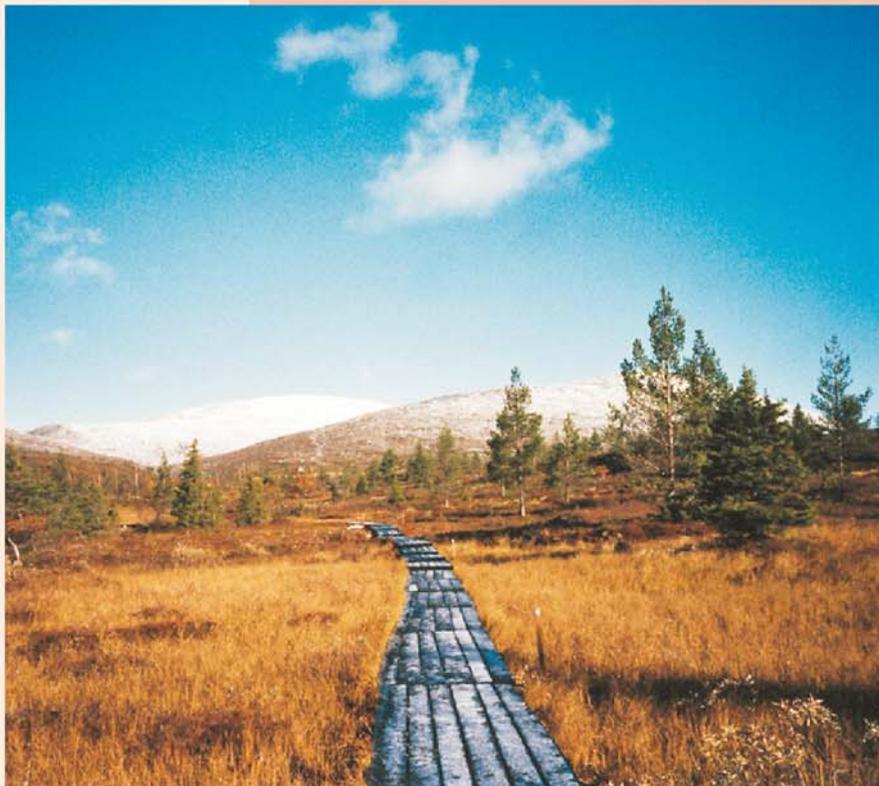




JOHANNA RANTANEN

# WORK-FAMILY INTERFACE AND PSYCHOLOGICAL WELL-BEING



*A Personality and Longitudinal Perspective*



UNIVERSITY OF JYVÄSKYLÄ

Johanna Rantanen

Work-Family Interface and  
Psychological Well-Being

A Personality and  
Longitudinal Perspective

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UNIVERSITY OF JYVÄSKYLÄ

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## ABSTRACT

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Yhteenveto: Työn ja perheen vuorovaikutuksen yhteys psyykkiseen hyvinvointiin sekä persoonallisuuden pitkittäistutkimuksen näkökulmasta

Diss.

The present study examined the Big Five personality traits as antecedents and moderators of the work-family interface–psychological well-being linkage. The cause-effect relation between work-family conflict and low psychological well-being was investigated to see whether work-family conflict is an antecedent (normal causality), an outcome (reversed causality), or both for psychological strain (reciprocal causality). Also, the direct spillover effects among job-related, family-related, and general psychological well-being were studied. Finally, a four-fold typology of work-family (im)balance, comprising of work-family conflict (WFC) and work-family enhancement (WFE) experiences, was developed and tested. The study was part of the ongoing Jyväskylä Longitudinal Study of Personality and Social Development (JYLS), in which the originally 8-year old children ( $N = 369$ , in 1968) have been followed to age 42 (in 2001). Another Finnish longitudinal study used was the Economic Crisis, Job Insecurity and the Household data ( $N = 851$ ), collected in years 1999 and 2000 from working-age citizens. Because the rank-order stability of the Big Five traits was shown to be high from age 33 to age 42, these traits were considered as antecedents for the work-family interface. Accordingly, Neuroticism preceded WFC from age 33 to age 36. At age 36, the WFC was directly related to psychological distress in men, whereas in women this association was found only in those high in Neuroticism. Although WFC was not related to psychological well-being longitudinally, job exhaustion preceded psychological distress across both 1- and 6-year time lags. High psychological well-being and psychosocial maturity (low Neuroticism, high Agreeableness, and high Conscientiousness) characterized the beneficial work-family imbalance type (absence of WFC, presence of WFE; 48.4%), whereas the opposite was observed for the harmful imbalance type (presence of WFC, absence of WFE; 8.9%). High work and family engagement and Extraversion, in turn, characterized the active balance type (presence of both WFC and WFE; 16.4%), whereas the opposite was observed for the passive balance type (absence of both WFC and WFE; 26.3%). Based on these results, it is recommended that personality be included both in the theories of work-family interface and in future empirical studies. When designing human resource policies directed toward reducing WFC, it is important to consider the actions that prevent and reduce employees' job exhaustion. The finding that nearly half of the 42-year-old participants experienced beneficial work-family imbalance is very positive, while at the same time there is a need for work-life benefits to be targeted particularly for the risk group of individuals experiencing harmful work-family imbalance.

Keywords: work-family conflict/enhancement/balance, psychological well-being, personality, longitudinal study

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## LIST OF PUBLICATIONS

- Study I Rantanen, J., Pulkkinen, L., & Kinnunen, U. (2005). The Big Five personality dimensions, work-family conflict, and psychological distress: A longitudinal view. *Journal of Individual Differences, 26*, 155-166.
- Study II Rantanen, J., Metsäpelto, R.-L., Feldt, T., Pulkkinen, L., & Kokko, K. (2007). Long-term stability in the Big Five personality traits in adulthood. *Scandinavian Journal of Psychology, 48*, 511-518.
- Study III Rantanen, J., Kinnunen, U., Feldt, T., & Pulkkinen, L. (2008). Work-family conflict and psychological well-being: Stability and cross-lagged relations within one- and six-year follow-ups. *Journal of Vocational Behavior, 73*, 37-51.
- Study IV Rantanen, J., Kinnunen, U., & Pulkkinen, L. A typology of work-family balance and imbalance. *Manuscript submitted for publication.*

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# 1 INTRODUCTION

Family, work, and health are mentioned by adults as the most important things in their lives (Lehto & Sutela, 1998; Pulkkinen, Nurmi, & Kokko, 2002; Pulkkinen et al., 2003). Ideally work promotes psychological health in the form of income and the development of a sense of accomplishment; family or home, in turn, is a place for attaining close relationships, personal happiness, and recovery (Barnett & Hyde, 2001; Kinnunen & Mauno, 2002; Sonnentag & Fritz, 2007). Today's adults are, however, facing many challenges while trying to find a satisfying balance between these life domains. Working life in Finnish society has undergone changes during recent decades (Moisio & HUUHTANEN, 2007), a development which is associated with global competition and the "24/7" service-on-demand society that is also evident in other countries (Major & Germano, 2006). This has demanded that workers be flexible, expend more effort, and endure uncertainties in their lives, even at the risk of their mental health and fulfilling family life (Törrönen, 2005). Indeed, forty percent of Finnish adults experience at least sometimes that combining work and family lives is problematic (Toivanen & Kauppinen, 2007). Within this context the present study aims to shed light on 1) whether personality shapes the work-family interface experience, and 2) how the quality of this experience is related to individuals' psychological well-being?

## 1.1 Work-family interface: a multifaceted phenomenon

### 1.1.1 Basic concepts

Citing Bronfenbrenner's ecological systems theory, Voydanoff (2002) describes the work-family interface as a mesosystem consisting of linkages and processes between work and family, which are viewed as microsystems consisting of networks of face-to-face relationships. Geurts and Demerouti (2003) use a broader term, work/non-work interface, which they define as a point where

work and non-work encounter each other, and the encounter can be either positive or negative. The term non-work is not limited to family, it refers to activities and responsibilities both within family and within private life beyond or not including family. Although these definitions complement each other, I have chosen to use the term work-*family* interface here, because the interaction between wage work and obligations within private life not including family was beyond the scope of the present study. In my opinion, before applying the same theories and measures that originally were developed from the perspective of working adults with family to working adults without family (i.e., living alone), the work/non-work (or work-home) experiences of working adults without family deserve to be both qualitatively and quantitatively explored in their own right. Thus, including working adults without family in research samples without further consideration (e.g., performing studies comparing working adults with and without family) might undermine their unique experiences and obscure our understanding of the work-family or work/non-work interface because it is hard to differentiate what effects are due to family and what due to private life not including family.

The work-family interface can further be described through four aspects: amount, direction, quality, and context. *Amount* of the work-family interface refers to the degree of segmentation versus integration between work and family domains. In segmentation, there are strict physical, temporal, functional, and psychological boundaries between work and family which are thus seen as relatively independent and non-influential life domains in relation to each other (Edwards & Rothbard, 2000; Geurts & Demerouti, 2003; Staines, 1980). By contrast, in integration or identity, work and family domains are tightly intertwined in terms of time, place, people, behaviour, thoughts and emotions (e.g., family business or among clerics), and therefore there is no clear distinction between work and family (Clark, 2000; Frone, 2003; Käsälä & Kovalainen, 2005). *Direction* of the work-family interface refers to a reciprocal relationship between work and family domains: work can affect family life (work-to-family direction), and family can affect working life (family-to-work direction), (Crouter, 1984; Frone, Russell, & Cooper, 1992; Greenhaus & Beutell, 1985; Gutek, Searle, & Klepa, 1991; Kirchmeyer, 1992b).

*Quality* of the work-family interface refers to negative versus positive interaction between work and family domains. Negative work-family interaction includes concepts of work-family conflict (Greenhaus & Beutell, 1985), interference (Gutek et al., 1991; O'Driscoll, Ilgen, & Hildreth, 1992), negative spillover (Kirchmeyer, 1992b; Lambert, 1990; Small & Riley, 1990), and resource drain (Edwards & Rothbard, 2000). These concepts are rooted in role stress theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964) and scarcity approach (Marks, 1977). Positive work-family interaction includes concepts of work-family enhancement (Tiedje et al., 1990; Voydanoff, 2002), enrichment (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006; Kirchmeyer, 1992b; Rothbard, 2001), positive spillover (Grzywacz & Marks, 2000; Kirchmeyer, 1992a; Lambert, 1990), and facilitation (Frone, 2003; Wayne, Grzywacz, Carlson, & Kacmar, 2007). These concepts are rooted in role

accumulation theory (Sieber, 1974) and expansion approach (Barnett & Hyde, 2001; Marks, 1977). Compensation can be seen as an intermediate experience in relation to negative and positive work-family interaction. This experience occurs when an individual seeks satisfaction and rewards by redirecting one's attention and energy into a certain life domain (e.g., family) due to dissatisfaction and unattained expectations within another life domain (e.g., work) (Edwards & Rothbard, 2000; Staines, 1980). Through compensation, the negative experiences within the compensated life domain are connected with the positive experiences attained in the compensating life domain.

*Context* of the work-family interface refers to the perspective from which the work-family interface is studied. In terms of the ecological systems theory, individual experiences in face-to-face relationships within work and family domains reflect the microsystems of the work-family interface (Bellavia & Frone, 2005; Bronfenbrenner, 1989; Voydanoff, 2002). The linkages and processes occurring between work and family as well as shared experiences and reciprocal effects that occur between an individual and his/her role partners reflect the mesosystem of the work-family interface. The influence of the third life domain, in which an individual is not involved in work-family interface processes that directly involve him or her, constitutes the exosystem effects. The influence of broader social contexts, such as subcultures or larger groups with distinctive norms and rules, on the work-family interface constitutes the macrosystem effects.

The demands placed upon an individual by his or her work/family members may be excessive or ambiguous (Kahn et al., 1964), and this is an example of the microsystem level phenomena. Voydanoff's (2005a) finding that affective community resources (neighbourhood attachment, support from friends) are related to high satisfaction both towards one's job and within one's marital relationship is a representation of mesosystem level effects. Kinnunen and Rantanen (2006) found that job exhaustion experienced by parents was negatively related to their knowledge about their child's activities, friends, and whereabouts as assessed by the child. Low parental knowledge in turn was related to less adaptive behaviour manifested by the child as assessed by the child's teacher. This three-stage spillover (i.e., parent's work affects parent-child interaction which affects child's behaviour; cf. Galambos, Sears, Almeida, & Kolaric, 1995) is an example of the exosystem level work-family interface. Another exosystem level work-family interface phenomenon is crossover of stress in a dyadic level, in which the work stress and job demands experienced by one spouse also transmits through marital interaction to the well-being, work experiences, and performance of the other spouse (Bakker, Demerouti, & Dollard, 2008; Kinnunen, Malin, & Mäkikangas, 2005; Westman, 2006). At the macrosystem level, Yang, Chen, Choi, and Zou (2000) found that family demand was related to work-family conflict in the United States more strongly ( $\beta = .85$ ) than in China ( $\beta = .57$ ). They explained this finding based on differences in cultural values: in China sacrificing family time for work is considered as self-sacrifice for the family in the long run whereas in the United

States sacrificing family time for work is viewed as failure to provide care and attention for one's family.

The present study examined the work-family interface from the perspective of a working individual with a partner and/or children, concentrating on both negative and positive work-family interactions. The inclusion of both negative and positive work-family interaction is one of the key issues in obtaining a comprehensive understanding of this phenomenon (Jones, Burke, & Westman, 2006; Kinnunen & Mauno, 2008). From the numerous theories and models of the work-family interface, those relating most closely to the present study are considered in detail in the following sections, but it is acknowledged that there are many other perspectives as well (e.g., Barnett, 1998; Clark, 2000; Kossek, Noe, & DeMarr, 1999; Voydanoff, 2002).

### 1.1.2 Theoretical background and definitions of negative work-family interaction

*Role stress theory* postulates that if a given set of social roles impose conflicting role expectations and pressures towards a focal person, it can create psychological conflict and role overload for him (Kahn et al., 1964). A fundamental element of a role conflict is the simultaneous occurrence of role pressures that preclude the compliance of competing role expectations. Kahn and colleagues (1964, pp. 19-20) identified four types of role conflict: intra-sender conflict (same person, e.g., supervisor, imposes incompatible expectations on a focal person), inter-sender conflict (when demands from two or more persons towards a focal person are in contradiction), inter-role conflict (role pressures associated with one role are in conflict with role pressures arising from another role) and person-role conflict (requirements of a given role oppose the needs and values of a focal person). Based on this, and especially on the notion of inter-role conflict, Greenhaus and Beutell (1985) defined *work-family conflict* as:

A form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role. (p. 77)

Greenhaus and Beutell (1985) further suggested three major forms of work-family conflict: time-, strain-, and behaviour-based conflict. *Time-based conflict* refers to overlapping schedules and pressures between work and family roles, due to which it may be impossible to be both physically as well as psychologically present within both roles as expected. *Strain-based conflict* refers to work- and family-related stressors that produce mental and emotional strain (e.g., anxiety, depression, apathy), due to which the demands of other life domains are difficult to fulfil. *Behaviour-based conflict* refers to different behavioural expectations within work and family domains and the inability to adjust one's behaviour according to these expectations within each life domain.

Resembling the ideas of Greenhaus and Beutell (1985), Small and Riley (1990) presented a few years later three processes that describe how work spills over to family life: time, psychological absorption, and energy. Time spent at work may take away time spent at home. Due to work concerns an individual may be absent-minded although physically present at home, and due to the physical and/or psychological demands of work an individual may be too fatigued to manage adequately their personal and family life. Based on these three processes, Small and Riley (1990) developed a three-dimensional measure of negative spillover where the respondents evaluate the negative cause-effect relationship between work and family, that is, the degree of time, psychological, and energy interference from work on family in their lives. Greenhaus and Beutell's (1985) and Small and Riley's (1990) conceptualizations of work-family conflict and negative spillover, as subjective cause-effect evaluation of the demands of work and family roles, correspond closely with the scarcity approach to multiple roles (Marks, 1977). In this conceptualization time, energy, and commitment are finite and scant individual resources, which can be easily drained, leading to role strain, resulting in, for example, work-family conflict or negative work-family spillover.

Greenhaus and Beutell (1985) explicitly defined work-family conflict as a *bi-directional phenomenon*, but work-to-family and family-to-work conflicts were first studied separately. The developmental psychologists and work-family sociologists concentrated on the former, and the organizational-behaviour researchers on the latter (Gutek et al., 1991). Both Gutek (1991) and Frone (1992) with their colleagues called attention to the reciprocal relationship between work-to-family conflict and family-to-work conflict stating that if one experiences either of these two conflict types one is also likely to experience the other. A recent meta-analysis confirmed this by showing that across 25 independent studies the reliability corrected correlation between work-to-family conflict and family-to-work conflict was .48 (Mesmer-Magnus & Viswesvaran, 2005). This means that there is both overlap (reciprocity) and unique variance between these two conflict types that warrants the inclusion of them both, as separate and distinctive constructs, into a study design when examining work-family conflict.

