person-centered approach can help enhance the precision of WLB measures. Finally, I discussed cultural perspectives that need to be taken into consideration in order for the WLB construct to be relevant for a broader array of people, as these perspectives impact how people view the world and assign values to the roles they engage in (Chandra, 2012), thus influence how they experience WLB. After establishing these building blocks, I specified my *a priori* hypotheses, introduce the dataset, and described the analytic approach I used to conduct my study.

## CHAPTER 2 – LITERATURE REVIEW ON WORK-LIFE BALANCE THEORIES

Historically, Kahn et al. (1964) was the first to theorize on the dynamics among various roles that an individual has. They defined a role as a set of activities that need to be performed by the person occupying such role. They believed that job stress can arise from role conflict (i.e. incompatible expectations) or role ambiguity (i.e. unclear expectations), making it difficult for people to adapt and fulfill their roles. Hence, role conflict and role ambiguity can lead to negative outcomes like job dissatisfaction (Kahn et al., 1964). Rooted in role theory (Kahn et al., 1964; Kahn & Quinn, 1970), researchers developed multiple theories on the functionality of one's role system, namely role balance theory (Marks & MacDermid, 1996), role conflict theory (i.e. Greenhaus & Beutell, 1985), and role enhancement theory (i.e. Sieber, 1974).

Role balance theory (Marks & MacDermid, 1996) is one of the most prevalent theories utilized by researchers. Role balance theory postulates that balance is one's holistic, non-hierarchical appraisal of the role system and role strain arises when the total role system is overdemanding. As such, being in balance means being mindful and engaged in the performance of every role. Previous studies demonstrated the association between role balance and better well-being, marital, and life satisfaction (Bailey, 2008; Chen & Li, 2012; Lee et al., 2014).

In conjunction with role balance theory, role conflict theory posits that people have finite resources to juggle between various roles. Satisfying all these roles requires people to exhaust all of their limited resources, which inevitably results in strain and conflict between the demands of different roles (Greenhaus & Beutell, 1985). In contrast to role conflict theory, role enhancement theory proposes that partaking in multiple roles may be beneficial in the sense that more and varied roles may present several opportunities and resources for one's development

and growth (Barnett, 1998; Marks, 1977; Sieber, 1974). Validating these approaches, numerous studies using these theoretical frameworks showed that role conflict was related to imbalance, higher degree of burnout as well as detrimental physical and mental health (Benner & Curl, 2018; Neto et al., 2018; Tahir & Aziz, 2019), whereas role enhancement was associated with higher marital satisfaction, job satisfaction and well-being (Demerouti et al., 2012; Srivastava & Srivastava, 2014).

Clark's (2000) work/family border theory defined balance as having satisfaction in both work and family spheres with minimal role conflict. The author noted that there are aspects of work and life domains that are difficult to alter, yet people can, to some extent, connect their work and family life with a permeable, flexible, and even blendable border (Clark, 2000). In other words, experiences in the work domain may cross over the work/family border and influence the family domain and vice versa. Additionally, this border can contract or expand depending on the demands within each domain; if there is a great deal of flexibility and permeability around the border, the two domains may blend together and become indistinguishable (Clark, 2000). Border theory was adopted to explain several phenomena, including employees' segregation of work and family domains in an attempt to achieve balance (Karassvidou & Glaveli, 2015), employee's private use of internet at work to respond to high demands in their personal, non-work life (König & Caner de la Guardia, 2014), and the relationship between employees' life-to-work conflict and at-risk drinking and job-related hangover (Bennett et al., 2006).

Although these role and border theories fueled a great deal of research, each only discussed certain aspects of WLB. Since balance is a subjective experience, more holistic theories that tap into individual differences may do a better job of conceptualizing WLB. In fact,

several researchers attempted to integrate existing theories on WLB. Sirgy and Lee (2016) advocated for a quality of life model to understand WLB, which incorporated four different theoretical approaches to WLB: role commitment, role conflict, social alienation, and positive spillover theory. They suggested that working people can be categorized into four groups of WLB and life satisfaction: fully engaged individuals with high level of life satisfaction, partially engaged individuals with moderate life satisfaction, engaged-but-conflicted individuals with low life satisfaction, and disengaged individuals with extremely low life satisfaction (Sirgy & Lee, 2016). Detailed discussion on this model is outside of the scope of this paper; however, interested readers may find the information in their published work. It is notable that while this model is helpful in dissecting the association between WLB and life satisfaction with respect to people's role engagement, the authors did not suggest how WLB should be redefined for future research.

Wayne et al. (2017) argued that studies on balance can and should be explicitly classified as either a type of combined spillover (i.e. additive and multiplicative spillover across domains) or as a global assessment of balance (i.e. balance satisfaction and balance effectiveness). Additive spillover refers to the unique bidirectional effects of role conflict and role enhancement; multiplicative spillover refers to the interaction effects of lower role conflict and higher role enhancement. Regarding global balance, balance satisfaction reflects how one evaluates their own thoughts and feelings on the allocation of resources to integrate different roles they have, based on their values, goals, and desires; balance effectiveness is understood as one's interdependent assessment of how shared role expectations with their role partners are met (Wayne et al., 2017). Using these measures, Wayne et al. (2017) found that additive spillover was the strongest predictor of work attitudes, and multiplicative spillover also explained

additional variance in work attitudes, above and beyond the effects of additive spillover. On the other hand, balance satisfaction and effectiveness were the most important predictors of job and family performance as well as family satisfaction. The results of this study suggested that different approaches to balance might have meaningful impacts on the results obtained. Despite the unique contribution this work made to the literature, it did not concern people's experiences outside the work and family spheres. As the authors acknowledged, further work accounting for individual differences is needed before the study results can be generalized to a broader population.

Recently, Casper and colleagues (2018) conducted a thorough review of the existing work on WLB and offered some interesting ideas for reconceptualizing and redefining WLB. They suggested that WLB should be conceptualized as an “attitude about one's own needs-supplies fit or the degree to which one's needs are met by what the environment supplies (Kristof, 1996; as cited in Casper et al., 2018, p. 198).” According to the attitude-based theory of balance (Valcour, 2007), WLB is comprised of both affective and cognitive components that can be measured as contentment and assessment of success in both work and non-work domains. To supplement this theoretical approach, Casper et al. (2018) also drew from the person-environment fit theory (Edwards, 1996; Edwards & Rothbard, 1999) to highlight that subjective appraisal of fit is the main driver of balance. A person is likely to feel in balance when they can effectively manage the roles they value. Effective involvement would require that one's needs and supplies fit; in other words, the work and non-work environments supply resources and opportunities (i.e. financial, psychological support) for an individual to fulfill their valued roles. In this sense, Casper et al. (2018) defined WLB as:

Employees' evaluation of the favorability of their combination of work and nonwork roles, arising from the degree to which their affective experiences and their perceived involvement and effectiveness in work and nonwork roles are commensurate with the value they attach to these roles. (p. 197)

This conceptualization of balance takes into account individual differences in how people seek and experience balance and it is not limited to traditional work and life roles (i.e. full time employment, parenting). Given the comprehensiveness and inclusiveness of Casper and colleagues' redefinition of WLB, I adopted this conceptualization as my primary guiding theory as I developed and tested my hypotheses.



## CHAPTER 3 – METHODOLOGICAL APPROACH TO WORK-LIFE BALANCE

### **The Variable-Centered Methodology**

The literature on WLB is dominated with research using variable-centered approaches. These variable-centered approaches, such as factor analysis and structural equation modeling, are very useful for examining the psychometric properties of WLB scales. For example, Valcour (2007) measured satisfaction with work and family balance using a 5-item scale. Participants in the study were asked to rate their satisfaction on a 5-point Likert scale (1- “*Very dissatisfied*” to 5- “*Very satisfied*”) in response to items like: “*The way you divide your time between work and personal or family life*” and “*How well your work life and your personal or family life fit together.*” Confirmatory factor analysis suggested that the items measure a unidimensional construct and the internal consistency of the scale was very good (Cronbach’s alpha = .93; Valcour, 2007). Brough et al. (2014) examined a different 4-item measure for WLB in which, participants were asked to rate statements like “*I currently have a good balance between the time I spend at work and the time I have available for non-work activities*” and “*Overall, I believe that my work and non-work life are balanced*” on a 5-point Likert scale (1- “*Strongly disagree*” to 5- “*Strongly agree*”). Using structural equation modeling and confirmatory factor analysis, they found that a single-factor model represented their data well. Additionally, the scale demonstrated good internal consistency (Cronbach’s alpha ranging from .84 to .94) and adequate criterion-related and predictive validity – confirming that higher work demands were associated with lower balance, whereas lower balance was associated with higher psychological strain, turnover intentions and lower family and job satisfaction (Brough et al., 2014). Such evidence

for the psychometric properties of WLB measures support their use in applied research on WLB issues.

Indeed, researchers have utilized different WLB measures to examine the antecedents and consequences of balance or a lack thereof. For instance, using (M)ANOVA, multiple linear regressions, and structural equation modeling (common variable-centered approaches), Zheng et al. (2016) discovered that organizational WLB programs were indirectly related to employee's overall well-being improvement in via individual coping strategies. Karkoulian et al. (2016) suggested that there were some gender differences in how individuals' work and life spheres' interplay. Specifically, females experienced relatively more stress from work-to-personal-life than personal-life-to-work interference, yet males experienced the reverse. Under the premise that workers are sampled from a single population, variable-centered approaches allow researchers to describe the chosen population with a set of parameters. Findings generated from these approaches are often very parsimonious (simple, easy to interpret), which are of great values to future researchers and policy makers that work with rather homogenous samples.

Although variable-centered approaches set the stage for understanding the importance of WLB for working individuals, it is notable that the likelihood of a truly homogenous population in terms of the definition of WLB is untenable. Social progress and scientific, technological advances have brought much diversity to the workplace. Subpopulations arise within a grand population that differ substantially on several aspects (i.e. social categorical diversity such as sex, ethnicity and informational/functional diversity like educational background and personal beliefs; van Knippenberg et al., 2004); thus, a single set of estimates is likely not sufficient to demonstrate the observed characteristics of the population. In response to the need for more complex models, WLB researchers have used moderation models or analysis of interaction to test

potential changes in the magnitude of the association between two variables as a function of a third variable (two-way interaction), multiple two-way interactions, and even higher-order interactions. For example, Glavin and Schieman (2012) found that employees' role blurring was positively correlated with conflict between work and life domains, especially for those with excessive pressures. Conversely, employees who had some degree of schedule control and decision-making latitude showed a weaker relationship between role blurring and reported conflict.

To note, a moderation analysis simply describes how variables interact to predict a certain outcome. As a variable-centered approach, this method does not impose any grouping structure to the data that allows for a deep understanding of truly qualitative differences in subpopulations (Howard & Hoffman, 2018). Additionally, field researchers often have to deal with the lack of statistical power needed to detect a moderation effect (Aguinis & Gottfredson, 2010; McClelland & Judd, 1993). For these reasons, variable-centered approaches may not be suitable when researchers are interested in identifying the existence and distinguishable characteristics of subpopulations in a given population.