Some researchers have been able to demonstrate the discriminant validity and invariance of the factor structure between six subscales of work-family conflict (i.e., time-, strain-, and behaviour-based work-to-family and family-to-work conflicts) (Carlson, Kacmar, & Williams, 2000). But most of the work-family conflict scales based on Greenhaus and Beutell's conceptualization differentiate only between the two directions of work-family conflict, and these scales contain varying combinations of time- and strain-based items (e.g., Frone et al., 1992; Geurts et al., 2005; Kinnunen, Feldt, Rantanen, & Pulkkinen, 2005; Netemeyer, Boles, & McMurrin, 1996). Because of this, the empirical findings for behaviour-based work-family conflict are scarce (Geurts & Demerouti, 2003), and its role is somewhat vague in comparison to time- and strain-based work-family conflict.

### 1.1.3 Conceptual models of negative work-family interaction

The most widespread model of work-family conflict based on the foundation laid by Greenhaus and Beutell (1985) is *the model of the work-family interface* (Frone et al., 1992). For one example, the influence of this model can be seen in reviews and meta-analyses (Allen, Herst, Bruck, & Sutton, 2000; Byron, 2005; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Ford, Heinen, & Langkamer, 2007) that have analyzed accumulating research results according to its main elements: bidirectional nature of work-family conflict, domain-specific predictors of work-family conflict, and work-family conflict as a key mediating variable between work and family characteristics and work-related, family-related, and overall psychological distress (Frone et al., 1992, pp. 66-68). These main elements are illustrated in Figure 1.

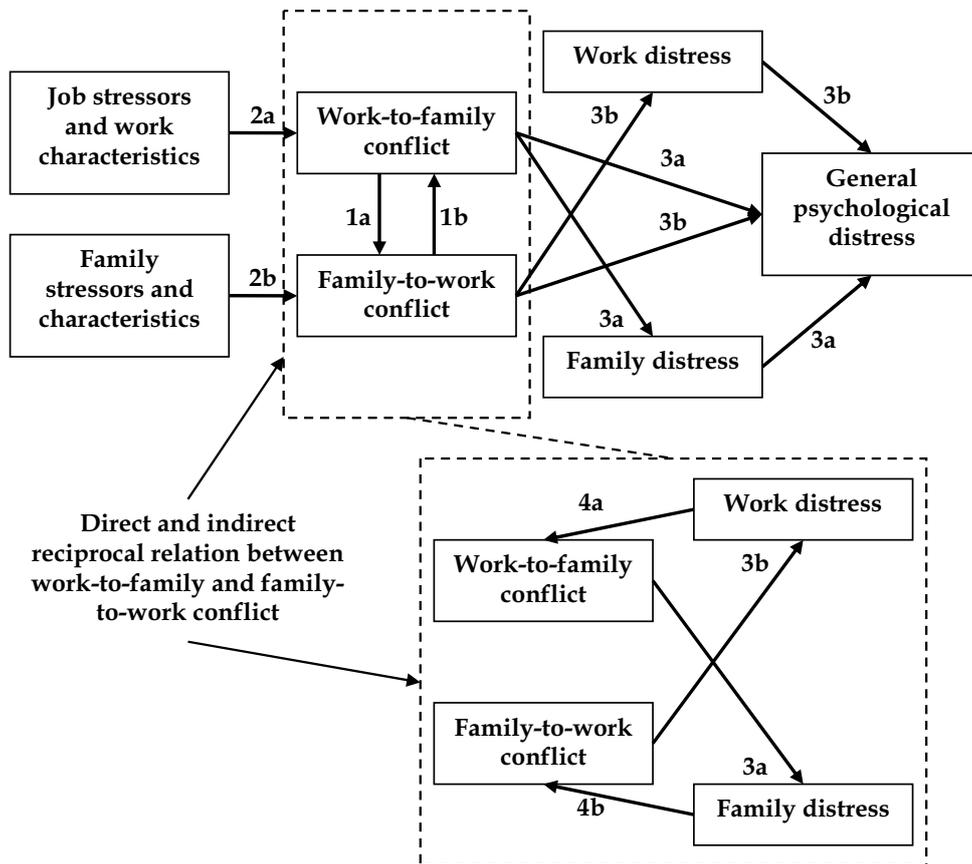


FIGURE 1 Main elements of the models of the work-family interface. Combined and modified from Frone et al. (1992, p. 66, Fig. 1; 1997, p. 147, Fig. 1).

*Bidirectional nature of work-family conflict* means that work-to-family conflict and family-to-work conflict are directly, positively, and reciprocally related to each other: work-to-family conflict causes family-to-work conflict (path 1a) when work interferes with family tasks and these unfulfilled family tasks start to hinder full performance in work (Frone et al., 1992). In reverse, family-to-work conflict causes work-to-family conflict (path 1b) when family interferes with work tasks and these unfulfilled work tasks start to hinder full participation within family. The *domain-specific predictors* refer to the assumption that work-to-family and family-to-work conflict both have unique antecedents that are directly and positively related to them. For work-to-family conflict these antecedents reside in the work domain (path 2a; i.e., job stressors and mental preoccupation, time, and effort devoted to work), and for family-to-work conflict they reside in the family domain (path 2b; i.e., family stressors and mental preoccupation, time, and effort devoted to family). The *mediator role of work-family conflict* means that job stressors and work characteristics are related to family distress and overall psychological distress indirectly through work-to-family conflict (paths 3a), whereas family stressors and characteristics are related to work distress and overall psychological distress indirectly through family-to-work conflict (paths 3b).

Frone, Yardley, and Markel (1997) later developed the model of the work-family interface further and renamed it *the integrative model of the work-family interface*. It was proposed that the reciprocal relation between work-to-family and family-to-work conflict might alternatively be indirect rather than direct, so that the two directions of work-family conflict are related to each other through work and family distress. In addition to being domain-specific outcomes of work-to-family and family-to-work conflict, work distress and family distress, respectively, are also domain-specific antecedents of these experiences. To illustrate more specifically, this means that, when work distress drains individuals' resources their capability and enthusiasm to meet the demands of the family domain are weakened, which leads to the experience of work-to-family conflict (path 4a in Figure 1). Family distress, in turn, bounds individuals' resources to the family domain, which hinders the management of work obligations and leads to the experience of family-to-work conflict (path 4b).

In addition to the previous work-family conflict approach, negative work-family interaction has been conceptualized as a similarity between work and family domains. According to other scholars, negative moods and emotions are carried over from work to family and vice versa by an individual without a mediating role of subjective cause-effect evaluation (i.e., work-family conflict), and these negative spillover effects generate similarity between these two life domains (Edwards & Rothbard, 2000; Lambert, 1990). What is essential for spillover between work and family domains to exist is the positive relationship between a work construct and a distinct, but related construct in the family domain (Edwards & Rothbard, 2000). Thus, the difference between negative work-family spillover and work-family conflict approaches can be seen because the former concentrates on carry over effects that produce similarity between work and family, and the latter concentrates on incompatibility between work and family roles.

*Negative spillover* of moods and emotions between work and family domains can be either direct or indirect (see Figure 2). Lambert (1990) suggested that an individual's negative reactions, such as dissatisfaction to objective work and family conditions (e.g., pay, the nature of the job, family size, housing conditions), are directly and positively related to unfavourable outcomes in the other life domain (path A). Edwards and Rothbard (2000) in turn state that spillover of moods can be explained through the following causal sequence: negative moods from work or family weaken effective performance in the other domain (path B), due to which the intrinsic and extrinsic rewards in that domain are not attained (path C), which then leads to negative emotional, affective, and cognitive states within the same domain (path D). A negative domain-specific mood can also first affect general mood (path E; e.g., decreased overall life satisfaction), which then hampers effective performance (path F), blocks rewards (path C), and finally produces negative mood in the other domain as well (path D).

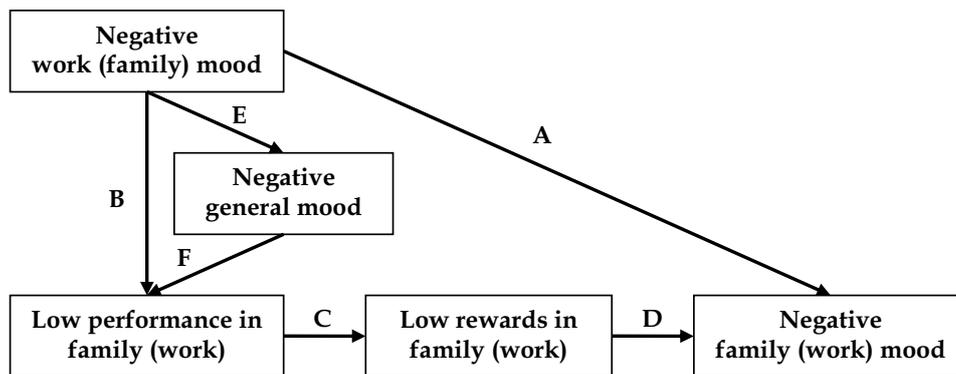


FIGURE 2 Direct and indirect negative work-family spillover. Combined and modified from Lambert (1990, p. 249, Fig. 1) and Edwards and Rothbard (2000, p. 186, Fig. 1).

There are two important notions about work-family spillover that are not included in the model presented in Figure 2. First, in addition to moods and emotions, the spillover processes refer also to the transfer of skills, behaviours, values, and attitudes from one domain to another (Geurts & Demerouti, 2003; Lambert, 1990). But these processes are considered beneficial rather than harmful carryover effects between work and family (Edwards & Rothbard, 2000), and are thus described in the following section. Second, sometimes the similarity between work and family domains can be spurious instead of true spillover effects, meaning that a third variable as a common cause may explain the positive relationships between work and family experiences (e.g., a positive correlation between job and marital dissatisfaction maybe explained by negative affectivity) (Edwards & Rothbard, 2000). This phenomenon is called congruence.

#### 1.1.4 Theoretical background and definitions of positive work-family interaction

Parallel to negative work-family interaction positive work-family interaction has also been operationalized as either a subjective cause-effect evaluation of the level of facilitation between work and family domains (Frone, 2003; Geurts et al., 2005; Hanson, Hammer, & Colton, 2006; Kirchmeyer, 1992b; Tiedje et al., 1990; Wayne et al., 2007) or as a transfer of mood, performance, and values from one life domain to another that improve quality of life in the receiving domain (Edwards & Rothbard, 2000; Greenhaus & Powell, 2006; Lambert, 1990). The theoretical rationale for both of these approaches is, however, the same. The basic argument of the role accumulation theory (Sieber, 1974) and expansion approach (Barnett & Hyde, 2001; Marks, 1977) is that multiple roles are not harmful, but rather are beneficial for both men and women in most cases.

Sieber (1974) argues in his *role accumulation theory* that holding multiple roles is both sociologically normal and psychologically desirable for four reasons. First, the inherent and emergent privileges of each role benefit an individual in their unique way (e.g., being an expatriate offers one the possibility to learn about different cultures, and being a parent offers the possibility to learn how to guide and support the development of another human being). The more roles an individual occupies the more privileges he or she enjoys. Second, multiple roles offer overall status security because an individual's well-being is not dependent on success in one role but instead on the other roles, and as well, role partners can buffer against hardships in one role (e.g., during divorce, friends, relatives, and work mates can provide affection, moral support, and emergency resources). Third, different role partners provide a variety of resources for status enhancement and role performance that are incidental in nature and come as a by-product of social relationships (e.g., the use of company property for personal reasons, possibilities for meeting important contact persons, getting recommendations for openings or good day-care centres). Fourth, role accumulation has the potential for personality enrichment and ego gratification through "tolerance of discrepant viewpoints, exposure to many sources of information, flexibility to the demands of diverse role-partners, reduction of boredom ... In fact, role accumulation may be essential to mental health" (Sieber, 1974, p. 576).

Marks (1977) complemented Sieber's (1974) theory by arguing that instead of human time, energy, and commitment being solely finite resources that individuals have to sparingly allocate across work and family roles to make them last (scarcity approach), these resources can also be seen as abundant and expansible (expansion approach). The rationale for *the expansion approach* is that social activities and tasks which are experienced as meaningful and rewarding, and which are carried out in a supportive and sympathetic atmosphere, are likely to produce energy, increase commitment, and counteract the feeling of time shortage (Marks, 1977). Thus, role strain and conflict are not seen as inevitable consequences of multiple roles but more a reflection of socio-cultural conditions that inhibit the potential for role expansion and resource enrichment.

Barnet and Hyde (2001) have presented *an expansionist theory of multiple roles* resembling Sieber (1974) and Marks' (1977) ideas. In addition, the expansionist theory is based on accumulated research results that, according to Barnet and Hyde, have made the classical theories about gender, work, and family obsolete. Their theory has four main principles. First, multiple roles are generally beneficial for both men and women, as it has been shown that adding worker roles for women, and family roles for men, produces better mental, physical, and relationship health. For example, for both men and women equal engagement to work and family roles was a buffer against psychological stress symptoms when work-family negative spillover was experienced (Toivanen, Väänänen, Ala-Mursula, Linna, & Vahtera, 2005). Second, the processes of buffering – added income, social support, opportunities to experience success, expanded frame of reference, increased self-complexity, similarity of experiences, and liberal gender-role ideology – illustrate why and when the effects of multiple roles are beneficial for an individual (cf. Sieber, 1974). Third, the advantageousness of multiple roles on health depends both on the number of roles and the quality of roles. It has been found that five might be optimal number of roles (Thoits, 1986). More important, however, is the subjective feeling that the roles are satisfying and reasonably manageable (Barnett & Hyde, 2001; Marks, 1977). Fourth, unlike often claimed, the psychological gender differences are for most part small and even when they exist these gender differences are alterable. Therefore, although highly differentiated gender roles may be still embedded in societies and effect work-family issues, it is not a definitive state of affairs (cf. Turpeinen & Toivanen, 2007; Turpeinen & Toivanen, 2008).

The more recent definitions of positive work-family interaction, summarized in Table 1, are based on this theoretical background (Barnett & Hyde, 2001; Marks, 1977; Sieber, 1974). The feature that combines all of the definitions in Table 1 is the emphasis on bi-directional beneficial effects between work and family (or home) domains. The main difference concerns the assumed outcome of these effects. Some emphasize the enhanced functioning (behaviour, performance, participation) of an individual in the receiving domain (Frone, 2003; Geurts et al., 2005; Voydanoff, 2002), while others emphasize the improved quality of life in the receiving domain (Greenhaus & Powell, 2006). However, as Hanson and colleagues (2006) have pointed out, the concept of work-family enrichment could be seen as an overarching construct under which the rest of the concepts of positive work-family interaction could be categorized. This is because the enhanced functioning and transfer of different sorts of resources (i.e., affects, values, skills, and developmental and capital gains) between work and family domains are likely (but not inevitably) to increase the experienced quality of life in each domain. Yet another emphasis is given by Wayne and colleagues (2007), who specify the system as the unit of analysis instead of the individual. By work-family facilitation they mean the enhanced functioning of dyads or groups within work and family (i.e., supervisor-subordinate or parent-child dyad) due to gains acquired by an individual from the 'sending' life domain.

TABLE 1 Definitions of positive work-family interaction

<b>Concept</b>	<b>Definition</b>	<b>Presented by</b>
Work-family enhancement	"The extent to which aspects of the work or family role provide resources that facilitate the performance of the other role."	Voydanoff, 2002, p. 149
Work-family facilitation	"The extent to which participation at work (or home) is made easier by virtue of the experiences, skills, and opportunities gained or developed at home (work)."	Frone, 2003, p. 145
Positive work-home interaction	"A process in which a worker's functioning (behaviour) in one domain (e.g., home) is influenced by positive load reactions that have built up in the other domain (e.g., work)."	Geurts et al., 2005, p. 322
Work-family enrichment	"The extent to which experiences in one role improve the quality of life in the other role."	Greenhaus & Powell, 2006, p. 73
Work-family positive spillover	"The transfer of positively valenced affect, skills, behaviors, and values from the originating domain to the receiving domain, thus having beneficial effects on the receiving domain."	Hanson et al., 2006, p. 251
Work-family facilitation	"The extent to which an individual's engagement in one life domain (i.e., work/family) provides gains (i.e., developmental, affective, capital, or efficiency) which contribute to enhanced functioning of another life domain (i.e., family/work)."	Wayne et al., 2007, p. 64

The measures developed and validated following the definitions of positive work-family interaction represent two views: *bi-directionality* (Geurts et al., 2005; Grzywacz & Marks, 2000; Kinnunen et al., 2005; Wayne, Musisca, & Fleeson, 2004), in which the scales of positive work-to-family and family-to-work interaction are differentiated from each other, and *multidimensionality* (Carlson et al., 2006; Hanson et al., 2006), in which bi-directionality is combined with subscales reflecting different aspects of positive interaction. Carlson and colleagues' (2006) work-family enrichment scale consists of six dimensions: work-to-family development, affect, and capital enrichment, and family-to-work development, affect, and efficiency enrichment. Also, the perceived work-family positive spillover scale by Hanson and colleagues (2006) consists of six dimensions: affective spillover, behaviour-based instrumental spillover, and value-based instrumental spillover each occurring in two directions, from work to family and from family to work. As can be seen, the perceived work-family positive spillover scale (Hanson et al., 2006) and the work-family enrichment scale (Carlson et al., 2006) overlap to some extent. A scale measuring positive work-family interaction including the idea of enhanced functioning of work and family systems as the unit of analysis is pending development and validation (Wayne et al., 2007).