### **The Person-Centered Methodology**

Person-centered approaches (i.e. cluster analysis, latent class/profile analysis, latent transition analysis) are becoming more and more popular in organizational sciences (Meyer et al., 2015; Morin et al., 2018). Person-centered approaches relax the assumption that the studied sample is drawn from a single population, thus allowing for more precise estimations of individual differences in complex processes (Howard & Hoffman, 2018).

### *Latent Class/Profile Analysis*

Latent Class Analysis (LCA), as part of the latent class models – or finite mixture models, is a statistical method that can be used to categorize people (units, cases) into different groups (classes) of a latent (unobserved) variable based on people's response patterns on a series of categorical observed variables (Collins & Lanza, 2009). When the observed variables are continuous, LCA is often referred to as Latent Profile Analysis (LPA). The use of LCA/LPA has important implications for research and intervention practice since there are lots of phenomena that cannot be directly measured, or the variables of interest are simply not available (Lanza & Rhoades, 2013; Porcu & Giambona, 2017). In the context of organizational psychology, researchers may be interested in estimating workers' perceived levels of WLB. With variable-centered approaches, researchers can explicitly ask participants if they perceive balance (i.e. rate their WLB on a 1-5 Likert scale). However, since people construe WLB very differently, variance in employees' responses may be attributable to discrepancy in their interpretation of the construct. With a person-centered approach like LCA/LPA, one can utilize a set of variables indicative of how someone is doing in terms of work and life (i.e. perceived stress and support, spillover across domains) to infer WLB. Moreover, knowing about an employee's attributes (i.e. gender, age group, marital status) and job characteristics (i.e. work hours, work demands), researchers can predict if the person is likely to belong to a latent class/profile of certain WLB level (latent class/profile membership), and consequences of latent class/profile membership are also easily incorporated into a latent class/profile framework.

LCA was first used by Lazarsfeld (1950) to classify individuals based on their responses to various dichotomous variables. Since then, the LCA model was extended to incorporate polytomous variables, continuous variables (i.e. LPA) and estimate multiple latent variables

(LVs; Goodman, 1974). Unlike other types of latent variable models such as factor analysis (Bauer & Curran, 2004), cluster analysis (Kaufman & Rousseeuw, 2005), item response theory (Ayala, 2008), LCA/LPA does not attempt to characterize people based on “how much” they score along some continuous latent dimensions. Instead, LCA/LPA is a person-centered statistical analysis which specifies categorical and discrete LVs that capture differences in type or pattern of responses across all indicators (Hagenaars & McCutcheon, 2002). The mathematical model for LCA/LPA is available in Lanza and Rhoades's (2013) work, it is described briefly here. Essentially, a LCA/LPA model assumes that a latent variable with various unordered levels causes different response patterns in a set of observed indicators. Stated differently, the selected indicators are reflective measures of the latent variable (Nylund-Gibson & Choi, 2018). In this sense, the LCA/LPA model also assumes conditional independence, meaning that the latent variable explains all the association among the observed indicators. There are two key parameters in a LCA/LPA, the latent class/profile prevalence and the conditional item probabilities. The former refers to the relative size of the latent classes/profiles in the sample (Nylund-Gibson & Choi, 2018). The latter refers to the probabilities of choosing certain responses to a set of items, conditional on the latent classes/profiles. Each individual has an estimated probability of belonging to each latent class/profile. Hypothetically, if researchers were to assign people into these latent classes/profiles (i.e., assign each person to the class/profile in which they have the highest probability of belonging), individuals within the same latent class/profile respond similarly to certain criteria while those with different latent class/profile membership respond dissimilarly (Porcu & Giambona, 2017). In short, LCA/LPA identifies emergent subpopulations that are mutually exclusive and exhaustive in a population.

The use of LCA/LPA has become increasingly important to break down patterns and group differences in work-related issues such as organizational commitment (Meyer et al., 2015; Morin et al., 2018) and work-nonwork boundary management (Kossek et al., 2012). WLB is a pressing social concern. I argue that WLB is best thought of as a latent variable that is unobservable (whether in principle or practice). Using LCA/LPA to derive WLB classes from a set of observed (measured) variables will bring about insightful conclusions on meaningfully different groups of people with distinctive WLB experiences. In fact, Yucel (2020) recently published a study on the typology of work-family balance in a sample of 1120 workers in the United States using LCA/LPA. The study showed that there were three different classes of work-family balance, which the author named the Beneficial (high work-to-family and family-to-work enrichment, but low work-to-family and family-to-work conflict), the Moderate Beneficial (moderate enrichment and low conflict across domains), and the Moderate Active (moderate enrichment and moderate conflict across domains). Furthermore, the Moderate Active group had lower job satisfaction than the other two groups, and this relationship was attenuated by support from coworker, supervisor, and the organization. Yucel's study generates valuable findings; however, it is important for future work to consider a broader range of balance (i.e. balance between work, family, and personal life) and test for potential predictors of class membership as well as other distal outcomes (i.e. well-being, life satisfaction, job turnover).

## CHAPTER 4 – CULTURAL CONSIDERATION

WLB is a ubiquitous goal for workers around the world. However, most published work on WLB has been done with White-dominant populations in developed countries like the United States and the United Kingdom. Expanding research with different populations will contribute greatly to the understanding of WLB.

Among developed countries, Japan is one of the world's leading economies. However, as an Asian country, Japan's approach to WLB is vastly different from the United States. In fact, when comparing WLB policies in different countries, Okuyama et al. (2011) pointed out that Japan has introduced and promoted WLB policies as a means to address their declining birthrates. However, in Japan – a country where men's careers are prioritized over women's – WLB seems to be synonymous with gender issues (Chandra, 2012). On top of that, long work hours are considered a norm, a proof of commitment to the job. Workers take pride in the work they do, and thus negotiating for shorter work time is considered weakness (Chandra, 2012; T. A. Sullivan, 2014). Given the comparable economic development, yet distinct work culture, Japan is a great case for studying WLB.

To date, there are some studies on the WLB of Japanese workers. Many of these studies concerned workers in professional caring (i.e. nursing, psychiatry) that was often characterized with high degree of burnout. For instance, Umene-Nakano et al. (2013) studied 704 psychiatrists from sixty different departments in Japan and found that nearly half of the respondents had difficulty maintaining WLB. The results of the multivariate linear regression in this study indicated that low social support, low satisfaction in the work environment and WLB were all related to higher emotional exhaustion. In a more recent study, Watanabe and Yamauchi (2016)

analyzed survey responses from 603 nurses from three different hospitals in Japan using structural equation modeling. They discovered that involuntary overtime work was negatively associated with WLB satisfaction whereas voluntary overtime work can have a fairly weak but positive relationship with WLB satisfaction. However, voluntary overtime work also had an indirect, negative relationship with WLB satisfaction through involuntary overtime work. Results from these WLB-related studies in Japan seem to be consistent with findings on the significance of WLB in individuals' work and life experience in other countries.

There are also a few studies in the literature focusing on aspects that are more unique to the Japanese society. In a qualitative study with 52 men and 66 women in Japan, Goldstein-Gidoni (2019) discussed the *ikumen* movement (i.e. men who actively engage in the upbringing of their children). The author noted that while the movement aims at a healthier and better WLB, it was pushed back by the persistence of culturally gendered division of responsibilities between husbands and wives. As such, Japanese workers, especially those in dual-earner household found it difficult to actively engage in both work and family domains while being able to maintain balance between the two (Goldstein-Gidoni, 2019; Nagase & Brinton, 2017). On a different note, Kazekami (2020) studied approximately 9200 employees under the age of 61 and found that telework can improve labor productivity, increase life satisfaction while also increasing the stress of balancing demands from work and non-work spheres.

The studies above took variable-centered approaches to understand the general experience of balance in certain professions and the effectiveness of WLB policies. Though informative, a great deal of variance in participants' responses may have been unaccounted for. A person-centered approach like LCA/LPA may be more suitable to evaluate if there are



meaningfully different groups of people who have distinct experience of WLB, and ultimately yield new insight.

## CHAPTER 5 – THE PRESENT STUDY

The present study utilized a Japanese national survey called Midlife in Japan (MIDJA) to examine the WLB construct. As previously described, WLB is a complex latent construct that is not the same for people in different walks of life. This study evaluated WLB using Latent Profile Analysis (LPA), a person-centered approach that helps explain population heterogeneity by identifying unobserved (latent) population subgroups on a set of measured variables (Collins & Lanza, 2009; Lanza & Cooper, 2016; Lanza & Rhoades, 2013).

### **Research Questions and Hypotheses**

#### ***Research Question 1***

Can mutually exclusive and exhaustive groups of individuals with different WLB experiences be identified from the sample?

Built on the quality of life model proposed by Sirgy and Lee (2016), the current study focused on direct indicators of WLB such as job demands, relationship strains and supports, self-control and spillovers (both negative and positive) across work and family domains to identify different subgroups of people in the chosen population. Together, these indicators sufficiently reflect the comprehensive definition of WLB stated above. That is, they represent employee's self-evaluation of how their work and life roles interplay (i.e. is there positive/negative spillover across domains?) as well as how their experiences align with the values they place on these roles (i.e. are the environmental supplies such as role-based involvement, support from key players in a specific domain commensurate with one's needs?). Details on these WLB indicators are discussed in the following paragraphs.

Environmental factors such as job demands, perceived spillover across domains (both negative and positive spillover), strain, and support (from coworkers, supervisors, spouse, friends, and other family members) can collectively serve as important indicators of WLB. Essentially, according to the conservation of resources theory (Hobfoll, 1989), individuals have a finite amount of energy to dedicate to different activities. If they are overwhelmed with the tasks in one domain, they will not have the time and/or energy to fulfil the requirements in other domains. Imbalance arises from unsatisfied role commitment (Greenhaus et al., 2003).

Work can contribute greatly to individual self-perception (Duffy et al., 2016). Positive transfer of skills or experiences from one domain to another can empower a person to better fulfil their role commitments (Edwards & Rothbard, 1999). While this positive spillover across domains is beneficial, people need to possess a high sense of control in order not to let all elements of work blend into their private life and vice versa. One can argue that self-control should be the predictor of balance. That is, self-control leads to higher likelihood of attaining balance. Conversely, one can also posit that self-control is an indicator of balance. People who have a balanced work-life experience are likely those that take proactive actions to maintain it. The self-concordance model (Sheldon & Elliot, 1999) portrays WLB as one of the intrinsic and identified personal goals that individuals strive for. Within this framework, individuals who attain WLB are likely those with high degree of self-control and stay continuously engaged in WLB crafting behaviors (Gravador & Teng-Calleja, 2018; Sheldon & Elliot, 1999). To my knowledge, there is no theoretical support to whether self-control is a predictor or an indicator of WLB. Also, in the MIDJA cross-sectional survey in 2008, self-control was measured simultaneously with other WLB indicators. Because of the lack of temporal order and

theoretical ground, I decided to use the self-control measures as WLB indicators rather than as a predictor of WLB.