### 1.1.5 Conceptual models of positive work-family interaction

There exists a theoretical void concerning the positive work-family interaction as a subjective cause-effect evaluation (Frone, 2003). Because of this, investigating under what circumstances and with what outcomes positive work-family interaction exists has been rather intuitive, or has been based on models of negative work-family interaction. Frone (2003), however, has warned that just substituting work-family conflict with work-family facilitation in established models is not a valid approach. To remediate this, at least two views have been proposed: a dual process model of work-home interference (Bakker & Geurts, 2004) and a resource-gain-development perspective (Wayne et al., 2007).

The *dual process model of work-home interference* draws on two theories: the job demands-resources model by Demerouti, Bakker, Schaufeli and colleagues on the one hand, and on the effort-recovery model by Meijman and Mulder on the other hand (Bakker & Geurts, 2004). In this model, both negative and positive interference from work to home are considered. The key element of this model is that these two experiences are considered separate constructs, each having distinctive work-related antecedents. Excessive job demands (i.e., high emotional, physical, or time-related demands, high degree of role conflicts) are theorized to cause negative work-to-home interference either directly, or through job exhaustion caused by job demands. However, job resources (i.e., skill variety, autonomy, job security, supervisor and coworker support) are theorized to induce positive work-to-home interference either directly, or through flow at work generated by job resources.

The *resource-gain-development* (RGD) perspective is a model of primary antecedents, consequences, and moderators with work-family facilitation that extend the positive side of the dual process model. The RGD perspective is based on positive organizational scholarship by Cameron, ecological systems theory by Bronfenbrenner, and conservation of resources theory by Hobfoll (Wayne et al., 2007). The basic premise of the RGD perspective is that because individuals have natural tendency towards positivity and development, they obtain resources and positive gains through role engagement, which in turn improve system (work, family) functioning in another role domain when the gains are applied, sustained, and reinforced in that domain (Wayne et al., 2007, p. 66). Furthermore, the greater the resources within one role and the accumulation of resources across different roles, the greater the likelihood of positive work-family facilitation.

The conceptual model of the RGD perspective is illustrated in Figure 3. The resources enabling work-family facilitation are personal characteristics (e.g., positive affectivity, self-efficacy, work identity) and environmental resources (e.g., enriched jobs with developmental opportunities, co-worker and supervisor support along with a supportive work-family culture, high-paying and high-prestige jobs) (Wayne et al., 2007). The work-family facilitation in itself includes three components: engagement, individual gains, and enhanced functioning. Engagement is the foundation of facilitation and refers to the level

of investment of an individual toward work and family related activities. Through active engagement individuals acquire developmental (skills, knowledge, values, perspectives), affective (moods, attitudes, confidence, other aspects of emotions), capital (economic, social, and health assets), and efficiency (enhanced focus/attention toward multiple role responsibilities) gains. These gains then promote enhanced functioning, which refers to improvements in vital work and family performance, such as problem solving or interpersonal communication.

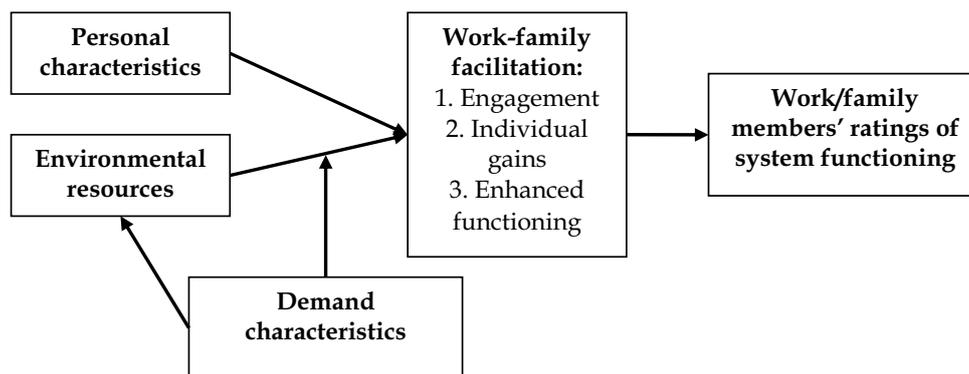


FIGURE 3 Conceptual model of resource-gain-development (RGD) perspective modified from Wayne et al. (2007, p. 67, Fig. 1).

Work-family facilitation, in turn, is claimed to produce quantifiable enhancements in system and/or system member's functioning such as improved quality of work-related dyadic relations, work group cohesion, perceived unit effectiveness, marital quality, parent-child interactions, and family well-being (Wayne et al., 2007). Finally, demand characteristics, that is, individual characteristics that "operate in ways to demand particular responses from the environment", may directly affect either the availability of environmental resources for facilitation, or may moderate the relationship between environmental resources and facilitation. For example, being in an executive position with a family may increase both the desire for and the availability of family-friendly policies without fear of sanction from a higher level, leading to increased work-family facilitation (occupational status as a facilitating demand characteristics) (Turpeinen & Toivanen, 2007). Wayne and colleagues (2007) have intended the RGD model to be applicable to both work-to-family and family-to-work directions in future research, although they wrote this initial RGD model more from the perspective of work-to-family facilitation.

There are two theories of positive work-family interaction as a transfer of mood, values, resources, and performance from one life domain to another without subjective cause-effect evaluation as a mediating factor, as exemplified by the RGD perspective (Wayne et al., 2007). Edwards and Rothbard (2000) have presented a *model of causal structures for spillover between work and family* and Greenhaus and Powell (2006) have presented a *theory of work-family enrichment*.

The transfer process of positive mood and affect from one life domain to another is very similar in both of these theories and it is illustrated in Figure 4 (upper schema). Accordingly, positive mood from originating domain spills over to the receiving domain, by enhancing the role performance and rewards in the receiving domain that then generates positive mood in the receiving domain (Edwards & Rothbard, 2000). Greenhaus and Powell (2006) have described this mechanism as comprising an affective path of work-family enrichment. They have elaborated it further by suggesting that resources (skills and perspectives, flexibility, psychological, physical, social-capital, and material resources) generated in the originating role precede both high performance and positive affect in that role, launching the affective path into action in the first place.

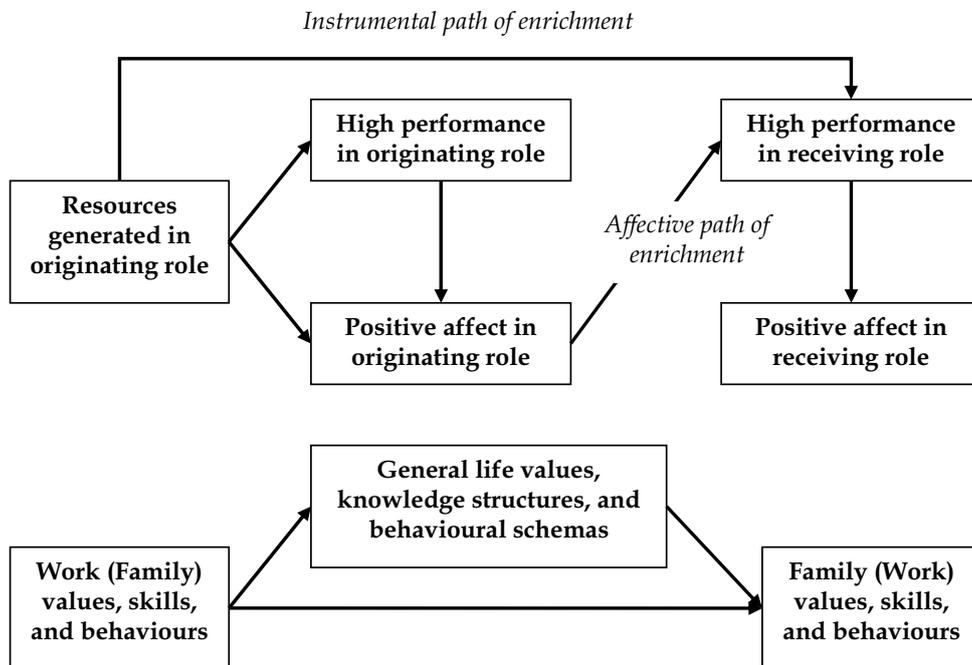


FIGURE 4 Positive work-family interaction as transfer of mood, values, resources, and performance from one life domain to another. The upper schema is modified from Greenhaus and Powell (2006, p. 79, Fig. 1) and the lower schema is modified from Edwards and Rothbard (2000, p. 186, Fig. 1).

The resources of the originating role may enhance the performance in the receiving role also directly (i.e., without affective path), producing positive affect in the receiving role. Greenhaus and Powell (2006) call this an instrumental path of enrichment (Figure 4, upper schema). Instead of considering different resources as preceding factors for high role performance and positive affect, in Edwards and Rothbard's (2000) theory, values, skills, and behaviours each are assumed to have unique spillover effects from work to family and vice versa. It is assumed that values, skills, and behaviours from the originating domain transfer either directly or indirectly (through general life

values, knowledge structures, and behavioural schemas) to the receiving domain producing similarity in these aspects (Figure 4, lower schema).

### 1.1.6 Work-family balance

Work-family interface research has long been driven by role stress theory, meaning that mostly the negative side of the work-family interaction has been studied. Now that the emphasis has shifted into the investigation of also the positive interaction between work and family roles, the scholars have started to discuss and debate about what is the essence of work-family balance.

Scholars in the area of work-family research have generally agreed that work-family balance is important for an individual's psychological well-being, and that high self-esteem, satisfaction and overall sense of harmony in life can be regarded as the markers of a successful balance between work and family roles (Clark, 2000; Clarke, Koch, & Hill, 2004; Marks & MacDermid, 1996). There exists, however, ambiguity concerning how work-family balance should be defined, measured, and researched. And thus, the theorizing of what constitutes work-family balance, how it evolves, and what factors enable or hinder it, is still in process (Castrén, 2007; Grzywacz & Carlson, 2007; Tetrick & Buffardi, 2006; Voydanoff, 2005b). Greenhaus, Collins, and Shaw (2003) have also questioned the obviousness that work-family balance leads to favourable, and imbalance to detrimental, health outcomes since according to them this is the empirical question that has not yet been firmly established.

The foundation for work-family balance can be traced back to studies of women with multiple roles. Barnett and Baruch (1985) investigated the effect of balance between rewards and concerns in the roles of a paid worker, wife, and mother on psychological distress. They found that positive role quality, that is more rewards than concerns experienced in a given role, was related to low role overload, role conflict, and anxiety. Barnett and Baruch operationalized role quality as a 'rewards minus concerns' difference score. Tiedje and her colleagues (1990) approach the same research question from the perspective of role perception typology. In their typology role conflict and role enhancement were regarded as independent dimensions, and therefore it was possible to experience simultaneously either: a) high conflict and low enhancement, b) high enhancement and low conflict, c) low conflict and low enhancement, or d) high conflict and high enhancement. It was found that regardless of the level of enhancement, women who experienced high role conflict were more depressed and less satisfied as parents than women belonging to the low conflict - high enhancement group.

From these studies it might be concluded that high rewards and enhancement combined with low concerns and conflict experienced in work and family roles is beneficial for an individual's well-being, and thus these experiences define role balance. Marks and MacDermid (1996) have, however, conceptualized this quite differently in their *theory of role balance*. According to them role balance is not an outcome but instead "a behavioral pattern of acting across roles in a certain way, and a corresponding cognitive-affective pattern of

organizing one's inner life of multiple selves" (Marks & MacDermid, 1996, p. 421). They present that there are two ways to engage multiple roles: positive and negative role balance. *Positive role balance* refers to the tendency to engage every role with equally high effort, devotion, attention, and care, whereas *negative role balance* refers to the tendency to engage roles with apathy, cynicism, and low effort and attentiveness. Due to these tendencies positive role balance is theorized to lead role ease and negative role balance is theorized to lead role strain – role ease and strain corresponding with positive and negative work-family interaction, respectively (Marks & MacDermid, 1996). In the case of positive role balance, mutually incompatible role demands are either prevented beforehand or solved before these situational urgencies become chronic. For individuals whom negative role balance is characteristic, mutually incompatible role demands are likely to accumulate, creating an ongoing state of situational urgencies.

More recent views about work-family balance can be classified into overall appraisals of work-family balance, and components approach to work-family balance (Grzywacz & Carlson, 2007). *Overall appraisal* refers to an individual's general assessment concerning the entirety of his or her life situation. For example, work-family balance has been defined as "satisfaction and good functioning at work and home, with a minimum of role conflict" (Clark, 2000, p. 751), "equilibrium or maintaining overall sense of harmony in life" (Clarke et al., 2004, p. 121), and "global assessment that work and family resources are sufficient to meet work and family demands such that participation is effective in both domains" (Voydanoff, 2005b, p. 825). When an overall appraisal approach is applied in research, work-family balance is typically measured with one general question (e.g., "All in all, how successful do you feel in balancing your work and personal/family life?") (Clarke et al., 2004, p. 127).

A *components approach* to work-family balance emphasizes work-family balance as a direct formative latent construct (see more Edwards & Bagozzi, 2000), which means that the components of work-family balance precede it and give meaning to it (Grzywacz & Carlson, 2007). For example, according to Greenhaus and colleagues (2003), work-family balance consists of time balance, involvement balance, and satisfaction balance, and according to Frone (2003) it consists of work-family conflict and work-family facilitation. The advantage of the components approach over overall appraisals of work-family balance is that researchers can use conceptually based measures of balance that tap the different aspects of work-family balance that form the overall evaluation how well an individual is meeting role-related responsibilities (Grzywacz & Carlson, 2007).

Following the theory of role balance (Marks & MacDermid, 1996), Greenhaus and colleagues (2003, p. 513) have defined work-family balance as "the extent which an individual is equally engaged in – and equally satisfied with – his or her work and family role". They present that the components of work-family balance are time balance, involvement balance, and satisfaction balance. *Time balance* refers to equal time devoted, *involvement balance* refers to equal psychological effort and presence invested, and *satisfaction balance* to equal satisfaction expressed across work and family roles. Work-family balance

is regarded as *a continuum* where imbalance in favor of work role lies at one end, and imbalance in favor of family role lies at the other end, and balance lies in the middle favoring neither work nor family role. In this conceptualization work-family balance and work-family imbalance are not seen as inherently beneficial and detrimental, respectively, for the quality of life. Instead, it should be empirically tested whether equal time, involvement, and satisfaction balance is better for an individual than imbalance in favor of either work or family roles. In addition, Greenhaus and colleagues assume that the difference between balance and imbalance in relation to quality of life is more pronounced within individuals whose total level of engagement is high across roles (positive balance vs. positive imbalance in favor of work or family) than within individuals whose total level of engagement is low across roles (negative balance vs. negative imbalance in favor of work or family).

Frone (2003), in turn, presented *a four-fold taxonomy of work-family balance*, in which work-family balance is defined as “low levels of inter-role conflict and high levels of inter-role facilitation” (p. 145). The four-fold taxonomy is based on the notion of bi-directionality between work and family domains and the theories of work-family conflict and facilitation (Frone et al., 1992; Greenhaus & Beutell, 1985; Grzywacz & Marks, 2000; Kirchmeyer, 1992b). Accordingly, work-family balance (low conflict, high facilitation) can occur in two directions: from work-to-family and from family-to-work. Thus, the measurable four components forming the work-family balance are work-to-family conflict, family-to-work conflict, work-to-family facilitation, and family-to-work facilitation.

Rantanen and Kinnunen (2005) have suggested *a typological approach to work-family balance* in which the basic premises of role conflict (Kahn et al., 1964), role enhancement (Marks, 1977; Sieber, 1974), and role balance (Marks & MacDermid, 1996) theories are combined into one model. Their approach corresponds with the role perception typology of Tiedje and colleagues (1990), and to some extent with the other recent theories pertaining to work-family balance (Clark, 2000; Frone, 2003; Greenhaus et al., 2003). The typology of work-family balance and imbalance offers a global description of work-family balance based on multidimensional measurement of work-family interface (Rantanen & Kinnunen, 2005). In this approach four types of work-family (im)balance are identified: beneficial imbalance, harmful imbalance, active balance, and passive balance as illustrated in Figure 5.

Work-family enhancement	Work-family conflict	
	High	Low
High	<b>Active balance</b>	<b>Beneficial imbalance</b>
Low	<b>Harmful imbalance</b>	<b>Passive balance</b>

FIGURE 5 Typology of work-family balance and imbalance modified from Rantanen and Kinnunen (2005, p. 240, Fig. 6.1.3).

In *imbalance*, the experiences of work-family enhancement and conflict are in contradiction: either enhancement is high and conflict is low (*beneficial imbalance*) or conflict is high and enhancement is low (*harmful imbalance*). In *balance*, the experiences of work-family enhancement and conflict are equivalent: both are high (*active balance*) or both are low (*passive balance*). It is assumed that beneficial and harmful work-family imbalances relate to an individual's psychological functioning and well-being according to their labels. Instead, active and passive work-family balances are assumed according to their labels to reflect "a behavioral and cognitive-affective pattern of acting and feeling across roles in a certain way" to quote Marks and MacDermid (1996).

Grzywacz and Carlson (2007) have argued that the views discussed above over emphasize work-family balance as a psychological construct and thus they fail to capture one fundamental aspect, the contextual and social perspective of work-family balance. Therefore they have suggested an extended definition of work-family balance that considers work-family balance as both a psychological and a social construct. According to them, work-family balance is the "accomplishment of role-related expectations that are negotiated and shared between an individual and his or her role-related partners in the work and family domains" (Grzywacz & Carlson, 2007, p. 458).

As there does not exist an instrument that would coincide with this definition, Grzywacz and Carlson recommend that the measures of work-family conflict and work-family enrichment (facilitation, enhancement) be used to investigate the experience of work-family balance. To confirm this recommendation, they studied the variance explained in work- and family-related outcomes (e.g., satisfaction, stress) by single item of work-family balance (overall appraisal) and by four-fold taxonomy of work-family balance (i.e., components approach presented by Frone, 2003). It was found that the components approach produced systematically higher explanation rates than did the overall appraisal. For example, in the case of job stress the respective explanation rates were 45% vs. 18%.

A specific issue concerning the conceptualization of work-family balance concerns whether and how it is different from work-family fit. According to Pittman (1994, p. 186), *work-family fit* "represents an assessment of the balance between the spheres and may be considered the acceptability of the multidimensional exchange between a family and work". As can be seen from this definition, work-family fit seems either to be a direct outcome of work-family balance, or stems from one's perceptual evaluation of his or her work-family balance, which is how Voydanoff (2002) first interpreted and presented work-family fit. Later, however, she has presented that work-family fit "as a form of inter-role congruence in which the resources associated with one role are sufficient to meet the demands of another role" precedes the overall assessment of work-family balance (Voydanoff, 2005b, p. 825). The difference between work-family fit and work-family balance is made even more ambiguous by the fact that even when the same bi-directional measure of positive and negative work-family interaction (Grzywacz & Marks, 2000) is used, the researchers refer to the underlying phenomena interchangeably as work-family fit (Grzywacz & Bass, 2003) or work-family balance (Aryee, Srinivas, & Tan, 2005).

## **1.2 Work-family interface: psychological well-being and personality**

### **1.2.1 Cross-sectional studies of work-family interface and psychological well-being**

The proportion of working adults experiencing negative influence from work to family at least sometimes has been found to be about 40% both in Finnish (Kinnunen & Mauno, 1998; Toivanen & Kauppinen, 2007) and in U.S. (Bellavia & Frone, 2005) samples. The prevalence for negative influence from family to work is much lower, being in these nations about 7% and 12%, respectively. Comparing the reported means (as the prevalence rates are seldom reported) it seems that the proportions of adults experiencing these two directions of negative work-family interaction are close to these levels also in eastern cultures as in India (Aryee et al., 2005) or Israel (Cinamon & Rich, 2002). In the light of these prevalence rates and in accordance with the model of the work-family interface (illustrated in Figure 1; Frone et al., 1992), researchers have extensively investigated the psychological consequences of negative work-family interaction for an individual (Allen et al., 2000). Psychological well-being is understood here broadly including mental health, emotional states, and satisfaction in the domains of work and family as well as generally in life regardless of context.

The reviews and meta-analysis of work-family conflict and psychological well-being show that from the work-related well-being indicators, work-family conflict is related to high burnout and job stress, and low job satisfaction (Allen et al., 2000; Ford et al., 2007; Kossek & Ozeki, 1998). Accordingly, from the family-related well-being indicators, work-family conflict is related to high family stress and low family satisfaction. With regard to general psychological well-being, work-family conflict is related to elevated levels of psychological strain, psychosomatic symptoms, depression, and low life satisfaction. From the two directions of work-family conflict, work-to-family conflict has stronger effects on psychological well-being than family-to-work conflict (Ford et al., 2007; Kossek & Ozeki, 1998).

There are no prevalence rates available for positive work-family interaction, but concluded from the means of negative and positive work-family interaction, it seems that positive family-to-work interaction is more prevalent than negative work-to-family or family-to-work interactions (Aryee et al., 2005; Demerouti & Geurts, 2004; Demerouti, Geurts, & Kompier, 2004; Grzywacz & Bass, 2003; Kinnunen, Feldt, Geurts, & Pulkkinen, 2006; Wayne et al., 2004). In addition, the positive work-to-family interaction is also found to be either more, or as prevalent as the negative work-to-family interaction in these studies, and more prevalent than the negative family-to-work interaction.

The findings from the studies examining the relationship between positive work-family interaction and psychological well-being are so far rather

consistent, although this side of the work-family interface is far less studied than negative work-family interaction. Positive work-to-family interaction has been found to be related to low job exhaustion and job stress, and high job satisfaction (Aryee et al., 2005; Kinnunen et al., 2006; Voydanoff, 2005a; Wayne et al., 2004). Positive family-to-work interaction, in turn, has been found to be related to high family and marital satisfaction, and low marital risk and disagreement (Voydanoff, 2005a; Wayne et al., 2004). With regard to general psychological well-being, positive work-to-family interaction was found to be related to low psychological distress (Kinnunen et al., 2006) and positive family-to-work interaction has been related to low depression (Grzywacz & Bass, 2003). Neither of these experiences, however, was related to low fatigue (Geurts et al., 2005).

### **1.2.2 Longitudinal studies of work-family interface and psychological well-being**

Psychological well-being indicators are often described as consequences of the work-family interface, but the supporting research findings are based mostly on cross-sectional findings, and this is described as a serious limitation of work-family research (Allen et al., 2000; Ford et al., 2007; Kossek & Ozeki, 1998). In fact, it has been determined that 94% of the work-family conflict studies have been cross-sectional (methodological review by Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007). Due to this, the causal relation between the negative and positive work-family interaction and psychological well-being has not been firmly established, and the need for longitudinal studies is emphasized, especially because the existing longitudinal studies of negative work-family interaction and psychological well-being offer mixed results, and longitudinal studies of positive work-family interaction are yet very rare.

The causality between negative work-family interaction and psychological well-being has been conceptualized in three different ways, resulting in three different approaches. According to the most traditional approach, called *normal or classical causality*, negative work-family interaction is seen as an antecedent of high psychological strain, because it is thought to cause a state where an individual's mental resources are threatened and depleted, leading to a possible decrease in well-being (Eby et al., 2005; Grandey & Cropanzano, 1999; Voydanoff, 2002).

This normal causality approach is supported by several longitudinal studies. Global work-family conflict (directionality not considered) preceded employees' low general psychological well-being after six months (Grant-Vallone & Donaldson, 2001). Over three months, longitudinal relations were found from work-to-family interference to low, and from family-to-work interference to high, family satisfaction although the authors emphasized that the concurrent associations between work-family conflict and well-being were more frequent and plausible (O'Driscoll, Brough, & Kalliath, 2004). Over a one-year time lag work-to-home interference was related to the emotional exhaustion dimension of burnout (Peeters, de Jonge, Janssen, & van der Linden,

2004) and fatigue at work (van Hooff et al., 2005). Work-to-home interference was also related to depressive complaints across one year (van Hooff et al., 2005), and family-to-work conflict preceded elevated levels of depression four years later (Frone, Russell, & Cooper, 1997). In addition, it was found that in women, but not in men, work-to-family conflict was a precursor of job dissatisfaction, parental distress, and psychological stress symptoms over a one-year period (Kinnunen, Geurts, & Mauno, 2004). Supporting this gender difference, it was found that work interfering with family preceded job dissatisfaction a year later in women, but not in men (Grandey, Cordeiro, & Crouter, 2005). Gender differences were also found in a study where neither self-evaluated work-family conflict nor work-family positive spillover preceded depression in men and women, but instead for women their husbands' work-to-family positive spillover, and for men their wives' family-to-work positive spillover preceded low depression across a year time lag (Hammer, Cullen, Neal, Sinclair, & Shafiro, 2005).

Although the normal causality approach has received support, its premise can be questioned. It has been shown that impaired mental health, for example depression, both lowers the threshold for negative environmental perceptions and experiences (Zapf, Dormann, & Frese, 1996), and reduces mental abilities to function in daily life (Wang et al., 2004). Thus, it might be possible that if an individual suffers from psychological strain, he or she as a consequence will have less mental resources to manage simultaneous work- and family-related responsibilities. Therefore psychological strain accompanied by impaired daily functioning might increase the incidence of negative work-family interaction.

The following longitudinal studies support this *reversed causality approach*: among business travellers pre- and mid-trip burnout preceded work-family conflict (work-to-family and family-to-work conflict were combined into one measure) during and after the trip (the three measurement points were one week before, during and a few days after the trip; Westman, Etzion, & Gortler, 2004). Among soldiers with family, job dissatisfaction preceded work-to-family conflict across three or four months (Britt & Dawson, 2005). In addition, in men, but not in women, marital dissatisfaction, parental stress and psychological stress symptoms were antecedents of work-to-family conflict one year later (Kinnunen et al., 2004). Partly supporting these latter findings, family dissatisfaction preceded family-to-work conflict in men, but not in women, whereas job dissatisfaction preceded work-to-family conflict both in men and women one year later (Huang, Hammer, Neal, & Parrin, 2004). The most recent study showed that instead of cross-lagged associations between work-family conflict and well-being across one year time lag, synchronous effects within the second measurement point were more plausible while controlling the effect of the first measurement on the dependent variable (Steinmetz, Frese, & Schmidt, 2008). This study concluded that depression explained the increase in work-to-family conflict that had happened during a year.

Besides normal and reversed causal approaches, there exists a *reciprocity approach* to negative work-family interaction and psychological well-being. Frone with colleagues (1997) proposed that work distress is both an antecedent

of work-to-family conflict and an outcome of family-to-work conflict, and that family distress is both an antecedent of family-to-work conflict and an outcome of work-to-family conflict as presented in the integrative model of the work-family interface (cf. Figure 1).

Reciprocal associations have been observed in three longitudinal studies, although the found relationships do not fully follow the domain-specificity principle (cf. Frone, Yardley et al., 1997). Over a six- and twelve-week period work-to-home interference both preceded and was an outcome of job exhaustion (Demerouti, Bakker, & Bulters, 2004). Over three months work-to-family conflict preceded high job exhaustion, dysphoric mood and marital dissatisfaction, and simultaneously work-to-family conflict was an outcome of high job exhaustion and a high amount of conflict with family members, and family-to-work conflict was an outcome of marital dissatisfaction (Leiter & Durup, 1996). Over six months family-to-work interference preceded psychological stress symptoms, and work-to-family interference was an outcome of these symptoms (Kelloway, Gottlieb, & Barham, 1999).

Considering the support found for both normal and reversed causality, as well as reciprocity approaches, it is difficult to draw a firm conclusion about the temporal order in predictive associations between negative work-family interaction and psychological well-being. This is because of the conceptual and methodological differences between the previous longitudinal studies. According to Frone and colleagues (1992, p. 65) the following criteria should be integrated into study designs to fully examine the relationship between work-family conflict and well-being: 1) inclusion of key work- and family-related antecedents, 2) inclusion of both domain-specific and general measures of well-being, 3) consideration for directionality of work-family conflict, and 4) the use of large, heterogeneous, and representative samples of working adults. In addition to these criteria, it has been emphasized that a prerequisite for antecedent-outcome interpretations is a longitudinal study with a full cross-lagged panel design where every concept to be studied is measured at each time point, and that, data are analyzed in a way that considers the stability and cross-lagged relations between all variables simultaneously (Schnabel, 1996; Zapf et al., 1996).

When a full cross-lagged panel design both in data collection and in method of analysis is held as a primary criterion for making sound causal interpretations between negative work-family interaction and psychological well-being, five studies (out of fifteen) fulfil this criterion (Demerouti et al., 2004; Kelloway et al., 1999; Leiter & Durup, 1996; Steinmetz et al., 2008; van Hooff et al., 2005) as summarized in Table 2. The implication of this is that valid conclusions for example in favour of the normal causality approach cannot be made if the other options have not been thoroughly investigated. This maybe either due to constraints in data collection when the same set of measures is not available at each time point, or in the method of analysis. For example, regression analysis does not allow multiple dependent variables to be included in the model simultaneously. In fact, three out of the five studies fulfilling this strict criterion for a full cross-lagged panel design both considered and found

the reciprocal relations between negative work-family interaction and psychological well-being (Demerouti et al., 2004; Kelloway et al., 1999; Leiter & Durup, 1996). Instead, in some studies the data would allow the examination of both normal causal, reversed causal and reciprocal relations between negative work-family interaction and well-being, but for theoretical or methodological reasons only normal causal relations are considered (e.g., Grant-Vallone & Donaldson, 2001; O'Driscoll et al., 2004).

Another important aspect hindering the firm conclusions about the causality of negative work-family interaction and well-being is the fact that only in half of the existing longitudinal studies has the bi-directionality of the negative work-family interaction been considered (see Table 2). Therefore, in the studies in which only work-to-family direction has been measured, the possibility that negative family-to-work interaction as an unmeasured third variable is involved in the detected relationships cannot be ruled out. It has been emphasized that the reciprocal interaction between work and family life can be validly addressed only by considering the bi-directional nature of the work-family interface (Eby et al., 2005; Frone et al., 1992). It has also been shown that only the inclusion of both work- and family-related as well as general well-being indicators allows for the examination of both domain-specific (i.e., work to work, family to family) and domain-crossing (i.e., from work to family and family to work) effects between negative work-family interaction and psychological well-being (Allen et al., 2000; Eby et al., 2005; Frone et al., 1992). Longitudinal studies applying the bi-directional nature of negative work-family interaction and simultaneously including well-being indicators from several life domains are, however, scarce (cf. Table 2).

With regard to sample characteristics, it has been recommended that samples should be heterogeneous and representative at least in terms of demographic characteristics, family configuration, occupation, and industry (Casper et al., 2007; Frone et al., 1992). In addition, the need for examining gender differences to fully understand the work-family interface is emphasized (Eby et al., 2005). In the studies where community-based samples were available and gender differences were thoroughly examined (i.e., at least separate regression analyses were performed for men and women) these differences were found (Grandey et al., 2005; Hammer et al., 2005; Huang et al., 2004; Kinnunen et al., 2004). This supports the view that gender may function as a moderator in the reciprocal relations between work-family interface and psychological well-being (cf. Byron, 2005).