While WLB requires proactive actions from employees (Eby et al., 2005; Gravador & Teng-Calleja, 2018; Sheldon & Elliot, 1999), organizational support is no less important. Workplace resources can be formal supports such as company policies for maternity/paternity leave, on-site child care (Kossek & Nichol, 1992; Kossek & Ozeki, 1998) or informal supports like supervisors' and coworkers' help and understanding (Kottke & Sharafinski, 1988; van Emmerik et al., 2007). Of the various means of organizational support, supervisor and coworker support have been widely recognized as valuable resources that are directly related to people's WLB and well-being through instrumental and emotional assistance (Ganster et al., 1986; Hobfoll, 1989; Hochwarter et al., 1999). Employees who experience balance are likely to have the support to engage in WLB crafting behaviors – taking leaves on company policy, setting clear boundary between work and life domains (Adkins & Premeaux, 2019; Chung & van der Lippe, 2018).

It is widely believed that work and family roles are interdependent (Kossek & Ozeki, 1998; Lambert, 1990; Leineweber et al., 2016). Family support (from spouse, children, and relatives, etc.) is a key component in individuals' network of social support (Umberson et al., 2010; Umberson & Montez, 2010). Family support often contain social ties that last a lifetime. A strong sense of WLB must be accompanied by strong, healthy, and supportive familial relationships. Simply put, working people who have WLB, possess positive energy and are psychologically available for their different life roles are likely to report that they feel supported by their family (Russo et al., 2016).

Beside familial support, friend support is considered an integral part of the social support network that supplement the inherent or expected resources such as family and coworkers (Amati et al., 2015, 2018). On the basis of social network analysis, friendships are voluntary relationships that individuals choose to incorporate in their personal network (Breiger, 2004). This idea totally separates friends from family members – whom people are born with, and supervisors/coworkers – whom people encounter in preexisting situations (i.e. the workplace; Wrzus et al., 2012). Complementing family support, friend support is fueled by feelings of trust, affection, mutuality, and love (Demir & Özdemir, 2010; Yeung & Fung, 2007). At times, individuals are able to discuss important matters and/or concern with friends, which they are neither able nor inclined to do with their family members or supervisors/coworkers (Amati et al., 2018). Those who are in balance are likely to have this confidential/trusted source of support.

For all the aforementioned points, I proposed that using LPA, I would identify three to four meaningful latent profiles of WLB (H1). Specifically, I suspected that one of the latent profiles would be characterized with high degree of negativity in all domains (i.e. high negative spillover from work-to-life and vice versa, high strain and low support), which can be referred to as the profile with low WLB. Another profile would be characterized with a moderate to high degree of positivity in certain aspects and some negativity in others (i.e. high positive spillover from work-to-life, high support from friends and coworkers, high spousal strain and negative life-to-work spillover). To put another way, this profile would be characterized by moderate degree of balance where people are doing well in some, but not all spheres of life. Potentially, this profile could be further divided into two separate profiles – one with high ratings for the work domain and low ratings for non-work domains and one with high ratings for non-work domains but low ratings for the work domain. Lastly, I posited that one latent profile could be

labelled the high WLB profile with high degree of positivity in all domains (i.e. high positive spillover across domains, low strain and high support).

### ***Research Question 2***

To what extent do demographic variables (i.e. age, gender, marital status) predict membership in certain profile of WLB?

Guided by the person-environment (PE) fit theory (Edwards & Rothbard, 1999, 2005), the current study built on the idea that the interactions between individuals and their environments have important implications for the outcomes and consequences of their behaviors. Chandra (2012) highlighted that working hard is a virtue in Japanese society. Young people are expected to work hard and make their way up in the seniority ranking system. This may pressure young workers to take on more work, which is likely to result in spillover and imbalance between work and life domains. Besides, working women are still expected to be responsible for household chores and childcare. Increasing work and limited support can potentially result in low WLB for women (Chung & van der Lippe, 2018; Karkoulian et al., 2016). Thus, I hypothesized that age, gender, marital and childcare status would predict people's responses to the WLB indicators. Employed individuals who are women, younger, have children, and a working partner would be characterized by membership in a lower perceived WLB and thus, they would be more likely to report higher negative spillover across domains, higher strain and lower support (H2).

### ***Research Question 3***

Are identified profiles of WLB related to individuals' well-being?

The existing literature demonstrates that well-being is important for people (Cho & Tay, 2016; Duffy et al., 2016; Sirgy & Lee, 2016; Tsaur & Yen, 2018). In fact, both subjective well-

being (SWB) and psychological well-being (PWB) have been extensively studied in work-related research. For example, numerous studies have shown that healthy well-being is associated with increased productivity (Rajaratnam et al., 2014) and work satisfaction (Harter et al., 2003). The published literature on the determinants of well-being for people in the workforce is extensive, and WLB is believed to be one of the chief factors contributing to better well-being (Schulte et al., 2015). Indeed, the association between WLB and workers' well-being (SWB, PWB, and the overarching concept of well-being) has been of primary concern not only at the organizational level but also at the governmental level (Exton & Shinwell, 2018). Over the past decade, several governments have established frameworks and indicator sets to effectively measure and promote well-being such as the "Commission on Measuring Well-being" by the Japanese government (Uchida et al., 2011) or the "Monitor of Well-being" by the Netherlands' government (Smits et al., 2014), indicating the importance of well-being as an outcome to study. Since the link between WLB and well-being is so important, the current study sought to determine if workers' well-being differs as a function of WLB latent profile membership. Specifically, I hypothesized that individuals who belong to a latent profile of higher WLB would score higher in the well-being measures compared to those of lower WLB profile (H3).

## CHAPTER 6 – METHOD

### **Dataset**

To test the proposed hypotheses, this study used the Midlife in Japan (MIDJA) dataset. Funded by the National Institute of Aging (NIA), the data consisted of 1027 Japanese adults aged 30 to 79 from Tokyo. The baseline survey was collected in 2008, including questions on socio-demographic characteristics (age, gender, marital status and family status), work characteristics (working style, work commitment), psychological characteristics (social support, family obligation, social responsibility), mental health (depression, anxiety, well-being), and physical health (health symptoms, functional limitations, health behaviors). In 2012, a second wave of study was conducted with additional support from the NIA using a largely similar set of questionnaires from the baseline assessments (N = 657). The current study focuses on the interplay between work and life domains, so people who reported as “*not working for pay*” in the 2008 MIDJA survey were excluded (N = 289) from the present analysis. After removing these cases, the sample included 735 working people.

### **Measures**

#### ***Latent Profile Predictors***

**Demographic Characteristics.** The demographic characteristics of the sample includes age, gender, highest education level, marital status, family status (i.e. having children or not) and working style (i.e. part-time and full-time). Demographic information is helpful for interpretation of the findings, future comparison with similar studies, and generalizability of the results. These variables was also used as predictors of WLB latent profile membership.



The total sample in this study included 735 participants from 30 to 79 years old, with an average age of 51.16 (SD = 12.74). 44% of participants were female, and the rest were male. Of all participants, 33.06% completed their Bachelor's degree, 27.35% finished high school, 15.24% graduated from a vocational school. Most participants were married (68.03%) or never married (19.46%). 67.48% participants did not have any children at the time of the initial survey in 2008 and 65.99% were having a full-time job.

### ***Latent Profile Indicators***

**Negative Work-to-Family Spillover.** This scale includes 4 items such as *“Your job reduces the effort you can give to activities at home”* and *“Job worries or problems distract you when you are at home”*. Participants responded to these questions using a 1-5 Likert scale (1- *“None of the time”* to 5- *“All of the time”*). The scale was constructed as the sum of all four items. The reliability of the scale (computed with the 2008 MIDJA dataset) is 0.831 (Ryff et al., 2010).

**Negative Family-to-Work Spillover.** This 4-item scale contains items like *“Responsibilities at home reduce the effort you can devote to your job”* and *“Stress at home makes you irritable at work”*. Participants used a 1-5 Likert scale (1- *“None of the time”* to 5- *“All of the time”*) to respond to these statements. The scale was constructed as the sum of all four items. The reliability of the scale (computed with the 2008 MIDJA dataset) is 0.716 (Ryff et al., 2010).

**Positive Work-to-Family Spillover.** This scale includes 4 items such as *“The things you do at work help you deal with personal and practical issues at home”* and *“The skills you use on your job are useful for things you have to do at home”*. Participants responded to these questions using a 1-5 Likert scale (1- *“None of the time”* to 5- *“All of the time”*). The scale was

constructed as the sum of all four items. The reliability of the scale (computed with the 2008 MIDJA dataset) is 0.804 (Ryff et al., 2010).

**Positive Family-to-Work Spillover.** This 4-item scale contains items like *“Talking with someone at home helps you deal with problems at work”* and *“Your home life helps you relax and feel ready for the next day’s work”*. Participants used a 1-5 Likert scale (1- *“None of the time”* to 5- *“All of the time”*) to respond to these statements. The scale was constructed as the sum of all four items. The reliability of the scale (computed with the 2008 MIDJA dataset) is 0.825 (Ryff et al., 2010).

**Job Demands.** Aside from a measure on work commitment (part-time/full-time), the 5-item demands scale is also used to capture role overload in the workplace. Participants responded to items like *“How often do different people or groups at work demand things from you that you think are hard to combine?”* or *“How often do you work very intensely – that is, you are very busy trying to get things done?”*. Participants’ responses are on a scale of 1- *None of the time*, to 5- *All of the time*. The scale was constructed as the sum of all five items. According to Ryff et al. (2010), the reliability of this scale (computed with the 2008 MIDJA dataset) is 0.759.

**Spouse/Partner Strain.** This 6-item scale measures the frequency of negative experiences an individual had with their intimate partner. On a scale of 1 - *Never* to 4 – *Often*, participants responded to questions like *“How often does he or she argue with you?”* and *“How often does he or she let you down when you are counting on him or her?”*. The scale was constructed as the mean of all six items. Items in the scale have good internal consistency with alpha coefficient = 0.881 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

**Family Strain.** This 4-item scale measures the frequency of negative experiences an individual had with their family members (not regarding their spouse/partner). On a scale of 1 - *Never* to 4 - *Often*, participants responded to questions like “*Not including your spouse or partner, how often do members of your family make too many demands on you?*” and “*How often do they criticize you?*”. The scale was constructed as the mean of all four items. Items in the scale have good internal consistency with alpha coefficient = 0.85 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

**Friend Strain.** This 4-item scale measures the frequency of negative experiences an individual had with their friends. On a scale of 1 - *Never* to 4 - *Often*, participants responded to questions like “*How often do your friends make too many demands on you?*” and “*How often do they get on your nerves?*”. The scale was constructed as the mean of all four items. Items in the scale have good internal consistency with alpha coefficient = 0.77 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

**Self-control.** The MIDJA dataset has a set of questions labelled self-control that emphasizes on one’s view of themselves. The current study focused on control in the sense of proactiveness, goal-driven behaviors as I assumed that one’s latent profile of WLB drives their responses to these questions on self-control. For this reason, I conceptualized self-control with three different scales: selective primary control, compensatory primary control, and compensatory secondary control.