The previous longitudinal studies also differ from each other in terms of the time lag between measurement points, although the most typical time lag is one year (cf. Table 2). The time lags used seem to be based on practical reasons rather than on theoretical considerations because the issue of the appropriate time lag is not informed by the work-family interface theories (e.g., Edwards & Rothbard, 2000; Frone, Yardley et al., 1997). Nevertheless, the effect of the time lag used (e.g., weeks, months, years) on detected or undetected cross-lagged relations should be discussed in longitudinal studies because too short a time lag may not allow the effect of X on Y to be manifested, and on the other hand,

TABLE 2 Conceptual and methodological features of previous longitudinal studies of work-family interaction and psychological well-being

Authors	Observed causality in results	Full cross-lagged panel design method <sup>1</sup>	Directionality of negative work-family interaction measure	Psychological well-being indicators included from more than one life domain	Sample	Gender differences examined	Time lag differences
Frone et al., 1997	Normal	No	<b>Work-to-family and family-to-work</b>	No (depression)	<b>Community-based sample,</b> 52% female	No	Four years
Grant-Vallone & Donaldson, 2001	Normal	No	Global measure without directionality	No (general well-being)	<b>Community-based sample,</b> 70% female	No	Six months
O'Driscoll et al., 2004	Normal	No	<b>Work-to-family and family-to-work</b>	<b>Yes</b> (psychological strain, job and family satisfaction)	<b>Community-based sample,</b> 54% female	No	Three months
Peeters et al., 2004	Normal	No	Work-to-family	<b>Yes</b> (psychosomatic health complaints, job exhaustion)	Health care workers, 89% female	No	One year
Grandey et al., 2005	Normal	No	<b>Work-to-family and family-to-work</b>	No (job satisfaction)	<b>Community-based sample,</b> 50% female	<b>Yes</b>	One year
Hammer et al., 2005	Normal	No	<b>Work-to-family and family-to-work</b> (including also positive interaction)	No (depression)	<b>Community-based sample,</b> 50% female	<b>Yes</b>	One year
van Hooff et al., 2005	Normal	<b>Yes</b>	Work-to-family	<b>Yes</b> (depressive complaints, fatigue at work)	Police employees, 9% female	No	One year
Kinnunen et al., 2004	Normal in women, reversed in men	No	Work-to-family	<b>Yes</b> (psychological and parental distress, job and marital satisfaction)	<b>Community-based sample,</b> 51% female	<b>Yes</b>	One year

TABLE 2 (continues)

Authors	Observed causality in results	Full cross-lagged panel design method <sup>1</sup>	Directionality of negative work-family interaction measure	Psychological well-being indicators included from more than one life domain	Sample	Gender differences examined	Time lag differences
Westman et al., 2004	Reversed	No	Global measure, directions combined into one index	No (job exhaustion)	Business travelers, 26% female	No	Varying <sup>2</sup>
Huang et al., 2004	Reversed	No	<b>Work-to-family and family-to-work</b>	<b>Yes</b> (job and marital satisfaction)	<b>Community-based sample</b> , 50% female	<b>Yes</b>	One year
Britt & Dawson, 2005	Reversed	No	Work-to-family	<b>Yes</b> (job satisfaction, depression)	Soldiers, 15% female	No	Three or four months
Steinmetz et al., 2008	Reversed <sup>3</sup>	<b>Yes</b>	Work-to-family	No (depression)	<b>Community-based sample</b> , 60% female	No	One year
Leiter & Durup, 1996	Reciprocity	<b>Yes</b>	<b>Work-to-family and family-to-work</b>	<b>Yes</b> (dysphoric mood, burnout, marital satisfaction, family personal conflict)	Hospital workers, 100% female	No	Three months
Kelloway et al., 1999	Reciprocity	<b>Yes</b>	<b>Work-to-family and family-to-work</b>	No (psychological stress symptomatology)	Health care and retail workers, 69% female	No	Six months
Demerouti et al., 2004	Reciprocity	<b>Yes</b>	Work-to-family	No (job exhaustion)	Employment agency workers, 70% female	<b>Yes</b>	Six and twelve weeks

<sup>1</sup>) In the statistical analysis *the reciprocal and time-lagged relations* between negative work-family interaction and psychological well-being have been tested simultaneously.

<sup>2</sup>) Time lag varies according to each participant's length of business trip.

<sup>3</sup>) This finding concerned synchronous effects within the second measurement point.

too long a time lag may underestimate the true causal effect (de Lange, Taris, Kompier, Houtman, & Bongers, 2003; Zapf et al., 1996). Based on the previous findings we know that cross-lagged effects between negative work-family interaction and psychological well-being have been found across six weeks (Demerouti et al., 2004) and up to four years (Frone et al., 1997). At present, these findings suggest that negative work-family interaction and psychological well-being may form both short-term stress episodes and ongoing states of mental adversity that justify longitudinal studies with different time lags.

In conclusion, the longitudinal studies concerning negative work-family interaction and psychological well-being have produced valuable, much needed information for the area of work-family research. These studies have, however, more often focused only on some specific aspects of work-family conflict rather than on combining various aspects into the same design. For example, all of the four criteria (a full cross-lagged panel design, bi-directionality of the work-family interface, inclusion of well-being indicators from several life domains, and a heterogeneous, representative sample; cf. Frone et al., 1992; Schnabel, 1996; Zapf et al., 1996) are not met by any of the previous studies (Table 2). A study that would consider all of these aspects would have the potential to answer the following questions: are work- and family-related strain experiences longitudinally and reciprocally related to each other through work-to-family and family-to-work conflict both in men and women, and also in the presence of general psychological well-being as suggested in the integrative model of the work-family interface (Frone, Yardley et al., 1997)? Or are normal or reversed causality approaches (Eby et al., 2005; Grandey & Cropanzano, 1999; Voydanoff, 2002; Westman et al., 2004) more appropriate models of the work-family interface and well-being? Furthermore, the found differences in causality for men and women based on separate regression analysis (Huang et al., 2004; Kinnunen et al., 2004) could be further substantiated, if a methodology would be used in which the models of men and women could be compared statistically against each other.

### **1.2.3 Work-family interface-psychological well-being linkage and personality**

The antecedents for negative and positive work-family interaction can be divided into individual differences and work- and family-related environmental predictors, of which the latter are vastly studied (Eby et al., 2005; Kinnunen & Mauno, 2008; Lahelma, Winter, Martikainen, & Rahkonen, 2005). Accumulated research results have shown that work-related factors (e.g., weekly working hours, job involvement, work overload, organization culture and support) are primarily related to work-to-family interaction, and family-related factors (e.g., age and number of children, family commitment, conflict with family members, spousal support) are primarily related to family-to-work interaction (Bellavia & Frone, 2005; Byron, 2005). In comparison to the extensive study of environmental factors in the work-family interface research, the role of

individual differences is thus far inadequately addressed (Byron, 2005; Eby et al., 2005). Before reviewing existing studies of individual differences and the work-family interface, the theoretical rationale for the role of individual differences in relation to the work-family interface is presented.

Individual differences cover a broad spectrum of factors that describe the way in which the behaviour and performance of human beings differ from each other (Hogan, Harkness, & Lubinski, 2000). These factors include differences in social behaviour and in intellectual, psychomotor, perceptual, and cognitive performance. In the present study the focus was on personality traits, because there exists an achieved consensus concerning the hierarchical structure of personality traits, and the number of core personality traits represented in the five-factor model of personality (Goldberg, 1993; McCrae & Costa, 2003; Wiggins & Trapnell, 1997). The five-factor model of personality, often entitled the Big Five, organizes the highest level individual differences into following personality traits: Neuroticism (vs. Emotional Stability), Extraversion (Surgency), Openness to Experience (Intellect), Agreeableness, and Conscientiousness.

The distinctive feature of Neuroticism is the temperamental tendency to experience negative affect and to view the surrounding world as psychosocially distressing and threatening (Caspi, Roberts, & Shiner, 2005; McCrae & Costa, 2003). Extraversion contains both temperamental and interpersonal dimensions: individuals high in this trait are sensitive to positive emotions and potential rewards, and they are assertive, active and vigorous in their actions and social relationships (Caspi et al., 2005; McCrae & Costa, 2003). Agreeableness and Conscientiousness are regarded as instrumental personality traits (McCrae & Costa, 1991). Individuals high in Agreeableness are characterized as altruistic, compliant, and straightforward which promotes interpersonal bonding and social success, and the characteristics of conscientious individuals – orderliness, dutifulness, self-discipline, ambitious – promote effectiveness in daily tasks and success in work (Caspi et al., 2005; McCrae & Costa, 1991; McCrae & Costa, 2003).

Openness to Experience differs to some extent from the other Big Five personality traits and it is the least understood of these traits (Caspi et al., 2005). Openness to Experience is characterized by a deep scope of emotional and intellectual awareness and by a need to enlarge and examine experience which is shown in the imaginative, aesthetic, unconventional, and curious nature of open individuals (McCrae & Costa, 1997; McCrae & Costa, 2003). Openness to Experience seems to be “a double-edged sword” intensifying the magnitude of both positive and negative experiences that open individuals encounter (McCrae & Costa, 1991; McCrae & Costa, 1997).

Neuroticism has been found to be related to coping strategies that maintain stress (i.e., venting of emotions, denial, behavioural disengagement, alcohol usage) instead of coping strategies that might resolve situations that threatens an individual and his/her resources (e.g., Brebner, 2001; Costa, Somerfield, & McCrae, 1996; Pittenger, 2004; Watson & Hubbard, 1996). Extraversion, Agreeableness, and Conscientiousness are related to adaptive coping strategies (i.e., planning and focusing on the task at hand, positive reframing of a situation, seeking emotional and instrumental support), which

are likely to help individuals to overcome the difficulties they encounter in life (Costa et al., 1996; Pittenger, 2004; Watson & Hubbard, 1996). Openness to Experience has been found to relate to both adaptive (planning, positive reinterpretation) and less adaptive (venting of emotions, alcohol usage, avoidance) coping strategies (Brebner, 2001; Pittenger, 2004).

The essence of the Big Five personality traits in relation to developmental tasks in adulthood has been condensed as follows. Emotional Stability (the opposite of Neuroticism), Agreeableness, and Conscientiousness are considered to reflect psychosocial maturity promoting good socialization and success in adulthood roles (career, job, marriage) (Caspi et al., 2005; Digman, 1997; Hogan & Roberts, 2004; Lodi-Smith & Roberts, 2007). Extraversion and Openness to Experience, in turn, are considered to reflect self-actualization and agency promoting personal growth (Digman, 1997). From this perspective it seems likely that individuals differing in the manifestation of personality traits would accordingly differ in their work-family interface experiences. This expectation is based on the fact that because personality is related to the quality of performance within each adulthood role (Caspi et al., 2005), it would be logical for it to also be related to the quality and success of combining these multiple roles. The most likely candidates for explaining individual differences in work-family interface experiences are Neuroticism, Agreeableness, and Conscientiousness. Instead, the role of Extraversion and Openness to Experience would seem somewhat ambiguous because personal growth may promote good adjustment to work and family roles if an individual identifies his/her growth as finding a satisfying and rewarding balance between these roles. But if personal growth means something else for an individual, for example success, mastery, and striving to perform exceptionally in one's field (work, science, sport, art etc.) at any cost, it may be disadvantageous for the other areas of life.

Bolger and Zuckerman (1995) have provided a general framework for studying personality in the stress process that features two stages: stressor exposure and stressor reactivity. *Stressor exposure* indicates to what extent an individual is likely to experience a given situation as stressful, whereas *stressor reactivity* indicates to what extent an individual is likely to express emotional or physical reaction to the situation perceived as stressful. According to Bolger and Zuckerman (1995), there are four possibilities that may explain how personality may affect the stress process: 1) personality does not affect either exposure or reactivity to stressors; 2) personality leads to exposure to stressors, which, in turn, leads to outcomes; 3) personality affects outcomes by moderating the effects of stressful events on these outcomes; and 4) personality affects both exposure and reactivity stages of the stress process. They further state that "an optimal model of personality effects, however, can only be arrived at by considering both exposure (mediation) and reactivity (moderation) processes" (p. 891).

In the context of the work-family interface and psychological well-being, this framework needs to be broadened to include both negative work-family interaction (stressor) and positive work-family interaction (resource). Accordingly, negative work-family interaction can be defined as a stressor

exposure, because it indicates to what extent an individual perceives his or her work- and family roles as mutually incompatible and stressful. Positive work-family interaction can be defined as a resource exposure, because it indicates to what extent an individual perceives his or her work- and family-roles as not stressful but rather as compatible, each facilitating the other role. Psychological well-being related to these work-family experiences refers to stressor/resource reactivity, as it illuminates to what extent an individual's mental and emotional reactions are linked to negative or positive work-family interaction. Personality might thus affect both the level of negative and positive work-family interaction, indicated by a direct link between personality and work-family interaction experience (*differential exposure*), and the level of psychological well-being due to work-family interaction experience. In the latter, the link between work-family interaction experience and psychological well-being is moderated by personality (*differential reactivity*).

As illustrated in Table 3 previous findings concerning Neuroticism (and negative affectivity, a construct closely related to Neuroticism) and negative work-family interaction are coherent: there exists a direct, positive association between Neuroticism and negative work-family interaction in both its directions (Batt & Valcour, 2003; Bruck & Allen, 2003; Carlson, 1999; Grzywacz & Marks, 2000; Noor, 2003; Stoeva, Chiu, & Greenhaus, 2002; Wayne et al., 2004; Witt & Carlson, 2006). The combined findings concerning Agreeableness (Bruck & Allen, 2003; Wayne et al., 2004) and Conscientiousness (or hardiness) (Bernas & Major, 2000; Bruck & Allen, 2003; Wayne et al., 2004; Witt & Carlson, 2006) show that these traits are related to low levels of negative work-family interaction in both its directions. Interestingly, Conscientiousness was related only to low negative family-to-work interaction, but not to negative work-to-family interaction, in those studies in which women were over-represented in relation to men (Bernas & Major, 2000; Bruck & Allen, 2003).

With regard to Extraversion, some studies have found a direct, negative association between it and negative work-family interaction (Grzywacz & Marks, 2000; Noor, 2003), whereas in other studies this association has not been detected (Bruck & Allen, 2003; Wayne et al., 2004). This difference in results is especially puzzling because both Grzywacz and Marks (2000) and Wayne and colleagues (2004) utilized the same large national sample from the United States. In the former study the age range of participants was restricted between 25 and 62 ( $N = 1,986$ ) and results were found, whereas in the latter study the age range of the participants was from 25 to 74 ( $N = 2,130$ ) and results were not found. Openness to Experience has not been related to negative work-family interaction in studies that have examined it (Bruck & Allen, 2003; Wayne et al., 2004).

There are only three studies that have examined the direct associations between personality traits and positive work-family interaction (Table 3). These studies show that Extraversion has a direct, positive association with positive work-family interaction in both its directions (Grzywacz & Marks, 2000; Wayne et al., 2004). In addition, Agreeableness and Conscientiousness has been related to high family-to-work positive interaction, and Openness to Experience has been related to high work-to-family positive interaction (Wayne et al., 2004).

TABLE 3 Previous findings concerning direct associations between work-family interaction and the Big Five personality traits

Direction and quality of work-family interface	Big Five personality traits				
	Neuroticism (negative affectivity)	Agreeableness	Conscientiousness (hardiness)	Extraversion	Openness to Experience
<b>Negative work-to-family interaction</b>	<b>Positive association:</b> Batt & Valcour, 2003 Bruck & Allen, 2003 Carlson, 1999 Grzywacz & Marks, 2000 Noor, 2003 Stoeva et al., 2002 Wayne et al., 2004	<b>Negative association:</b> Wayne et al., 2004 <b>No association:</b> Bruck & Allen, 2003	<b>Negative association:</b> Wayne et al., 2004 Witt & Carlson, 2006 <b>No association:</b> Bernas & Major, 2000 Bruck & Allen, 2003	<b>Negative association:</b> Grzywacz & Marks, 2000 <b>No association:</b> Bruck & Allen, 2003 Noor, 2003 Wayne et al., 2004	<b>No association:</b> Bruck & Allen, 2003 Wayne et al., 2004
<b>Negative family-to-work interaction</b>	<b>Positive association:</b> Bruck & Allen, 2003 Grzywacz & Marks, 2000 Noor, 2003 Stoeva et al., 2002 Wayne et al., 2004	<b>No association:</b> Bruck & Allen, 2003 Wayne et al., 2004	<b>Negative association:</b> Bernas & Major, 2000 Bruck & Allen, 2003 Wayne et al., 2004 Witt & Carlson, 2006	<b>Negative association:</b> Grzywacz & Marks, 2000 Noor, 2003 <b>No association:</b> Bruck & Allen, 2003 Wayne et al., 2004	<b>No association:</b> Bruck & Allen, 2003 Wayne et al., 2004
<b>Positive work-to-family interaction</b>	<b>Negative association:</b> Wayne et al., 2004 <b>No association:</b> Grzywacz & Marks, 2000	<b>No association:</b> Wayne et al., 2004	<b>No association:</b> Wayne et al., 2004 Witt & Carlson, 2006	<b>Positive association:</b> Grzywacz & Marks, 2000 Wayne et al., 2004	<b>Positive association:</b> Wayne et al., 2004
<b>Positive family-to-work interaction</b>	<b>No association:</b> Grzywacz & Marks, 2000 Wayne et al., 2004	<b>Positive association:</b> Wayne et al., 2004	<b>Positive association:</b> Wayne et al., 2004 <b>No association:</b> Witt & Carlson, 2006	<b>Positive association:</b> Grzywacz & Marks, 2000 Wayne et al., 2004	<b>No association:</b> Wayne et al., 2004

Witt and Carlson (2006) also attempted to identify any direct association between Conscientiousness and positive work-family interaction but they did not detect any significant associations.

The moderating role of each of the Big Five personality traits between the work-family interface and psychological well-being has been examined only in one study in which the participants were employed fathers (Kinnunen, Vermulst, Gerris, & Mäkikangas, 2003), and there exists one study that considered the moderating role of negative affectivity (Stoeva et al., 2002). Negative affectivity strengthened the association between family-to-work conflict and family stress (Stoeva et al., 2002). Supporting this finding, Neuroticism intensified the association between work interference with family and job exhaustion, and between work interference with family and depression (Kinnunen et al., 2003). In addition, Agreeableness attenuated the association between family interference with work and marital dissatisfaction (Kinnunen et al., 2003).

In conclusion, the work-family studies that consider personality traits have widened the view of factors that define the quality and amount of work-family interface experienced from mere characteristics of work and family to personality. This helps to explain why under similar work-family situations there are still individual differences in work-family interface experiences. There are, however, several themes that merit further and closer investigation. First, the evidence concerning the role of Extraversion is mixed. Second, the evidence for the role of Openness to Experience and Agreeableness in relation to work-family interface is limited to a very few studies (cf. Table 3). Third, the relationship between each of the Big Five personality traits and positive work-family interaction is also very scanty studied. Fourth, the moderating role of the Big Five personality traits between work-family interface and psychological well-being has been investigated only in one study, in which all of the participants were men (Kinnunen et al., 2003). In addition, gender differences in direct relationships between the Big Five personality traits and the work-family interface has been examined only in one study (Grzywacz & Marks, 2000).

Lastly, and most importantly, none of the previous studies have tested the assumption that personality truly is a priori factor in relation to work-family interface experiences because these studies have been cross-sectional. Although it is possible that personality shapes the work-family interface experiences so that some individuals are prone to negative and some to positive interaction (selection effect), it is also possible that the acquisition and initial adjustment to work and family roles, and acting over time according to expectations related to these roles, may result in personality change, for example a decrease in Neuroticism and an increase in Agreeableness and Conscientiousness (socialization effect) (Lodi-Smith & Roberts, 2007).

### 1.3 Aims and hypotheses

The present study consists of four original publications which were chronologically built on each other as well as on the gaps existing in the present work-family interface literature. The first study aimed to shed light on the question: what is the role of personality in relation to work-family conflict as the role of individual differences in this context has been thus far inadequately addressed (Byron, 2005; Eby et al., 2005). The aim was two-folded:

- (1) *To investigate whether the Big Five personality traits explain the differences in work-family conflict experiences over and above work- and family-related situational factors.*
- (2) *To investigate whether the Big Five personality traits moderate the relationship between work-family conflict and psychological distress.*

In this study, personality traits were measured three years earlier (at age 33) than work-family conflict and psychological distress (at age 36), and the experiences of men and women were analyzed with a multi-group method within path analysis. These facts enabled a longitudinal design and consideration of possible gender differences. It was hypothesized that Neuroticism would act as a risk (direct harmful exposure effect) and vulnerability factor (moderating harmful reactivity effect) in the work-family conflict - psychological distress relationship, whereas Extraversion, Agreeableness, and Conscientiousness were hypothesized to act as resource (direct beneficial exposure effect) and protective factors (moderating beneficial reactivity effect) in this relationship. Openness to Experience was hypothesized to act as a protective factor in the work-family conflict - psychological distress relationship. Work-family conflict was studied according to the bi-directionality principle.

Study II tested the implicit assumption made in the first study, that the Big Five personality traits are a priori factors in relation to work-family interface. The aim was:

- (3) *To study the rank-order and absolute stability of the Big Five personality traits in men and women from early adulthood (age 33) to early middle age (age 42).*

The rank-order stability refers to an individual's placement in personality traits within a group relative to other individuals over time (Caspi et al., 2005). If it is very high, it is an indication that situational factors (e.g., work- and family-related factors) do not produce changes in individuals that would alter the relative difference between individuals. This could be interpreted as evidence that the Big Five personality traits are a priori factors in relation to the work-family interface. The absolute stability refers to mean-level differences in personality traits (Caspi et al., 2005), and these were examined at a group level. It was hypothesized that the rank order stability of the Big Five personality

traits would be relatively high, because these traits are postulated to be endogenous and basic tendencies with biological origins (McCrae & Costa, 2003). It was also hypothesized that there would be mean-level differences in these traits across time reflecting maturation principle (Hogan & Roberts, 2004; McCrae & Costa, 2003) and socialization effect (Lodi-Smith & Roberts, 2007): Neuroticism was expected to decrease, and Agreeableness and Conscientiousness were expected to increase through early adulthood to early middle age.

Study III tested the implicit assumption often made in work-family interface literature (cf. Allen et al., 2000; Ford et al., 2007), and also in Study I, that work-family conflict is an antecedent for psychological distress. This study was based on a full cross-lagged panel design in which the same set of measures were used and analyzed with structural equation modeling in two data sets (with one- and six-year time lags), and included domain-specific indicators of psychological well-being (job exhaustion, marital adjustment, parental stress) in addition to psychological distress. The study search for answers to the following research questions:

- (4) *What is the long-term rank-order stability of work-family conflict and does it decline as a function of time?*
- (5) *Does work-family conflict form reciprocal relationships with work- and family-related as well as general psychological well-being over time and do these relationships decline as a function of time?*
- (6) *Does work-related, family-related and general psychological well-being form direct reciprocal spillover relationships with each other over time and do these relationships decline as a function of time?*

In line with previous findings (Kelloway et al., 1999; Kinnunen et al., 2004), work-family conflict was hypothesized to show relatively high rank-order stability, but that it would be lower across the six-year time lag as opposed to the one-year time lag. Based on the integrative model of the work-family interface (Frone, Yardley et al., 1997), reciprocal relationships between work-family conflict and psychological well-being were hypothesized to reflect domain-specificity: high work-to-family conflict at Time 1 was hypothesized to precede low marital adjustment and high parental stress at Time 2, and high family-to-work conflict at Time 1 was hypothesized to precede high job exhaustion at Time 2. In reverse, high job exhaustion at Time 1 was expected to precede high work-to-family conflict at Time 2, and low marital adjustment and high parental stress at Time 1 was expected to precede high family-to-work conflict at Time 2. Likewise, it was hypothesized that high psychological distress at Time 1 would precede both types of work-family conflict at Time 2 and vice versa.

In relation to the direct, reciprocal spillover effects (Edwards & Rothbard, 2000), it was hypothesized that high job exhaustion at Time 1 would precede low marital adjustment and high parental stress at Time 2 and vice versa, and that high psychological distress at Time 1 would precede high job exhaustion, low marital adjustment and high parental stress at Time 2 and vice versa. The

possible gender differences in all of the hypothesized relationships as well as in the rank-order stability of work-family conflict were analyzed using the multi-group method.

In Study IV, the investigation of the work-family interface was complemented with a focus on work-family balance, including both negative and positive work-family interaction. Also the variable-oriented approach used in the first three studies was shifted to a holistic and person-oriented approach to consider work-family interface experiences in its entirety, because “the totality gets its characteristic features and properties from the interaction among the elements involved, not from the effect of each isolated part on the totality” (Bergman, Magnusson, & El-Khoury, 2003, p. 9). The aims of this last study were:

- (7) *To advance the theoretical base for work-family balance and to suggest a typology of work-family balance.*
- (8) *To examine the suggested typology of work-family balance in relation to psychological well-being, personality, time investment, and motivational energy across life domains.*

The typology of work-family (im)balance by Rantanen and Kinnunen (2005) was defined in terms of two constituents, work-family conflict and work-family enhancement experiences, and as such it was based on the early role theories (Kahn et al., 1964; Marks, 1977; Marks & MacDermid, 1996; Sieber, 1974), and combined their basic premises into one model. The typology of work-family balance includes four distinct work-family balance types: beneficial imbalance, harmful imbalance, active balance, and passive balance. Of these types, the beneficial and harmful imbalance were hypothesized to represent the opposite ends of good psychological well-being (high self-esteem and happiness and low psychosomatic and depressive symptoms) and the psychosocial maturity (low Neuroticism, high Agreeableness and Conscientiousness) dimension. The active and passive balance types, in turn, were hypothesized to represent the opposite ends of role engagement (high time investment and motivational energy) and the self-actualization and agency (high Extraversion and Openness to Experience) dimension.

## 2 METHOD

### 2.1 Participants and procedure

Studies I, II, III, and IV were based on the data provided by the ongoing Jyväskylä Longitudinal Study of Personality and Social Development (JYLS) in which the same individuals have been followed since 1968 by professor Lea Pulkkinen and her colleagues (Pulkkinen, 1996; Pulkkinen, 2006). In Study III, data gathered during the years 1999 and 2000 in the research project “Economic Crisis, Job Insecurity and the Household” by professor Ulla Kinnunen and her colleagues (Kinnunen et al., 2000) was used as well.

*JYLS.* The original sample, 369 children mostly at age 8 (196 boys and 173 girls, born mostly in 1959), consisted of all pupils in 12 randomly selected urban and suburban second-grade school classes in Jyväskylä. Jyväskylä is an ethnically homogenous, Finnish-speaking, medium-sized town in central Finland. The present study used the early and middle adulthood data from the data collection waves in 1992, 1995 and 2001, when the participants were 33, 36 and 42 years of age, respectively. At age 33 the participants responded to the mailed Big Five Personality Inventory (Hämäläinen, Pulkkinen, Allik, & Pulver, 1994; Pulver, Allik, Pulkkinen, & Hämäläinen, 1995). The data collection both at age 36 and 42 consisted of a mailed Life Situation Questionnaire (LSQ) and a psychological interview with self-rating measures. The themes of work, family and psychological well-being were included both in the LSQ and the psychological interview, and the interview with self-rating measures deepened the information gathered through the mailed questionnaire. In addition, the participants filled in the Big Five Personality Inventory again at age 42.

There was no initial attrition in the sample at age 8 and two-thirds of the original sample (67%) participated in each of the major data collections after that at ages 14, 27, 36, and 42 (Pulkkinen, 2006). Based on the comparison made at age 42 between the JYLS participants and the age cohort born 1959 in Finland, it was found that the sample ( $n = 285$ , 77% of the original sample, 185 men and 134 women) was representative in terms of marital status (60% married), number of children (42% having two children), and employment (75%

wage earners) both in men and women (Pulkkinen et al., 2003; Pulkkinen, 2006). The educational level (52% having higher secondary education) and occupational status (47% being blue-collar workers) of the JYLS men corresponded also with their age cohort. The JYLS women, however, had more often lower tertiary education than the corresponding female age cohort (42% of the sample, 26% of the cohort). Consequently, the JYLS women worked more typically as lower white-collar workers (59%) and less often as blue-collar workers (11%) or entrepreneurs (7%) than the corresponding female age cohort (51%, 20%, 10%, respectively).

*Economic Crisis, Job Insecurity and the Household.* The original sample ( $N = 1,878$ ) was drawn randomly from the database of the Population Register Centre of Finland and it was limited mainly to citizens between the ages of 25 and 59 (Kinnunen et al., 2000). The data collection consisted of a broad mailed questionnaire that included themes pertaining to work, family and psychological well-being, and was returned by 851 persons in 1999 (45% response rate). The questionnaire was repeated and mailed again in 2000 to those participants who had returned it a year earlier, and 655 (77% response rate) returned it. Despite the rather low initial response rate, it has been found that the respondents represent well the Finnish adult population regarding gender (52% male), age (mean 44 years in 1999), marital status (61% married), and geographical location (49% living in a town) (Kinnunen et al., 2000).

The participants included in Studies I, II, III, and IV from both above described research projects had to fulfil following requirements. First, the participant had to have a job or a life situation comparable to a job (e.g., being a full-time adult student) in terms of not being home due to maternity, parental or nursing leave, unemployment or disability pension. Second, each participant had to have a family, that is, to be either married, cohabiting and/or to have at least one child. Third, the participant had to have completed the measures concerning work-family interface (Study I at age 36; Study III at ages 36 and 42/ in 1999 and 2000; Study IV at age 42) and the Big Five Personality Inventory (Study I at age 33; Study II at ages 33 and 42). The resulting number of participants included in each of the Studies I, II, III, and IV are provided in Table 4.

## 2.2 Measures

The original publications provide the detailed information (e.g., response scales and alpha coefficients for each sample) of the measures used in Studies I – IV. Therefore, the following description of 1) work-family interface, 2) psychological well-being, 3) personality, and 4) role engagement measures provides a brief summary. In addition, the following background factors were used as covariates: gender (Study IV), occupational status (Studies I and IV), weekly working hours and work schedule (Study I), marital status (Study IV), parental demands (Study I), and number of children (Study IV).

TABLE 4 Summary of the samples, data collection waves, variables, and data analysis methods used in Studies I – IV

	<b>Samples and data waves</b>	<b>Variables in main analyses</b>	<b>Data analyses</b>
<b>Study I</b>	<b>JYLS</b> Ages 33, 36 ( <i>n</i> = 155) - 75 men, 80 women	<b>Work-family interface</b> Work-to-family and family-to-work conflict  <b>Psychological well-being</b> Psychological distress  <b>Personality</b> Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness	Independent samples <i>t</i> -test, Pearson correlations with equality tests based on <i>z</i> -transformation, Path analysis [SEM without measurement model component, ML, multigroup-method]
<b>Study II</b>	<b>JYLS</b> Ages 33, 42 ( <i>n</i> = 192) - 89 men, 103 women	<b>Personality</b> Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness	Independent samples <i>t</i> -test, MANOVA, Pearson correlations with equality tests based on <i>z</i> -transformation, SEM [full information ML, multigroup-method], $\chi^2$ – difference test
<b>Study III</b>	<b>JYLS</b> Ages 36, 42 ( <i>n</i> = 153) - 78 men, 75 women  <b>Economic Crisis, Job Insecurity and the Household</b> Years 1999, 2000 ( <i>n</i> = 365) - 189 men, 176 women	<b>Work-family interface</b> Work-to-family and family-to-work conflict  <b>Psychological well-being</b> Psychological distress, job exhaustion, marital adjustment, parental stress	Pearson correlations with equality tests based on <i>z</i> -transformation, SEM and Path analysis [robust full information ML, multigroup-method], Satorra-Bentler scaled $\chi^2$ – difference test
<b>Study IV</b>	<b>JYLS</b> Ages 33, 36, 42 ( <i>n</i> = 213) - 106 men, 107 women	<b>Work-family interface</b> Work-family conflict and enhancement  <b>Psychological well-being</b> Self-esteem, happiness, psychosomatic and depressive symptoms  <b>Personality</b> Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness  <b>Role engagement</b> Time invested and motivational energy directed to work and family roles	$\chi^2$ – cross tabulation, ANOVA, Profile analysis with covariates (MANCOVA)

SEM = Structural Equation Modeling, ML = Maximum Likelihood, (M)AN(C)OVA = (Multivariate) Analysis of (Co)Variance

### 2.2.1 Work-family interface

*Work-family conflict.* In Studies I and III, work-family conflict was measured with two time-based conflict items for each direction, work-to-family and family-to-work conflict (e.g., “How often does your job or career interfere with your responsibilities at home, such as cooking, shopping, child care, yard work, or repairs?” for work-to-family conflict, and “How often your home life prevents you from spending the desired amount of time on job- or career-related activities?” for family-to-work conflict; Frone et al., 1992). In Study IV, work-family conflict was measured with four items for each direction including both time- and strain-based items (e.g., “How often does it happen that the demands of your job interfere with your home and family life?” for work-to-family conflict, and “How often does it happen that family related strain interferes with your ability to perform job-related duties?” for family-to-work conflict; Frone et al., 1992; Netemeyer et al., 1996).

*Work-family enhancement.* In Study IV, work-family enhancement was measured with three items for each direction, work-to-family and family-to-work, and these items reflected positive spillover based on mood, skills and behaviour (e.g., “How often does it happen that you come home cheerfully after a successful day at work, positively affecting the atmosphere at home?” and “How often does it happen that you fulfil your domestic obligations better because of the things that you have learned on your job?” for work-to-family enhancement, and “How often does it happen that you take your responsibility at work more seriously because you are required to do the same at home?” and “How often does it happen that you manage your time at work more efficiently because at home you have to do that as well?” for family-to-work enhancement; Wagena & Geurts, 2000).

The detailed descriptions of work-family conflict and enhancement items, as well as the scale properties within JYLS data, are provided by Kinnunen et al. (2006) in English and by Kinnunen et al. (2005) in Finnish.