Selective primary control (i.e. persistence in goal striving) is measured with five items. Participants responded to statements like “*Even when I feel I have too much to do, I find a way to get it all done*” and “*I rarely give up on something I am doing, even when things get tough*” using a 1-4 Likert scale (1 - *Not at all*, 4 - *A lot*). The scale was constructed as the mean of all

five items. The selective primary control has good internal consistency with coefficient alpha = 0.817 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

Compensatory primary control (i.e. asking for support) is measured with five items. Participants responded to statements like “*Asking others for help comes naturally for me*” and “*When obstacles get in my way, I try to get help from others*” using a 1-4 Likert scale (1 – *Not at all*, 4 – *A lot*). The scale was constructed as the mean of all five items. The compensatory primary control has acceptable internal consistency with coefficient alpha = 0.617 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

Compensatory secondary control (i.e. persistence in goal striving) is measured with three items. Participants responded to statements like “*When my expectations are not being met, I lower my expectations*” and “*feel relieved when I let go of some of my responsibilities*” using a 1-4 Likert scale (1 – *Not at all*, 4 – *A lot*). The scale was constructed as the mean of all three items. The compensatory secondary control has acceptable internal consistency with coefficient alpha = 0.602 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

**Friend Support.** This 4-item scale measures the degree of positive experiences an individual had with their friends. On a scale of 1 – *Not at all* to 4 – *A lot*, participants responded to questions like “*How much do your friends really care about you?*” and “*How much can you open up to them if you need to talk about your worries?*” The scale was constructed as the mean of all four items. The items have good internal consistency with alpha coefficient = 0.827 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

**Spouse/Partner Support.** This 6-item scale measures the degree of positive experiences an individual had with their intimate partner. On a scale of 1 – *Not at all* to 4 – *A lot*, participants responded to questions like “*How much does he or she understand the way you feel*

*about things?”* and *“How much can you relax and be yourself around him or her?”* The scale was constructed as the mean of all six items. The items have good internal consistency with alpha coefficient = 0.934 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

**Family Support.** This 4-item scale measures the degree of positive experiences an individual had with their family members (not regarding their spouse/partner). On a scale of 1 – *Not at all* to 4 – *A lot*, participants responded to questions like *“Not including your spouse or partner, how much do members of your family really care about you?”* and *“How much can you rely on them for help if you have a serious problem?”* The scale was constructed as the mean of all four items. The items have good internal consistency with alpha coefficient = 0.845 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

**Coworker Support.** This 2-item scale measures the degree of support an individual receive from their coworkers. On a scale of 1 – *None of the time* to 5 – *All of the time*, participants responded to the two questions *“How often do you get help and support from your coworkers?”* and *“How often are your coworkers willing to listen to your work-related problems?”* The scale was constructed as the sum of these items. The items have good internal consistency with alpha coefficient = 0.771 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

**Supervisor Support.** This 3-item scale measures the degree of support an individual receive from their supervisor(s). On a scale of 1 – *None of the time* to 5 – *All of the time*, participants responded to questions like *“How often do you get the information you need from your supervisor or superiors?”* and *“How often do you get help and support from your immediate supervisor?”* The scale was constructed as the sum of these items. The items have

good internal consistency with alpha coefficient = 0.898 (computed with the 2008 MIDJA dataset; Ryff et al., 2010).

### *Distal Outcomes*

**Well-being.** Three different scales tapping into unique aspects of well-being were considered in this study: psychological well-being, subjective well-being and minimalist well-being (which is unique to the Japanese sample). These measures were taken from the second wave of the MIDJA. All these measures were coded such that higher scores reflect higher degrees of well-being.

Psychological well-being is the grand total of the scores across six dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance with 7 items for each dimension. Participants responded to statements like *“I have confidence in my opinions, even if they are contrary to the general consensus”* or *“I think it is important to have new experiences that challenge how you think about yourself and the world”* using a scale of 1 – *Strongly disagree* to 7 – *Strongly agree*. The scales were constructed by taking the sum of each item set. The scales have acceptable internal consistency with alpha ranging from 0.577<sup>1</sup> to 0.796 (computed with the 2012 MIDJA dataset; Ryff et al., 2016).

Subjective well-being is the grand total of the 8 items in the Good Life America Scale. The scale covers three dimensions: subjective happiness (1 item), satisfaction with life (5 items), and gratitude (2 items). Participants responded to statements like *“Compared to most of my peers, I consider myself to be more happy”* and *“If I could live my life over, I would change almost nothing”* using a 1-7 Likert scale (1 – *Strongly disagree* to 7 – *Strongly agree*). The scales were constructed by taking the mean of all items. The satisfaction with life and gratitude

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<sup>1</sup> I considered removing the purpose in life subscale due to the Cronbach’s alpha below .70. However, the results of the current study remained unchanged.

subscale have good internal consistency with coefficient alpha = 0.901 and .895, respectively (computed with the 2012 MIDJA dataset; Ryff et al., 2016).

Minimalist well-being is the grand total of the scores across two dimensions: gratitude and positive disengagement (5 items for each subscale). Participants responded to statements like *“I am grateful that I was born”* or *“I feel free when I spend all my time just for myself”* using a scale of 1 – *Strongly disagree* to 7 – *Strongly agree*. The scales were constructed by taking the sum of each item set. The scales have acceptable internal consistency with alpha ranging from 0.763 to 0.693 (computed with the 2012 MIDJA dataset; Ryff et al., 2016).

### **Analytic Approach**

I conducted some exploratory steps (i.e. data wrangling, data visualization) to obtain descriptive statistics and view distributional properties of all variables, examine patterns of missingness of variables, and evaluate the bivariate relationships between key variables of interest. For scales that have one missing value, mean imputation was used to handle this missingness (Ryff et al., 2010, 2016). It is crucial to note that this is a mild deviation from my initial proposal to do multiple imputation since the procedure was done by the principal investigators of the MIDJA project and the constructed scale scores were used in the present study.

To answer the proposed research questions, I performed LPA in the following order. First, I fit a baseline model to determine the optimal number of latent profiles (subgroups in the chosen sample) based on people’s responses to job demands, spillover, self-control, relationship strain and support. Then, I included demographic variables (i.e. age, gender, job characteristics, marital status) as predictors (covariates) of latent profile membership. Lastly, distal outcomes

(i.e. three well-being measures) were used to determine if the latent profiles significantly differ in the means of the selected distal outcomes.

Research Question 1 was answered with the results from an unconditional LPA (a baseline LPA model without covariates). In this unconditional LPA model, there are two main parameters of interest – the latent profile prevalence (the relative size of the latent profiles) and the item-response probabilities conditional on a particular latent profile (the conditional item probabilities (for shorter reference) (Collins & Lanza, 2009; Nylund-Gibson & Choi, 2018). These parameters are derived using an iterative process called maximum likelihood; in other words, the algorithm searches for parameter values under which, the data are most likely to be observed (Collins & Lanza, 2009).

To date, there are many studies on the power needed for selecting the correct number of latent classes (i.e. Nylund et al., 2007; Nylund-Gibson & Choi, 2018; Tein et al., 2013). Although some researchers relied on a heuristics of  $N \geq 500$  (Finch & Bronk, 2011), most agreed that the required sample size is contingent upon the study design and that other factor such as large number of indicators, high indicator quality (i.e. indicators selected based on theories and previous research) and high degree of profile separation (or inter-class distance, measured by Cohen's  $d$ ) also play an important role in determining the statistical power of the study (Nylund-Gibson & Choi, 2018; Tein et al., 2013; Wurpts & Geiser, 2014). Aside from the profile separation that can only be calculated in a post hoc fashion, the current study involved over 700 participants and used 16 indicators for WLB that are grounded in theories and previous research, I believe I had enough power for this analysis.

As suggested by Collins and Lanza (2009), the process of enumerating latent profiles started with an estimation of a one-profile LPA model to demonstrate the observed item-



response proportions in the sample. This one-profile model was used as the baseline for comparison with the multi-profile models fitted later. Then, I estimated a two-profile LPA model and considered if it statistically and conceptually fits the data better than the one-profile model solution. This process of adding an additional profile was repeated multiple times, until the latest model failed to converge and overparameterization occurred. I then compiled the fit indices from these models in a table for assessment and selection.

LPA model selection was based on multiple factors, including the relative fit between competing models (Collins & Lanza, 2009; Lanza & Rhoades, 2013; Nylund-Gibson & Choi, 2018). For comparing relative model fit, I considered several information criteria, including the Consistent Akaike Information Criterion (CAIC; Bozdogan, 1987), the Bayesian Information Criterion (BIC; Schwarz, 1978), the sample-size adjusted Bayesian Information Criterion (SABIC; Sclove, 1987), and the Approximate Weight of Evidence criterion (AWE; Banfield & Raftery, 1993). If these values were to be shown in a scree plot, the best fitting models emerged at the “elbow” of the plot, where these values start to level off. In addition, the Lo-Mendell-Rubin adjusted likelihood test (LMR-LRT; Lo et al., 2001) and the bootstrapped likelihood ratio test (BLRT; McLachlan & Peel, 2000) which test for comparative fit between a  $k$  profile and a  $k + 1$  profile model were also studied. A non-significant p-value for the latter indicates that the  $k+1$  profile model does not significantly improve model fit over the  $k$  profile model. Along with the information criteria and the likelihood-based criteria, there are two Bayesian-based indices that are helpful in comparing model fits, namely the Bayes factor (BF; Wagenmakers, 2007) and the correct model probability (cmP; Schwarz, 1978). A BF value between 1 and 3 demonstrates weak support for a model with less profiles, a BF between 3 and 10 shows average support, and a BF > 10 indicates strong support; whereas with the cmP, the model with the highest value is

considered the best fit one. Aside from these statistical indices, the interpretability of profiles is important to consider. Specifically, I assessed the profile prevalence to determine if the profiles represent a notable proportion of the sample. Also, the conditional probabilities of item responses were used to determine latent profile homogeneity (the degree of similarity among people within the same profile), and separation (the extent to which pattern of responses are differentiated for people in different profiles; Collins & Lanza, 2009). In evaluating these model summaries, I aimed to favor a more parsimonious model (less number of profiles that are conceptually different), over a model with slightly higher fit indices, more latent profiles and lower profile separation.

To examine Research Questions 2 and 3, I used the final latent profile solution from the profile enumeration step above and incorporated auxiliary variables to assess the antecedents and consequences of profile membership. To answer Research Question 2, I added gender, age, work commitment (full/part-time), and marital status as covariates to predict the profile membership in the best fitting latent profile model. To study Research Question 3, I added the well-being measures as distal outcomes of the WLB latent profile membership. Statistical significance was evaluated using alpha of .1, corresponding to a 99% confidence interval (CI). While I reported both the p-value and confidence interval, there are situations in which, the two do not point to the same conclusion (i.e. a p-value greater than .01 corresponding to a 99% CI not spanning over one). The p-value shows the point estimate of the probability of observing the data under the assumption that a null hypothesis is true (i.e. there is no difference in the reported well-being among the WLB latent profiles), whereas the confidence interval reflects the range of estimates by accounting for the study sample size and standard deviation. Hence, if the two metrics disagree, I would interpret the result based on the 99%CI.

Several approaches have been proposed over the past decade to deal with potential shift in the levels and prevalence of the latent profile variable (Nylund-Gibson & Choi, 2018) once auxiliary information is added to the model. I planned to follow the three-step Bolck, Croons, and Hagnaars's (BCH) approach (Asparouhov & Muthén, 2014; Bolck et al., 2004) for both the profile predictors and distal outcomes. However, upon closer review, I discovered that Vermunt's 3-step approach (Vermunt, 2010) seems to perform better when modeling class predictors while the BCH approach seems to work better for continuous distal outcomes, as suggested by several simulation studies (Bakk et al., 2013; Dziak et al., 2016; Shin et al., 2019). Hence, I adapted this recommendation in my analysis.

Essentially, the first two steps of the Vermunt and BCH procedures are similar. Step one involves estimation of the parameters from the correct measurement model (i.e. the final latent profile model solution). In step two, individuals are assigned to latent profiles based on their responses on the latent variable indicators. In the last step following the Vermunt's 3-step approach, the assigned profile are treated as a nominal latent profile indicator (while accounting for measurement error by fixing the logits for classification probabilities with the values extracted from step 1) and regressed on the predictors (i.e. age, marital status, job characteristics, etc.). With the latent profile membership specified as "known" in step 3 of the BCH method, a different correction procedure is used to account for classification errors. For a  $k$ -profile model, the initial dataset is expanded by  $k$  columns so that each person has a weight for being in each of the  $k$  class, and these different weight metrics reflect the correct and incorrect classification into each profile. Weighted multi-group analysis can then be used to evaluate the relationships among the latent profile variable and the auxiliary variables. In this way, I utilized the 3-step approach for assessment of the latent profile predictors, and the BCH approach for evaluation of

differences in my continuous distal outcomes as a function of latent profile membership. All these analyses were performed in Mplus, version 8.4 (Muthén & Muthén, 1998-2017). A graph demonstrating the measurement and structural model can be found in Figure 1 below.

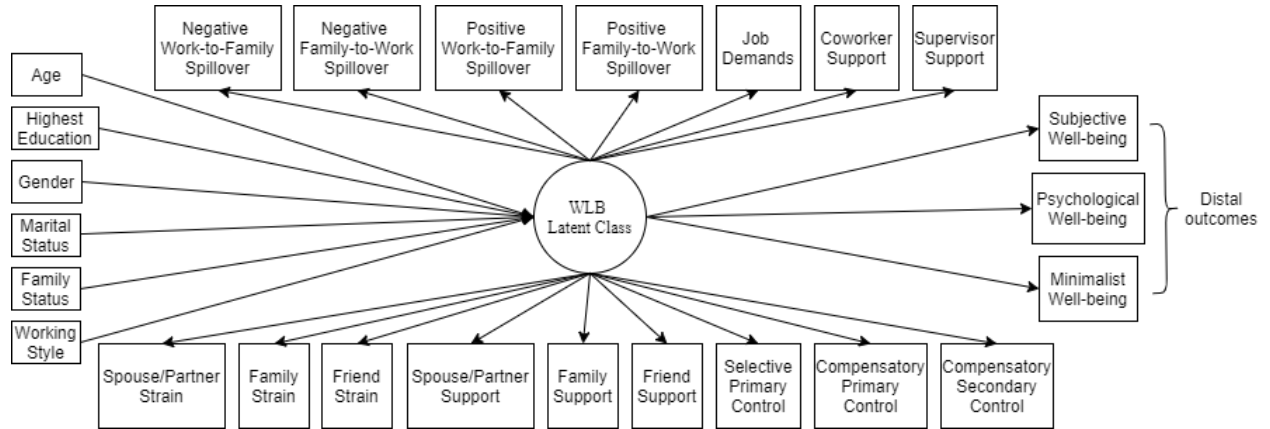


Figure 1. *Model Diagram*

## CHAPTER 7: RESULTS

### Descriptive Statistics

The distributions of 16 latent profile indicators and their descriptive statistics are presented in Figure 2 and Table 1, respectively.

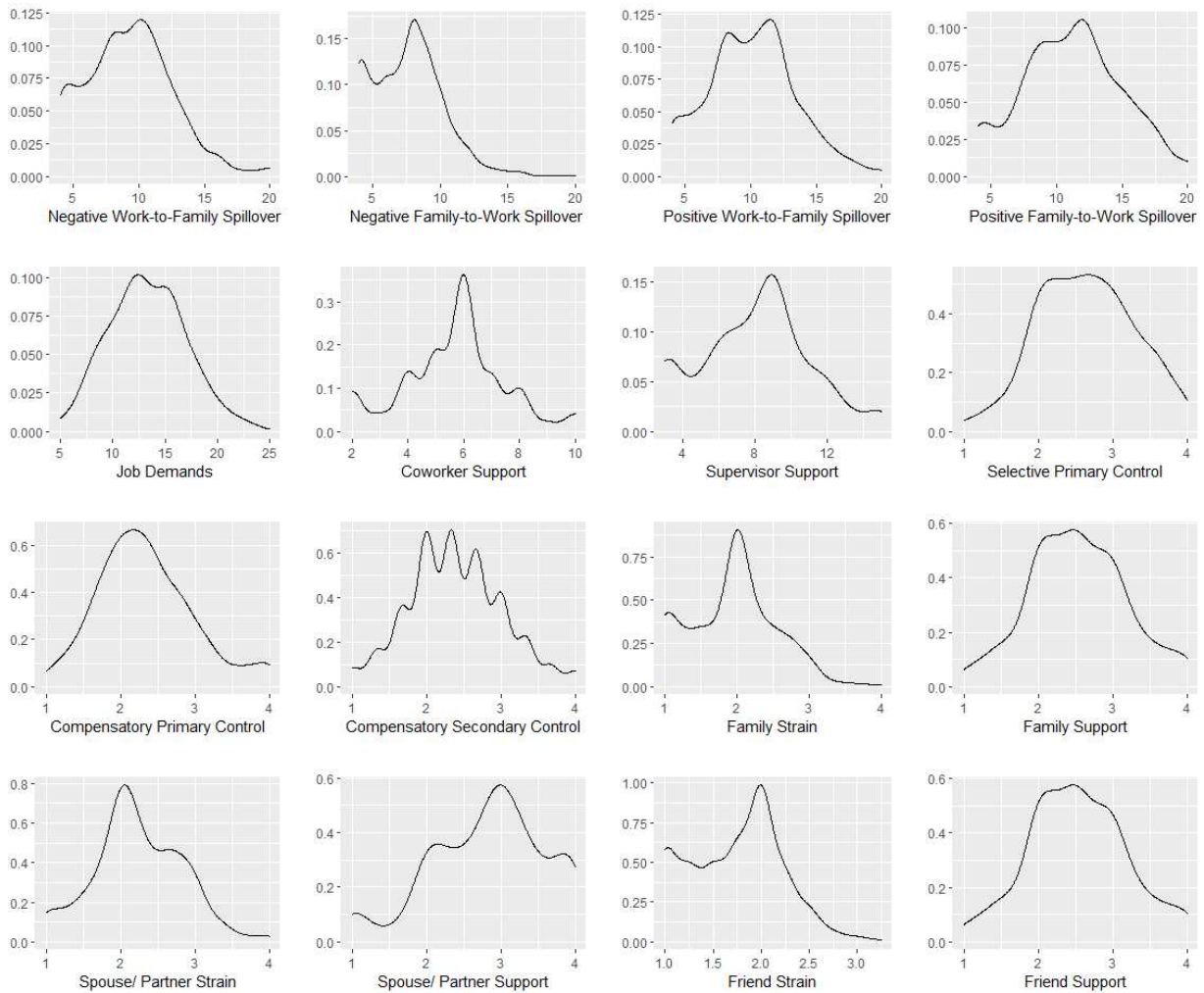


Figure 2. Histograms for the distributions of 16 latent profile indicators

Generally, most people in the sample experienced low to moderate degrees of spillovers between work and life domains. Regarding the work context, most people seemed to have moderate job demands and support from their colleagues and supervisors seemed to be the

highest. In terms of control, people reported having moderate compensatory primary control (i.e. willing to ask for help) and compensatory secondary control (i.e. goal adjustment when facing difficulties), and moderate to high selective primary control (i.e. persistence in goal pursuit). In non-work contexts, people reported having low to moderate strain from friends, partner and other family members. Most people received moderate support from their friends and family, and moderate to high support from their spouse/ partner.

Table 1. *Descriptive Statistics of the study sample*

Variable	Count	M (SD)	Min	Max
Work-Family Interface				
Negative Work-to-Family Spillover	731	9.295 (3.330)	4	20
Negative Family-to-Work Spillover	731	7.616 (2.584)	4	20
Positive Work-to-Family Spillover	731	10.112 (3.377)	4	20
Positive Family-to-Work Spillover	728	11.156 (3.802)	4	20
Work Context				
Job Demands	730	13.322 (3.731)	5	25
Coworker Support	621	5.641 (1.859)	2	10
Supervisor Support	604	8.021 (3.025)	3	15
Self-control				
Selective Primary Control	732	2.645 (.657)	1	4
Compensatory Primary Control	733	2.337 (.645)	1	4
Compensatory Secondary Control	734	2.394 (.636)	1	4
Family Context				
Family Strain	505	1.944 (.601)	1	4
Family Support	507	2.533 (.663)	1	4
Spouse/ Partner Strain	545	2.235 (.602)	1	4
Spouse/ Partner Support	545	2.826 (.761)	1	4
Other Social Context				
Friend Strain	733	1.732 (.484)	1	3.25
Friend Support	734	2.522 (.619)	1	4

### Overall Model Fit

The fit statistics for the 1 through 4-profile models are summarized in Table 2. Convergence issues occurred when I tried to fit a 5-profile model. Overall, the information criteria as well as one of the Bayesian-based indices (i.e. the CmPs) pointed to the same conclusion that a 4-profile model fit the data best. However, closer examination of the patterns

of the information criteria revealed that the drop in the levels of the BIC, SABIC, CAIC, and AWE was relatively smaller when moving from a 3-profile to a 4-profile model than from a 1 to 2 and 2 to 3-profile model (see Figure 3). Additionally, the two likelihood-based indices did not agree on the best-fit model; while the BLRT indicated that the 4-profile model was an improvement over the 3-profile model, the LRM-LRT showed otherwise. According to the LRM-LRT, the 4-profile model was not an improvement over the 3-profile model, and even the 3-profile model was not an improvement over the 2-profile model. Similarly, the two Bayesian-based indices did not agree, either. The CmPs showed support to the 4-profile model; however, the BFs suggested that the baseline 1-profile model was the best fit model.