### 2.2.2 Psychological well-being

*Psychological distress.* In Studies I and III, psychological strain experienced in everyday life was measured with the 12-item General Health Questionnaire (GHQ; Goldberg, 1972). Participants were asked to consider their state of health and coping during the previous month (e.g., “Have you felt continuously over-stressed lately?” and “Have you been able to enjoy your normal daily routines lately?”).

*Job exhaustion.* In Study III, emotional fatigue at work was measured with the four-item scale developed originally by Maslach and Jackson (1986), (e.g., “I feel emotionally drained from my work” and “I feel fatigued when I get up in the morning and have to face another day on the job”).

*Marital adjustment.* In Study III, the functionality and the quality of partner relationship were assessed with nine items from the dyadic adjustment scale (e.g., “How often do you and your partner agree on demonstration of

affection?" and "How often you have regretted your marriage or cohabitation?"; Busby, Crane, Larson, & Christensen, 1995; Spanier, 1976). In the JYLS, marital adjustment was also assessed with 15 questions (e.g., "How much conflict, tension, and discord is there in your relationship at the moment?"). On the basis of these questions, five value categories describing marital quality were formed (Kinnunen & Pulkkinen, 1998; Kinnunen & Pulkkinen, 2003).

*Parental stress.* In Study III, the difficulties and sense of inadequacy experienced as a parent were assessed with three items from the measure by Abidin (1990), (e.g., "I have a lot more problems raising my child than I expected" and "When I think about the kind of parent I am, I often feel guilty or bad about myself").

*Self-esteem and happiness.* In Study IV, self-esteem was measured with ten items from a scale by Rosenberg (1965), (e.g., "I feel that I am a person of worth, at least on an equal plane with others"). Happiness was measured by applying the life's mood line method: "How happy or satisfied you have been in the recent year, using grades from minus 3 (you have been extremely unhappy or dissatisfied) to plus 3 (you have been extremely happy or satisfied)?" (Perho & Korhonen, 1993; Sheehy, 1982).

*Psychosomatic and depressive symptoms.* In Study IV, the occurrence of 19 psychosomatic symptoms (e.g., headache, difficulties to fall asleep, heart palpitations, muscular pain) during the last six months was measured with a scale from Aro (1988). Depressive symptoms were measured with 16 items from the General Behavior Inventory (GBI; Depue, 1987) (e.g., "Have you been sad, depressed or irritable for several days or more without really understanding why?").

### 2.2.3 Personality

*Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness* were measured in Studies I, II, and IV with a 60-item shortened version of the Big Five Personality Inventory containing 181 items (Pulver et al., 1995). The 181-item inventory is an authorized Finnish adaptation of Costa and McCrae's (1985) NEO Personality Inventory (NEO-PI). In the short version, eight items are substitutes for the original American items due to differences in culture and society. Each personality trait was measured with 12 items (e.g., "When I'm under a great deal of stress, sometimes I feel like I'm going to pieces" for Neuroticism, "I like to have a lot of people around me" for Extraversion, "Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement" for Openness to Experience, "I would rather cooperate with others than compete with them" for Agreeableness, and "I have a clear set of goals and I work towards them in an orderly fashion" for Conscientiousness).

### 2.2.4 Role engagement

*Time investment.* In Study IV, time invested in work and family roles were asked with four questions: 1) How many weekly hours do you work on an average, including paid work, extra hours and work related to working at home? 2) How many weekly hours do you use on an average for caring for your children and your home, such as cooking, cleaning, home repairs, etc.? 3) Do you think that you have enough time of your own, which you can use in the way you like? and 4) Do you feel that you must continuously give up your time for others at home or at work?

*Motivational energy.* In Study IV, the degree of motivational energy, that is, action and thought directed toward work, family and health were measured with three questions from the Personal Life Investment scale (Schindler, Staudinger, & Nesselroade, 2006; Staudinger & Fleeson, 1996).

## 2.3 Data analyses

All of the data analysis methods used in Studies I to IV are specified study by study in Table 4 and described in detail in the original publications. Therefore, the main analysis methods – path analysis (Studies I and III), structural equation modeling (SEM; Studies II and III) and profile analysis (Study IV) – are outlined in the following only on a general level.

In Studies I, II, and III, the goal was to examine the fit of predetermined, multi-hypothetical conceptual models with the data. The conceptual models were based on both theory and empirical findings, and they included multiple independent and dependent variables and the complex relations between them. Therefore, path analysis (SEM without measurement model component) and SEM were chosen as the method of analyses. In Studies I and III within JYLS data, the conceptual models were examined with path analysis, because the samples size in relation to the number of variables and estimated pattern of relations between them did not allow the use of SEM with the measurement model component. Path analysis, however, allowed both multiple independent and dependent variables to be included in the model simultaneously, which is an advantage in comparison to multiple regression analysis allowing only a single dependent variable (Hoyle, 1995). In Study II, within JYLS data, and in Study III, within Economic Crisis, Job Insecurity and the Household data, the conceptual models were examined with SEM including latent variables and the measurement model component, as the sample sizes in relation to the estimated pattern of relations allowed this. The advantage of the SEM including the measurement model component over path analysis as well as over multiple regression analysis is, that the pattern of relations between latent variables can be estimated free of random error (Hoyle, 1995).

In Study I, the analyses were conducted with LISREL (Version 8.53, Jöreskog & Sörbom, 1996), and in Studies II and III with Mplus (Version 4.0,

Muthén & Muthén, 1998-2006) statistical package. The multi-group method was used in each of studies I, II, and III, because it allowed for comparison of the equality of covariance matrices between men and women, and tested whether the same model with equal parameter estimates fitted the data matrices of both genders (Jöreskog & Sörbom, 1993).

In Study IV, the goal was to examine the differences in multi-variable profiles between the four work-family (im)balance types that differed qualitatively from each other and were formed on theoretical grounds. Therefore, profile analysis with covariates (i.e., application of MANCOVA) was chosen as a method of analysis and it was conducted with the SPSS 15.0 for Windows statistical package.

### 3 OVERVIEW OF THE RESULTS

#### Study I

**Rantanen, J., Pulkkinen, L., & Kinnunen, U. (2005). The Big Five personality dimensions, work-family conflict, and psychological distress: A longitudinal view. *Journal of Individual Differences*, 26, 155-166.**

In this study, the Big Five personality traits were examined both as risk or resource factors inducing differential exposure to work-to-family and family-to-work conflict, and as vulnerability or protective factors inducing differential reactivity to these conflict experiences manifested in the level of psychological distress. These exposure and reactivity effects were examined in conjunction with situational factors that in this study included weekly working hours, work schedule (standard day shift vs. nonstandard shift), occupational status (blue collar workers, lower white-collar workers, upper-white collar workers), and parental demands (no children, children above school age, children under school age).

The results supported the risk factor hypothesis of Neuroticism that both in men and women Neuroticism measured three years earlier was positively related to work-to-family and family-to-work conflict. Unexpectedly, Openness to Experience was positively related to family-to-work conflict but only in men. Contrary to resources factor hypotheses, Extraversion, Agreeableness and Conscientiousness were not negatively related either to work-to-family or family-to-work conflict. With regard to differential reactivity (vulnerability factor hypothesis for Neuroticism and protective factor hypotheses for Extraversion, Openness to Experience, Agreeableness, and Conscientiousness), only Neuroticism moderated the link between work-family conflict and psychological distress: in women high Neuroticism strengthened and low Neuroticism attenuated the positive link between work-to-family conflict and psychological distress. In men, work-to-family conflict showed a direct positive link to psychological distress. Family-to-work conflict, in turn, showed a direct positive link to psychological distress both in men and women. As well, in both

men and women Neuroticism showed a direct positive, and Agreeableness a direct negative link to psychological distress.

The comparison between work- and family-related situational factors and personality traits as explaining factors for work-family conflict and psychological distress showed that although the situational factors explained a substantial amount of variance (from 12 to 25%), the inclusion of personality traits added an additional explained variance of 4% (men) and 2% (women) in relation to work-to-family conflict, 8% and 3% in relation to family-to-work conflict, and 13% and 16% in relation to psychological distress. Thus, personality traits had a notable influence on work-family conflict and psychological distress experiences over and above the situational factors.

## Study II

**Rantanen, J., Metsäpelto, R.-L., Feldt, T., Pulkkinen, L., & Kokko, K. (2007). Long-term stability in the Big Five personality traits in adulthood. *Scandinavian Journal of Psychology*, 48, 511–518.**

Studies have shown that the core personality traits are considerably stable in adulthood, so that the individual's rank-order in relation to others is high from one time point to another (e.g., McCrae & Costa, 2003), and thus, personality is regarded as an a priori factor leading to self-selection of specific environments and differential experiences within these environments. The aim of this study was to test this assumption by investigating the rank-order stability of the Big Five personality traits with a representative sample of adults in a non-English speaking culture, and using latent variables free of measurement error instead of test-retest correlations based on mean scores.

As hypothesized, the rank order stability of the Big Five personality traits were found to be high in both men and women. The stability coefficients were .81 (men) and .65 (women) for Neuroticism, .97 and .76 for Extraversion, .90 and .95 for Openness to Experience, .83 and .85 for Agreeableness, and .73 and .66 for Conscientiousness. This means that 42 to 95% of the variance in personality traits at age 42 could be explained with the same measurement nine years earlier at age 33. The rank-order stability of Neuroticism and Extraversion was significantly higher in men compared to women. The found mean-level differences between age 33 and 42 lend support to the maturation principle (Hogan & Roberts, 2004; McCrae & Costa, 2003) and socialization effect (Lodi-Smith & Roberts, 2007): Neuroticism decreased, and Agreeableness and Conscientiousness increased from early adulthood to early middle age. In addition, the mean levels of Extraversion and Openness to Experience increased with this time interval across the entire sample.

### Study III

**Rantanen, J., Kinnunen, U., Feldt, T., & Pulkkinen, L. (2008). Work-family conflict and psychological well-being: Stability and cross-lagged relations within one- and six-year follow-ups. *Journal of Vocational Behavior*, 73, 37-51.**

In this study, the rank-order stability and cross-lagged relations between work-to-family conflict, family-to-work conflict, and psychological well-being (job exhaustion, marital adjustment, parental stress, and psychological distress) were examined in two longitudinal studies with full two-wave panel designs (one and six years in between, respectively). As hypothesized, the rank-order stabilities of work-to-family and family-to-work conflict were moderately high and equal between men and women: the stability coefficients were .69 (one-year time lag) and .73 (six-year time lag) for work-to-family conflict, and .57 and .48 for family-to-work conflict, respectively. When the two samples were compared the stability of work-to-family conflict was unexpectedly higher over six years than over one year, whereas the stability of family-to-work conflict was expectedly lower over six years in comparison to the one-year time lag.

Hypotheses that were based on the integrative model of the work-family interface (Frone, Yardley et al., 1997) were not supported. There were no cross-lagged relations between work-to-family conflict or family-to-work conflict and the four indicators of psychological well-being, across either the one-year or six-year time lag. Instead, the data supported the hypotheses based on spillover perspective on work-family interface (Edwards & Rothbard, 2000), where high job exhaustion preceded high psychological distress both in men and women and across both the one- and six-year time lags. In addition, low marital adjustment preceded psychological distress, and high psychological distress preceded high parental stress in men and women across a one-year time lag.

### Study IV

**Rantanen, J., Kinnunen, U., & Pulkkinen, L. A typology of work-family balance and imbalance. *Manuscript submitted to publication.***

In this study, a typology of work-family balance comprising work-family conflict and work-family enhancement experiences was proposed and examined. The theoretical base for work-family balance was advanced by combining the basic premises of earlier role theories (Kahn et al., 1964; Marks, 1977; Marks & MacDermid, 1996; Sieber, 1974) into one model. As such it covered the essential experiences contributing to work-family balance as recommended by Grzywacz and Carlson (2007), while the inclusion of personality traits into the model of work-family balance was a unique contribution of this study. Psychological functioning was hypothesized to be the main differentiating factor between the beneficial and harmful work-family imbalance types, whereas role engagement was hypothesized to be the main

differentiating factor between the active and passive work-family balance types. The suggested typology of work-family balance interlinks with other recent perspectives of work-family balance (Clark, 2000; Frone, 2003; Greenhaus et al., 2003; Voydanoff, 2005b), and the typology's aim was to provide a unifying rather than contradicting perspective on work-family balance.

The findings supported the typology of work-family balance and the hypotheses. The participants in the beneficial imbalance type (presence of work-family enhancement, absence of work-family conflict; 48.4%) showed the highest self-esteem and happiness and lowest amount of psychosomatic and depressive symptoms whereas the opposite was true for participants in the harmful imbalance type (presence of conflict, absence of enhancement; 8.9%). In addition, the participants in the beneficial imbalance type scored highest in Emotional Stability (the opposite of Neuroticism), Agreeableness and Conscientiousness, whereas the participants in the harmful imbalance type scored lowest in these personality traits. The participants in the active balance type (presence of enhancement and conflict; 16.4%), in turn, showed the highest time invested to paid and domestic work as well as motivational energy directed towards work, whereas the opposite was true for the participants in the passive balance type (absence of enhancement and conflict; 26.3%). Participants in the active balance type also showed more insufficiency of their own time and time given up for others at work or home than participants in the passive balance type. In relation to personality traits, the participants in the passive balance type showed low Extraversion and Openness to Experience, whereas the participants in the active balance type showed high Extraversion.

Finally, the hypotheses concerning the differentiating factors between the work-family balance types were also tested with longitudinal data. This showed that, although the work-family balance type allocation was based on work-family interface experiences at age 42, the work-family balance types differed from each other in similar ways in psychological well-being at age 36 as at age 42 except for psychosomatic symptoms, and in the personality traits at age 33 as at age 42.

## 4 DISCUSSION

### 4.1 Personality as an antecedent for work-family interaction experiences

Work- and family-related situational factors have been examined extensively as antecedents of negative work-family interaction with much less attention given to intra-individual factors other than gender and age (Bellavia & Frone, 2005; Byron, 2005; Kinnunen & Mauno, 2008; Lahelma et al., 2005; O'Driscoll, Brough, & Kalliath, 2006). This is most likely because personality has not been included in the theoretical models of negative work-family interaction (e.g., Edwards & Rothbard, 2000; Frone et al., 1992; Frone, Yardley et al., 1997; Greenhaus & Beutell, 1985; Lambert, 1990). Alternatively, personality has been considered as a possible producer of spurious spillover effects between work and family domains to due a common third factor such as negative affectivity (Edwards & Rothbard, 2000). The present study suggests, however, that personality is tightly related to work-family interface experiences especially when work-family interface is considered from the person-oriented perspective, and that because of its' stable nature, personality traits could be regarded as an underlying foundation for work-family interface experiences.

The present findings support the view that the Big Five personality traits are a priori factors in relation to negative work-family interaction. First, as shown in Study II, the mean rank-order stability of these traits in adulthood was very high, which indicates that the relative difference between adults in these traits is not easily malleable by situational factors (e.g., work- and family-related incidents) unless they are very drastic. Second, although the rank-order stability of work-to-family and family-to-work conflict was moderate even across six years as shown in Study III, it was not as stable as the rank-order stability of personality traits. Taken together, these findings suggest that work-family conflict seems more susceptible to change than personality traits. Therefore personality traits can be considered as antecedents of work-family conflict as assumed in Study I, based on the framework for studying personality

in the stress process (Bolger & Zuckerman, 1995). Accordingly, Neuroticism was found to be a risk factor in both men and women for experiencing high work-to-family and family-to-work conflict. Instead, Extraversion, Agreeableness, and Conscientiousness were not resource factors for work-family conflict, and an unexpected finding was that in men high Openness to Experience was related to high family-to-work conflict.

In light of the present and earlier cross-sectional findings the role of Neuroticism as a risk factor for work-family conflict seems clear (Batt & Valcour, 2003; Bruck & Allen, 2003; Carlson, 1999; Grzywacz & Marks, 2000; Noor, 2003; Wayne et al., 2004). In relation to Extraversion, the common difference between the studies that have found a negative association between Extraversion and work-family conflict (Grzywacz & Marks, 2000; Noor, 2003) and the studies that have not found this association (Bruck & Allen, 2003; Wayne et al., 2004), in addition to present study, is that the former included only Neuroticism and Extraversion in their study design whereas the latter included all of the Big Five personality traits. This does not however, explain the present non-findings in relation to earlier observed negative association between work-family conflict and Agreeableness or Conscientiousness (Bruck & Allen, 2003; Wayne et al., 2004). The likely reason for this difference in results is the sample size and the three-year time lag between measurements in the present study. In relatively small samples weak time-lagged associations do not reach significance so easily. Despite the differences between the present and earlier findings it can be concluded that when all the Big Five traits are considered simultaneously, the role of Neuroticism in relation to work-family conflict seems most pronounced, and also Agreeableness or Conscientiousness play a role whereas the role of Extraversion is less evident.