Table 2. *Fit Statistics and Classification Coefficients: WLB Latent Profile Analysis Models*

	1-Profile	2-Profile	3-Profile	4-Profile
LL	-17817.064	-17421.740	-17219.510	-17104.398
BIC	35845.323	35166.874	34874.611	34756.586
SABIC	35743.712	35011.283	34665.039	34493.033
CAIC	35877.32	35215.87	34940.61	34839.59
AWE	35893.32	35240.37	34973.61	34881.09
BLRT <i>p</i>	-	< .001	<.001	<.001
LMR-LRT <i>p</i>	-	< .001	.577	.219
Entropy	-	.733	.737	.748
BF	>15000	>15000	>15000	-
CmP	<.001	<.001	<.001	1.000
ALPP	-	.916-.927	.865-.907	.823-.884
#/Profile	735	370	258	173
		365	221	283
			256	154
				125

*Note.* LL: log-likelihood; BIC: Bayesian information criterion; SABIC: sample-size adjusted BIC; CAIC: consistent Akaike information criterion; AWE: approximate weight of evidence criterion; BLRT: bootstrapped likelihood ratio test; LMR-LRT: Lo-Mendell-Rubin adjusted likelihood ratio test; *p*: p-value; BF: Bayes factor; cmP: correct model probability; ALPP: average latent profile probability; #/Profile: Number of participants per profile.

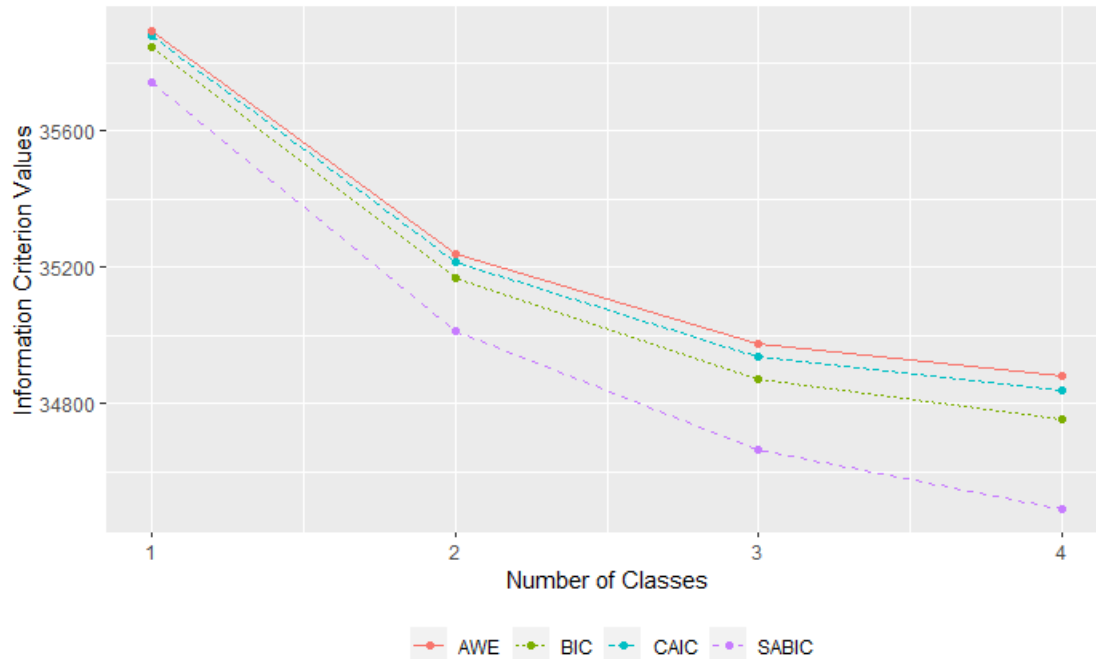


Figure 3. *Plot of information criterion values to select number of Latent Profiles*

In addition to statistical indices, the interpretability of all candidate models was also taken into account. I standardized the participants responses to the latent profile indicators by subtracting the minimum from the actual scores, then dividing by the range of the measures. Using these standardized values, I created figure 4 to compare competing LPA models.

The 2-profile model suggested that the sample may include two subgroups, one that scored higher on nearly all of the 16 indicators than the other (see Figure 4, Panel A). The group that reported higher spillovers, more demands and strains, as well as higher degree of self-control and perceived support from others can be called the “high engagement” profile, as opposed to the “low engagement” profile. This partition does not clearly help infer the level of WLB one experienced. It is possible that both groups felt imbalance between their work and non-work roles, but the underlying reasons for such perception were widely different. On the other hand, the 4-profile model did not yield substantively distinguished latent profiles (see Figure 4, Panel



C). The overlaps in patterns of responses make it challenging to meaningfully decipher what WLB meant for each of the four profiles.

Given this inconsistency and my preference for a more parsimonious solution, I decided to choose the middle ground and opted for the 3-profile model that had the second lowest information-based indices. The breakdown of the 3-profile model was reasonable, with roughly equal proportion of people in each profile and the average latent profile probability in between .865 and .907.

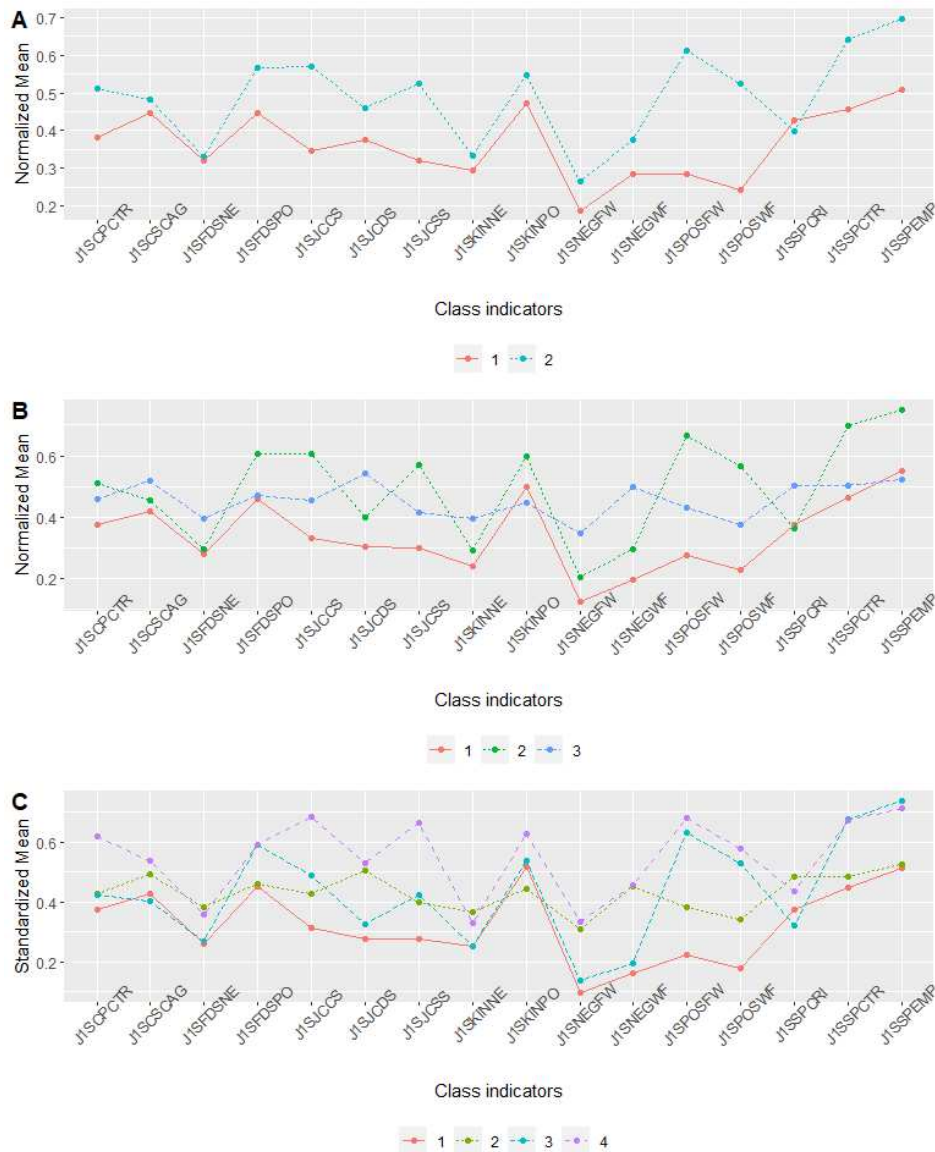


Figure 4. Comparing response patterns between competing LPA model

## Description of The Selected Model

Table 3 presents the estimated means for each latent profile indicator by latent profile membership. The first profile was characterized by the lowest ratings on most measures, except for partner strain, partner and family support (those were rated as moderate). This profile can be labelled the “moderate WLB” group that is rather family-oriented and is not highly engaged in other non-family roles. The second profile was characterized by the lowest level of partner strain, the highest levels of positive spillovers between work and family domains, highest degree of selective primary control, compensatory primary control, and support from others in all spheres of life. This profile can be thought of as the “high WLB” group that is fully engaged and efficient in negotiating and managing their roles. Lastly, the third profile was characterized by the highest rate of negative spillovers, job demands, greatest strain in all domains and compensatory secondary control, with the lowest levels of support from partners and other family members. This profile can be addressed as the “low WLB” group that is partially engaged in all roles, is neither efficient nor effective at negotiating and managing their roles.

Table 3. *Pattern of responses in Each Latent Profile of WLB*

Variable	Moderate WLB – Family-oriented, partially engaged M (SE)	High WLB – Fully engaged, efficient M (SE)	Low WLB – Partially engaged, inefficient M (SE)
	Work-Family Interface		
Negative Work-to-Family Spillover	7.197 (.537)	8.775 (2.202)	11.859 (.661)
Negative Family-to-Work Spillover	6.007 (.488)	7.312 (1.545)	9.498 (.403)
Positive Work-to-Family Spillover	7.650 (.271)	12.941 (.415)	10.085 (1.472)
Positive Family-to-Work Spillover	8.516 (.387)	14.506 (.342)	10.841 (2.092)
	Work Context		
Job Demands	11.194 (.566)	13.090 (2.017)	15.669 (.687)
Coworker Support	4.657 (.139)	6.762 (.256)	5.669 (.833)

Supervisor Support	6.605 (.228)	9.702 (.577)	8.066 (1.387)
		Self-control	
Selective Primary Control	2.393 (.102)	3.068 (.165)	2.522 (.223)
Compensatory Primary Control	2.129 (.041)	2.535 (.104)	2.369 (.188)
Compensatory Secondary Control	2.259 (.054)	2.374 (.155)	2.546 (.076)
		Family Context	
Family Strain	1.749 (.098)	1.889 (.168)	2.158 (.053)
Family Support	2.484 (.078)	2.770 (.107)	2.375 (.146)
Spouse/ Partner Strain	2.136 (.157)	2.089 (.098)	2.500 (.273)
Spouse/ Partner Support	2.650 (.184)	3.237 (.094)	2.572 (.484)
		Other Social Context	
Friend Strain	1.633 (.075)	1.669 (.115)	1.886 (.053)
Friend Support	2.384 (.060)	2.807 (.117)	2.410 (.142)

### Assessment of Latent Profile Predictors

I created dummy variables to represent the categorical predictors before including them in a multinomial logistic regression predicting the nominal latent class variable. The variable gender has two levels: male was coded as 0 and female was coded as 1. Similarly, family status has two levels: “have children” was coded as 0, and “no children” was coded as 1. Participants’ education was collapsed to “high school education or below”, “some college”, and “college and higher education”. These were represented by two dummy coded variables, with “college and higher education” as the reference group. Participants’ marital status was grouped into “married”, “never married”, and “other” (i.e. divorced/separated/widowed). These were also represented by two dummy coded variables, with “other” as the reference group. Lastly, working style with three levels was represented with two dummy coded variables – “full-time” and “other”, and “part-time” was the reference group.

Age, gender, education level, marital status, family status, and working style were used to predict latent profile membership. The multinomial logistic regression results suggested that, after accounting for classification errors, age, gender, and marital status significantly predicted

membership in different latent profiles (i.e. the 99% CI for the odds ratio did not include 1; see Table 4 below).

Table 4. *Demographic characteristics as predictors of profile membership*

Reference group	Predictor	Moderate WLB – Family-oriented, partially engaged (1)	High WLB – Fully engaged, efficient (2)	Low WLB – Partially engaged, inefficient (3)	
Profile 1	Age	-	.975* [.948, 1.002]	<b>.945*</b> [.917, .974]	
	Gender (Male = 0; Female = 1)	-	<b>3.084*</b> [1.500, 6.340]	1.768 [.851, 3.673]	
	Highest education				
	High school	-	.582* [.280, 1.207]	.509* [.234, 1.108]	
	Some college	-	.487* [.208, 1.138]	.704 [.312, 1.591]	
	Marital status				
	Married	-	<b>2.915</b> [1.060, 8.014]	1.064 [.413, 2.714]	
	Never married	-	.843 [.198, 3.587]	1.229 [.336, 4.495]	
	Family status (Have children = 0, No children = 1)	-	1.211 [.476, 3.081]	.824 [.306, 2.221]	
	Working style				
	Full-time	-	1.400 [.672, 2.916]	2.613 [.949, 4.932]	
	Other	-	.988 [.303, 3.223]	1.340 [.366, 4.902]	
	Profile 2	Age	1.026* [.998, 1.055]	-	.970* [.940, 1.001]
		Gender (Male = 0; Female = 1)	<b>.324**</b> [.158, .666]	-	.573* [.272, 1.209]
Highest education					
High school		1.719 [.828, 3.567]	-	.876 [.391, 1.961]	
Some college		2.053 [.878, 4.799]	-	1.446 [.627, 3.336]	
Marital status					
Married		<b>.343**</b> [.125, .943]	-	.365** [.120, 1.110]	
Never married		1.187 [.279, 5.053]	-	1.459 [.326, 6.258]	

	Family status (Have children = 0, No children = 1)	.826 [.325, 2.102]	-	.681 [.262, 1.770]
	Working style			
	Full-time	.714 [.343, 1.488]	-	1.545 [.661, 3.610]
	Other	1.102 [.310, 3.301]	-	1.357 [.330, 5.571]
Profile 3	Age	<b>1.058**</b> <b>[1.026, 1.090]</b>	1.031* [.999, 1.063]	-
	Gender (Male = 0; Female = 1)	.566* [.272, 1.175]	1.745 [.827, 3.681]	-
	Highest education			
	High school	1.963 [.902, 4.271]	1.142 [.510, 2.558]	-
	Some college	1.420 [.629, 3.207]	.692 [.300, 1.595]	-
	Marital status			
	Married	.940 [.365, 2.421]	2.740 [.901, 8.331]	-
	Never married	.814 [.222, 2.976]	.686 [.153, 3.068]	-
	Family status (Have children = 0, No children = 1)	1.213 [.450, 3.270]	1.469 [.565, 3.819]	-
	Working style			
	Full-time	.462** [.203, 1.054]	.647 [.277, 1.512]	-
	Other	.746 [.204, 2.729]	.737 [.179, 3.027]	-

*Note.* The estimated values are odds ratio. Values in square brackets represent the 99% confidence interval. \* indicates  $p < .05$ . \*\* indicates  $p < .01$

Specifically, for one unit increase in participants' age, the odds of being in the "low WLB" profile was lower than the odds of being in the "moderate WLB" profile (odds ratio (OR) = .945, 99%CI [.917, .974]). Regarding gender, the odds of being in the "high WLB" profile was 3.084 times higher (99% CI [1.500, 6.340]) than the odds of being in the "moderate WLB" profile among female as compared to male workers. Compared to individuals who were widowed, divorced, or separated with their partners, those who were still married had a higher odds of being in the "high WLB" profile than the "moderate WLB" profile (OR = 2.915, 95% CI

[1.060, 8.014]). For further details, the demographic breakdown by latent profiles was summarized in Table 5.

### Assessment of Distal Outcomes

The equality tests of the outcome means across profiles showed that the means differ across profiles for psychological well-being,  $\chi^2(2) = 73.089$ ,  $p < .001$ ; subjective well-being,  $\chi^2(2) = 85.695$ ,  $p < .001$ ; and minimalist well-being,  $\chi^2(2) = 12.691$ ,  $p < .01$ . Pairwise comparisons revealed that the “high WLB” profile had the highest ratings in all three kinds of well-being measures as compared to the “moderate WLB” and “low WLB” group. Interestingly, the “low WLB” and “moderate WLB” groups did not seem to statistically differ in these distal outcomes (refer to Table 5 for more information).

Table 5. *Associations Between Latent Profiles, Demographic Characteristics, and Distal Outcomes*

	Moderate WLB – Family-oriented, partially engaged (Profile 1, n = 258)	High WLB – Fully engaged, efficient (Profile 2, n = 221)	Low WLB – Partially engaged, inefficient (Profile 3, n = 256)
Age, mean (SE)	54.938 (.777)	51.267 (.872)	47.269 (.727)
Gender, n (% within profile)			
Male	160 (62.016%)	107 (48.416%)	146 (57.031%)
Female	98 (37.984%)	114 (51.584%)	110 (42.969%)
Highest education, n (% within profile)			
Junior high	25 (9.690%)	14 (6.335%)	9 (3.516%)
Some high school	8 (3.101%)	7 (3.167%)	6 (2.344%)
High school	85 (32.946%)	59 (26.697%)	57 (22.266%)
Vocational school	43 (16.667%)	24 (10.860%)	45 (17.578%)
2-year college	14 (5.426%)	21 (9.502%)	27 (10.547%)
Some college	7 (2.713%)	7 (3.167%)	6 (2.344%)
Bachelor’s degree	69 (26.744%)	77 (34.842%)	97 (37.891%)
Graduate school	4 (1.550%)	11 (4.977%)	7 (2.734%)
Marital status, n (% within profile)			
Married	168 (65.116%)	176 (79.638%)	156 (70.588%)
Separated	7 (2.713%)	1 (.452%)	3 (1.357%)

Divorced	21 (8.140%)	8 (3.620%)	20 (9.050%)
Widowed	14 (5.426%)	9 (4.072%)	8 (3.620%)
Never married	48 (18.605%)	26 (11.765%)	69 (31.222%)
Family status, n (% within profile)			
Have children	183 (70.930%)	159 (71.946%)	154 (60.156%)
No children	74 (28.682%)	60 (27.149%)	101 (39.453%)
Working style			
Full-time	154 (59.690%)	141 (63.801%)	190 (74.219%)
Part-time	74 (28.682%)	63 (28.507%)	47 (18.359%)
Other	24 (9.302%)	15 (6.787%)	16 (6.250%)
Psychological Well-being, mean (SE)	186.593 (1.958)	210.288 (2.403)	183.546 (2.177)
Subjective Well-being, mean (SE)	13.838 (.216)	16.463 (.236)	13.490 (.256)
Minimalist Well-being, mean (SE)	47.392 (.611)	50.764 (.686)	48.679 (.622)

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## CHAPTER 8 – DISCUSSIONS

The collection of results lend support for H1 that the sample of participants in this study can be divided into three meaningfully distinct subgroups. One profile was designated with moderate partner strain, partner and family support, and low levels of ratings in all other aspects. This profile was referred to as the “moderate WLB” group. They did not seem to put much efforts into overcoming difficulty (i.e. low selective primary control), asking others for help (i.e. low compensatory primary control), or readjusting their goals (i.e. low compensatory secondary control). However, they did not seem to have as much responsibilities and expectations to fulfill compared to the other two groups, either (i.e. low job demands, low friend and family strain). Compared to the other two profiles, this “moderate WLB” group experienced the lowest levels of work-family spillovers. Though they did not have as much support from their non-family peers, this group had moderate levels of support from their partners and family members. Another profile of WLB was signified by the highest degree of positive work-family spillovers, moderate negative spillovers, and greatest support from others in all domains. They were also highly persistent in pursuing their goals (i.e. high selective primary control) and were willing to ask for help when necessary (i.e. high compensatory primary control). Individuals in this profile tended to be highly efficient in negotiating and managing their role demands. Hence, this profile was referred to as the “high WLB” group. Nearly contradictory with this group, the last profile – the “low WLB” profile – was marked with the highest levels of negative spillovers across work and family domains, moderate positive spillovers, and highest levels of relationship strains. In comparison to the other two groups, this “low WLB” profile also had the highest levels of job demands. Despite receiving moderate support from their friends, coworkers, and supervisors, this group received the least support from their partners and family members and had to forgo



their responsibilities or lower their goals/expectations to cope with difficulties (i.e. high compensatory secondary control).

The addition of predictors to the latent profile model demonstrated partial support for H2. Age, gender, and marital status were important predictors of latent profile membership, while education level, family status, and working style were not predictive of latent profile membership. Interestingly, I found that an increase in age was more predictive of membership in the “moderate WLB” profile than the “low WLB” profile. The 99% CI for the odds ratios of membership in the “high WLB” profile compared to the “low WLB” profile (OR = 1.031, 99%CI [.999, 1.063]) and being in the “moderate WLB” compared to the “high WLB” profile (OR = 1.026, 99%CI [.998, 1.055]) barely included one. The result suggested that with age, balancing work and non-work domains might not become entirely easy, but it could be less daunting. Such finding is consistent with what other researchers have found in WLB literature – older people are able to maintain WLB since they are likely to have moved passed the stage of life when disruptions to WLB occur from parental responsibilities and early career development (Richert-Kazmierska & Stankiewicz, 2016). On the other hand, a different study posited that rather than mere contextual changes and individual preferences in work and non-work boundary, boundary management effectiveness that comes with age might explain why older workers tend to have higher WLB than younger workers (Spieler et al., 2018).

My finding indicated that compared to male workers, female workers had a higher odds of being in the “high WLB” profile than “moderate WLB” profile. Otherwise, there was no gender difference in the predicted membership in either the “high WLB” or the “moderate WLB” profile when the “low WLB” profile was used as a reference group. Previous studies demonstrated that both men and women experience imbalance between work and non-work

domains. While women tend to report home-related problems as disruptions to their WLB, men are more likely to have difficulties juggling their intensive work demands (i.e., Emslie & Hunt, 2009; Hilbrecht et al., 2008; Karkoulian et al., 2016b; McGinnity et al., 2007). To some extent, our result is consistent with these findings. Between the “high WLB” and the “moderate WLB” profile, women were more likely than men to manage their various roles better. Though the “high WLB” profile was characterized with higher negative work and family spillovers, job demands, and relationship strain, those people in this profile were also more likely to feel like they are in control of their situations, experience more positive spillovers, and enjoy more social supports.

As for marital status, I found a difference in profile membership only between married people and people who were in a discontinued relationship (i.e. divorced, separated, or widowed). The odds of being in the “high WLB” profile was higher than the odds of being in the “moderate WLB” profile for married people. There was no difference in profile membership when the “low WLB” profile was used as the reference group. Some past studies using variable-centered approaches showed that unmarried people can experience conflicts between work and non-work domains, and that there is no difference in the levels of WLB for married people versus unmarried people (Hamilton et al., 2006; Panisoara & Serban, 2013). The current study adds to the literature by comparing married and never married people with those who were never married. While married life can be stressful and demanding, it can also be supportive and bring out people’s potentials. Whereas a discontinued relationship can take away parts of the demands as well as support that they would otherwise receive from their partners. If a couple have children before they are separated, divorced, or one partner passes away, the responsibilities may rest on the other person’s shoulders (M. C. Sullivan et al., 2013).

Lastly, findings on the influence of latent profile membership on distal outcomes supported H3. Those in the “high WLB” profile, who were fully engaged and efficient in their roles, reported higher rates of subjective well-being, psychological well-being, as well as minimalist well-being. Such results align with prior study on the relationship between WLB and well-being (i.e., Edwards & Rothbard, 2005; Tahir & Aziz, 2019; Zheng et al., 2016).

### **Strengths and Limitations**

The use of person-centered approaches like LPA to understand heterogenous populations has become more and more popular in the past decade (Morin et al., 2018). For example, researchers in the field of organizational psychology have used LPA to identify different patterns of work-nonwork boundary management (Kossek et al., 2012) and supervisor and organizational commitment (Meyer et al., 2015). A recent publication by (Yucel, 2020) evaluated response patterns for work-family conflict and enrichment measures and reported three latent classes of balance between work and family life. The three classes included the Beneficial class (high enrichment, low conflict), the Moderate Beneficial class (moderate enrichment and low conflict), and the Moderate Active (moderate enrichment and moderate conflict). The present study is the first to use LPA and incorporate the most recent comprehensive conceptualization of WLB (Casper et al., 2018) to understand this phenomenon in a sample of urban Japanese workers. The results suggest that the sample can be parsed into three distinct profiles – “low WLB”, “moderate WLB”, and “high WLB”. Note that the choice of profile names is solely for the sake of brevity. As described above, these WLB profiles differ in not only their responses towards measures of work-family spillovers, but also role demands, social support, and self-control (see Table 3). The interpretation of these profiles relied heavily on the Quality-of-Life Model for WLB (Sirgy

& Lee, 2016), in which the authors place a large emphasis on individual differences in how individuals value and perform their roles.

LPA allows for identification of subgroups in a non-homogenous sample. If I were to use a variable-centered approach (i.e, factor analysis), I would have to describe the sample in this study with an aggregated measure (i.e. a factor score). Doing so, I would not be able to describe how people differ in their experience of balance. In contrast, using LPA, I was able to characterize the nature of three distinct groups of people with varying levels of balance. For example, the first profile was labelled “moderate WLB” as they had the lowest scores on nearly all indicators, which I interpreted as role withdrawal or disengagement. People in this profile reported the lowest levels of spillovers, job demands, self-control, as well as strain and support from non-familial others. The profile labelled “high WLB” described those who were efficient and engaged in their every role. They were persistent in their goal pursuit and were not hesitant to ask for help when necessary. Among the three groups, they enjoyed the highest levels of positive spillovers between work and family domains as well as support from their partners, family kins, and other social connections. Lastly, the profile labelled “low WLB”, however, seemed to include those who were partially engaged and inefficient in juggling among their various roles. They reported the highest levels of strain from their partners, family members, and friends. They also had the highest job demands and work-family spillovers.

Furthermore, this study examines WLB in a sample of urban Japanese workers. Even though the results mostly parallel WLB findings in Western societies, one intriguing pattern occurs is that female workers, compared to male workers, had a higher odds of membership in the “high WLB” profile than the “moderate WLB” profile. To a certain degree, this can be attributed to the notion that males may be less involved in the family domain. As such, they

were less impacted by the need to juggle between work and non-work domains and hence, they did not enjoy as much positive spillovers or receive as much social support. On the other hand, this result can also be understood as women were more likely than men to be in the “high WLB” group as they had more skills and were more efficient in negotiating their various role expectations. Previous findings have raised the concern that one-size-fits-all policies (i.e. general flexible work-time arrangement without addressing the company climate to encourage male involvement in the household) can further gender inequality (Chung & van der Lippe, 2018). Adding to those studies, the current research suggests that besides notable gendered practices, there may be more subtle gender differences in how male and female workers manage their role system. For instance, considering differences in how men and women prioritize their roles and negotiate their role responsibilities may generate some insightful understanding.

Regarding the distal outcomes, I found that membership in the “high WLB” profile was predictive of a higher degree of psychological well-being, subjective well-being, as well as minimalist well-being than being in either the “moderate WLB” or “low WLB” profiles. A causal link between WLB and well-being may be possible in this study because there is a temporal order, that is, the WLB indicators were collected before well-being was measured. The indicators cover very diverse aspects of individuals’ life; as such, the chance of missing confounding variables is relatively low. This finding that workers in a “high WLB” profile reported higher levels of well-being bolsters the idea that people strive for a balanced life and that continual efforts to promote balance is critical.

Aside from the aforementioned advantages, this study has some limitations that can be addressed by future research. First, the definition of WLB used is very comprehensive, considering multiple work and non-work domains. As such, interpretation of the results,

especially in comparison with previous findings should be taken with caution. For example, to incorporate people's role values as well as their perceived involvement and effectiveness, I chose to use three different self-control measures as WLB indicators. Limited empirical evidence, however, showed that people's proactive efforts (i.e., schedule control, choosing job location), were related to higher WLB (Gravador & Teng-Calleja, 2018). As such, self-control can be thought of as predictor of WLB, rather than its indicator. I would argue that since the self-control measures were collected at the same time as other WLB indicators, they should be used as indicators for WLB as well. As an indicator of WLB, an individual who had high WLB must be one who continually exerts control in different work and non-work domains.

Second, our sample included midlife workers from Tokyo, an urban area in Japan. This sample is certainly not representative of all Japanese workers. For example, in some remote areas of Japan, where the *ikumen* movement is not as popular or where organizational and governmental policies to enhance WLB are not implemented effectively, people may have very different take on what is considered balance and how to attain it. Researchers may find very different profiles arising from such samples.

Lastly, the present study utilized archival data, which limits the selection of measures (i.e. self-control was used to indicate individuals' effectiveness and involvement in their various roles). Future research can consider other measures that directly capture people's proactive and self-initiated behaviors to maintain balance similar to Gravador and Teng-Calleja's (2018) WLB crafting behaviors instrument. Other distal outcomes like job performance, job turnover, and life satisfaction as proposed by Sirgy and Lee (2016) can also be examined with this person-centered approach.

## **Implications**

Using a person-centered approach called LPA, the current study identified three distinct profiles of WLB in a sample of urban Japanese worker. I referred to them as the “moderate WLB” profile – including those who seemed to be family-oriented (with moderate partner strain, moderate partner and family support, and the lowest ratings on all other indicators), the “high WLB” profile – including those who seemed to be fully engaged and efficient at handling their multiple roles (with the lowest level of partner strain, moderate negative spillovers and role demands, complementary to the highest levels of positive spillovers, perceived control and social support), and the “low WLB” profile – including those who were partially engaged and inefficient at negotiating their roles (with the highest levels of negative spillovers, moderate to high role demands, moderate support from friend and work, and the least levels of support from their partner and family). Since these profiles differ greatly in the symptomology of imbalance, one-size-fits-all policies (i.e, flexible place-time arrangement) to enhance balance might not benefit workers as expected. Indeed, several papers on the effectiveness of WLB policies emphasized the notion that WLB policies are under-utilized as they are irrelevant or less important for certain employees (Chung & van der Lippe, 2018; Demerouti et al., 2012; Hamilton et al., 2006). As an example, Hamilton et al. (2006) found that never-married women without children found typical WLB policies as not very crucial and did not utilize such policies as frequently compared to other women working in health care and financial services, despite experiencing similar levels of work-life conflict. Understanding workers’ circumstances and needs is a steppingstone to better promotion of balance. For the sample in this study, the “low WLB” group may benefit from a training/workshop on work delegation and responsibility

negotiation, while an intervention to boost motivation and engagement may be more beneficial for the “moderate WLB” profile.

On a separate note, age, gender, and marital status seemed to predict membership in different WLB profiles. Such influence should also be analyzed together with the cultural values in Japan. Seniority is highly valued in a Japanese society. Younger workers may find it challenging and not have the resources necessarily to try to establish their position at work while balancing other aspects of life (Chandra, 2012; Kanai et al., 1996; Spieler et al., 2018). Moreover, recent governmental policies to stimulate the birthrate in Japan provided workers with several options for flexible working. However, the utilization of such policies can still generate stigma against working men and women, or worse, strengthen the gendered division of labor that women should take primary care of the home sphere (Chandra, 2012; Goldstein-Gidoni, 2019; Nagase & Brinton, 2017), similar to results found in Western countries (Chung & van der Lippe, 2018; Hilbrecht et al., 2008; Toffoletti & Starr, 2016). Interestingly, the current study found that Japanese female workers in this sample can in fact, have higher WLB than male workers. In relation, comparing to people in a discontinued relationship, married people were also more likely to be in a “high WLB” profile than a “moderate WLB” profile. While I made some speculation as to why such differences exist, replication of these findings is needed.

In sum, the current paper demonstrated that similar studies using this person-centered approach can meaningfully contribute to the literature on WLB. Additionally, policy makers and decision makers should draw on the results of such findings to have more targeted policies to help enhance people’s WLB.



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