In the earlier two cross-sectional studies that included Openness to Experience no association between it and work-family conflict was detected (Bruck & Allen, 2003; Wayne et al., 2004). It is known that Openness to Experience is a predictor of vocational careers characterized by entrepreneurship, investigative or artistic interests, and self-directedness (Tokar, Fischer, & Subich, 1998). The mechanism that might explain the positive association between Openness to Experience and family-to-work conflict in men in Study I is the blurred boundaries between family and work: the inspirations, ideas and flow of work may strike either at home or at the work place and it cannot be put on hold. This may lead to feelings of family intruding and hindering one's working when it is not possible to follow one's urge. Perhaps women in this sense are more socialized to inhibit one's own aspirations when being responsible for others, based on the fact that the connection between Openness to Experience and family-to-work conflict did not exist among them.

The role of Neuroticism for work-family conflict seems most influential among the Big Five personality traits, and indeed the past research has sometimes concentrated only on negative affectivity ignoring the other dimensions of personality (e.g., Carlson, 1999; Stoeva et al., 2002). On the contrary, in a recent resource-gain-development (RGD) model of work-family

facilitation, the tendency to experience positive affect and self-efficacy are considered as personal resources enhancing facilitation (Wayne et al., 2007). The findings of the present study support this model, showing that in addition to Neuroticism the other Big Five personality traits are also needed to understand better the individual differences in positive work-family interaction. Moreover, the present study emphasizes that personality can be a resource as well as a risk factor for both negative and positive work-family interaction. This is demonstrated in the differential profiles of the Big Five personality traits among the four types of work-family balance in Study IV.

The results from Study IV showed that each of the four types of work-family balance had a distinctive personality profile. Psychosocial maturity and positive affect described the beneficial imbalance type: low Neuroticism, and high Extraversion, Agreeableness and Conscientiousness. In contrast, psychosocial immaturity and low positive affect described the harmful imbalance type: high Neuroticism, and low Extraversion, Agreeableness, and Conscientiousness. In addition, the participants in the harmful imbalance type were high in Openness to Experience. Ambivalence described the active balance type: high negative affect in the form of Neuroticism but also high positive affect in the form of Extraversion. Low agency and self-actualization described the passive balance type: low Extraversion, Openness to Experience, and Conscientiousness. Notable in the preceding personality profiles of each work-family balance type was that they showed high correspondence between ages 33 and 42, although the classification into these types was formed at age 42. This confirms the view that personality traits are also a priori factors in relation to positive work-family interaction in addition to negative work-family interaction.

The findings from Study IV also both give support to and clarify the few earlier variable-oriented studies where the personality trait correlates of each dimension of work-family interface have been studied (Grzywacz & Marks, 2000; Wayne et al., 2004). First, based on the present results the notion that psychosocial maturity is likely to promote good socialization and success in adulthood roles (Caspi et al., 2005; Digman, 1997; Hogan & Roberts, 2004; Lodi-Smith & Roberts, 2007) can be extended to concern achieving the ideal balance between work and family lives. Emotional stability as an opposite of Neuroticism was related to the specific combination of presence of work-family enhancement and absence of work-family conflict, whereas in the previous, variable-oriented studies Neuroticism has been found to be related only to high work-family conflict, and not to work-family enhancement (Grzywacz & Marks, 2000; Wayne et al., 2004). Agreeableness and Conscientiousness, in turn, have been related in these studies both to low work-family conflict and high work-family enhancement as also in the present study in the form of beneficial work-family imbalance.

Second, the present findings showed that high agency in terms of Extraversion was related to work-family balance reflecting positive and active work-family interface (beneficial and active types). This is in line with the notion that personal growth may promote an individual's adjustment (Digman, 1997),

and supports the view that Extraversion defines the experience of work-family enhancement (Wayne et al., 2004) rather than both enhancement and conflict (Grzywacz & Marks, 2000). On the other hand, the present findings concerning the other constituent of personal growth, Openness to Experience (Digman, 1997), showed that if an individual is highly work-oriented, Openness to Experience coupled with personality showing psychosocial immaturity may not promote adjustment but instead lead to detrimental work-family interaction as seen in the harmful imbalance type. This finding is quite opposite to one earlier study showing that Openness to Experience was related only to high work-family enhancement, and not to work-family conflict (Wayne et al., 2004). The present finding is, however, in accordance with Study I showing that open men experienced more family-to-work conflict than other participants. Due to a scarcity of research, the role of Openness to Experience in relation to work-family interface should be examined more before further conclusions can be reached.

To summarize, there exists now enough tentative research results showing that all of the Big Five personality traits are linked to work-family interface experiences, and this warrants the inclusion of each of them in the theoretical models and study designs in the area of work-family research. The role of Neuroticism as a risk factor, and the role of Agreeableness and Conscientiousness as resources factors for beneficial and harmful work-family interface experiences seem most pronounced, whereas the role of Extraversion and Openness to Experience seem to be more dependable on the level of other traits they are merged with.

## **4.2 Moderators of work-family conflict-psychological well-being linkage**

Reviews showing differential findings across studies concerning the work-family conflict - psychological well-being linkage have evoked the question that there may be undetected third variables affecting this relationship that should be examined instead of just main effects (Allen et al., 2000; O'Driscoll et al., 2006). This possibility is not emphasized in the theoretical models of work-family interface that often assume a direct relationship between work-family conflict and well-being (e.g., Frone, Yardley et al., 1997). The findings from the present study lend more support for the former perspective, as it was shown that gender, personality, and work-family enhancement moderated the relationship between work-family conflict and psychological well-being.

In Study I, gender and personality moderated the work-to-family conflict - psychological distress linkage simultaneously. The experience that work hinders participation in family life was directly related to psychological distress only in men, whereas in women this relationship was moderated by Neuroticism. Women high in Neuroticism reported more psychological distress

within a high work-to-family conflict experience than women low in Neuroticism who, in fact, reported low psychological distress within a high work-to-family conflict. One explanation for this might be that women high in Neuroticism may interpret high work-to-family conflict as a serious threat to their coping capacity, whereas women low in Neuroticism may interpret a similar experience as a challenge resulting from many work- and family-related activities in their lives that they enjoy. The present finding supports the previous finding concerning the role of Neuroticism as a moderator in the links between work-to-family conflict and depression/job exhaustion (Kinnunen et al., 2003).

But why was work-to-family conflict directly related to psychological distress in men whereas this linkage was moderated by Neuroticism in women? One explanation for this might be the different family stage of the men and women in the present study. At age 36, most participants (90%) had one or more children living at home, but the age of the youngest child was typically four years among men and seven years among women. Simultaneously, men had longer working hours than women (on average 45 vs. 40 hours per week, respectively). Accordingly, it has been noticed that in the families with young children the fathers work very long hours both to provide sufficient income for their families as well as to fulfill the oversized job demands of their employers (Lammi-Taskula & Salmi, 2004; Sauli, 1998). In contrast, mothers in Finland (Julkunen & Nätti, 1998; Nätti, Väisänen, & Anttila, 2005; Salmi, 1996) and in other western countries (Greenhaus & Parasuraman, 1999; Isaksson, Johansson, Lindroth, & Sverke, 2006) are more likely than men to adjust their working hours or choose telecommuting when possible due to the fact that they still carry the main responsibility of childcare and domestic work in their families in addition to holding a job. Considering all of the above aspects, it seems likely that because of their long working hours the men in present study may have felt both emotionally and physically worn-out, and may have also felt guilty for not being present for their family in their time of need (demanding daily routines and urgent needs of young children), which then may have induced psychological distress. For women, perhaps because of their lower work hours and older children in comparison to men, work hindering the family life induced psychological distress only when the women were prone to emotional instability and experiencing negative affect in everyday life.

The theoretical models of work-family interface have mostly discussed the outcomes of work-family conflict (Frone et al., 1992; Frone, Yardley et al., 1997) and work-family facilitation (Wayne et al., 2007) separately instead of combining these experiences into the same model. With the emergence of the construct of work-family balance scholars have, however, offered tentative perspectives to this issue. According to Frone (2003) work-family balance consists of low work-family conflict and high work-family facilitation, and psychological well-being is generally regarded as a marker of work-family balance (e.g., Clark, 2000; Clarke et al., 2004). Based on this, the outcomes of work-family balance have been studied by examining how work-family conflict and work-family facilitation as separate constructs are related to psychological well-being (Aryee et al., 2005). The supported hypothesis is that conflict is

related negatively and facilitation positively to psychological well-being (Grzywacz & Bass, 2003; Kinnunen et al., 2006; Wayne et al., 2004). The restriction of this approach is that it does not account for the interactive effects of work-family conflict and work-family facilitation on psychological well-being. How is the well-being of individuals who simultaneously experience high (low) conflict and high (low) facilitation? Is work-family facilitation needed for good psychological functioning, and do the beneficial effects of work-family facilitation counterbalance the harmful effect of work-family conflict or not?

The answer to these questions was searched for in Study IV. The results showed that work-family enhancement acted as a buffer in relation to positive well-being (self-esteem, happiness) but not in relation to negative well-being (psychosomatic and depressive symptoms) when work-family conflict was present. On the one hand, the active balance type participants experiencing both conflict and enhancement did not differ significantly from the participants in the beneficial imbalance type showing high self-esteem and happiness. On the other hand, the participants in active balance showed psychosomatic and depressive symptoms that were as high as within the participants in the harmful imbalance type. In addition, when work-family conflict was not present, the presence of work-family enhancement was not a necessary factor for psychological well-being. The participants in the passive balance type experiencing neither work-family conflict nor enhancement did not differ significantly from the participants in the beneficial type showing high happiness and low psychosomatic and depressive symptoms. Similar findings have been reported in the few earlier studies applying a typological approach to the work-family interface (Demerouti & Geurts, 2004; Tiedje et al., 1990).

In sum, gender has often been considered more as a moderator altering the effects of work- and family-related factors on work-family conflict than altering the effects of work-family conflict on so-called outcome variables such as psychological distress (Byron, 2005; O'Driscoll et al., 2006). The present results show, however, that gender is an influential factor also in relation to work-family interface and individual's well-being (cf. Eby et al., 2005; Greenhaus & Parasuraman, 1999; Voydanoff, 2002). In addition, from the Big Five personality traits Neuroticism seems to act as a vulnerability factor predisposing to mental ill-health in the presence of work-family conflict, and the presence of work-family enhancement seems to counterbalance the harmful effect of work-family conflict on positive but not on negative well-being. The further examination of gender, personality, positive work-family interaction, and other possible moderators of work-family conflict – psychological well-being linkages has the potential to expand the existing theories pertaining to work-family conflict (e.g., Frone et al., 1992; Frone, Yardley et al., 1997) by specifying to whom and in what circumstances is work-family conflict likely to cause deterioration in well-being.

### 4.3 Causality of the work-family conflict and psychological well-being

The integrative model of the work-family interface (Frone, Yardley et al., 1997) is intended to describe the longitudinal and causal relations between work-family conflict and psychological well-being, although the original support presented for this model was obtained through a cross-sectional design. Further cross-sectional (e.g., reviews by Allen et al., 2000; Ford et al., 2007) and longitudinal (reviewed in Table 2) studies have found support for the hypothesized negative relation between work-family conflict and psychological well-being. In relation to these studies, the findings of the present study suggest that the antecedent – outcome relations between work-family conflict and psychological well-being described in the integrative model of the work-family interface (Frone, Yardley et al., 1997) may be most applicable to concurrent or short-term longitudinal relations such as over a few months (e.g., Kelloway et al., 1999; Leiter & Durup, 1996) rather than over many years (Rantanen, Kinnunen, Feldt, & Pulkkinen, 2008).

In Study III, with one and six-year time lags, neither work-to-family nor family-to-work conflict were antecedents or outcomes for psychological well-being either, in relation to domain-specific (job exhaustion, marital adjustment, parental stress) or general (psychological distress) well-being. Hence, none of the three possibilities – normal causality, reversed causality, or the reciprocity approach – describing the links between work-family conflict and psychological well-being were supported, although these approaches have received support in the previous longitudinal studies (cf. Table 2). The explanation for this contradiction in results relates to methodological and theoretical reasons that are also important to consider when reviewing the other longitudinal studies of work-family conflict and psychological well-being.

First of all, a plausible reason for the present non-findings is the long time lag between the measurements. There exists, however, evidence that longitudinal effects of work-family conflict on low psychological well-being has been detected even across four years (Frone et al., 1997). This indicates that the long time lag alone is not a satisfactory explanation. The second reason may lie in the fact that a time-based work-family conflict measure was used in Study III. In studies where both strain- and time-based work-family conflicts have been analyzed separately, significant cross-lagged relations have been found only between strain-based work-family conflict and health impairment (Kelloway et al., 1999; van Hooff et al., 2005).

Third, Study III utilized a full cross-lagged panel design method controlling for the autoregressive effects of the first measurement on the dependent variables at the second measurement before the cross-lagged effects between work-family conflict and psychological well-being were examined. This prerequisite for examination of antecedent–outcome relations over time (Schnabel, 1996; Zapf et al., 1996) is met in only a very few earlier studies (see

Table 2). Moreover, even in these few studies with the full cross-lagged design, autocorrelation between measurement pairs have been used, instead of considering the variance explained by the autoregressive effects of the first measurement on the dependent variables (Demerouti et al., 2004). Or, alternatively, primarily synchronous effects between work-family conflict and psychological well-being within the second measurement point have been found, instead of cross-lagged effects (O'Driscoll et al., 2004; Steinmetz et al., 2008). Taken together, these three main methodological differences between Study III and the earlier longitudinal studies refer to the conclusion that valid cross-lagged relations between work-family conflict and psychological well-being are most likely to be found across a time-lag of one year or less, and when using strain-based work-family conflict scales.

A theoretical reason for the lack of cross-lagged relations between work-family conflict and psychological well-being in the present study may be the fact that hypotheses based on the integrative model of the work-family interface (Frone, Yardley et al., 1997) and on the direct negative work-family spillover (Edwards & Rothbard, 2000) were examined simultaneously. Only spillover hypotheses were supported. As seen in Table 2, studies that include work-to-family conflict, family-to-work conflict, well-being indicators from more than one life domain, and a study design that considers the multiple cross-lagged relationships between these constructs simultaneously are very rare. In fact, only the study by Leiter and Durup (1996) corresponds with Study III in terms of a broad study design. Leiter and Durup found support both for the integrative model of the work-family interface (Frone, Yardley et al., 1997) and the negative spillover perspective (Edwards & Rothbard, 2000). Together the present study, and the study by Leiter and Durup suggest that it might be fruitful to combine the work-family conflict (Frone et al., 1992; Frone, Yardley et al., 1997; Greenhaus & Beutell, 1985) and work-family negative spillover (Edwards & Rothbard, 2000; Lambert, 1990) traditions into a common model of negative work-family interaction, rather than study them separately.

In Study III, job exhaustion preceded psychological distress both across one- and six-year periods. Across one year, low marital adjustment preceded psychological distress, and psychological distress preceded parental stress. This chain of cross-lagged relations across a one-year time lag suggests that well-being and adjustment at work and in a marital relationship have a central role in maintaining psychological functioning in everyday life which, in turn, is a base for sense of adequacy and ability to function as a parent (cf. Barnett, Raudenbush, Brennan, Pleck, & Marshall, 1995; Malinen, Sevón, & Kinnunen, 2006). This finding also supports the indirect negative work-family spillover perspective (depicted in Figure 2) suggesting that general psychological well-being and mood may act as a transmitter of psychological strain across work and family domains (Edwards & Rothbard, 2000).

The final relevant theme to consider when interpreting the present results concerning adults' psychological well-being is the fact that the participants represented the mainstream of the society in a sense that they had *both* work and family. Thus, despite the exhaustion they experienced at work or the

problems they encountered in their marital relationship or with their children, they still were likely to be in an advantageous position in comparison to adults without a job and/or family. This may also partly explain why work-family conflict and psychological well-being were related to each other only concurrently in the present study. In the long run, having both work and a family may be a resource that overcomes the short-term difficulties in combining these two life domains. Confirming the premise of role accumulation and expansion theories, according to which holding multiple roles is beneficial for both men and women (Barnet & Hyde, 2001; Marks, 1977; Sieber, 1974), studies have shown that the long-term unemployed were psychologically more distressed than the employed (Kokko, 2001). It has also been shown that allostatic load in the form of blood pressure was the lowest in individuals with work, a partner and children, as compared to working couples and singles (Steptoe, Lundwall, & Cropley, 2000). In addition to better physical health, the increased involvement by men in fatherhood is linked to the mens' higher self-esteem and lower risk for depression (World Health Organization, 2007).

In summary, the accumulated research findings from studies with a full cross-lagged panel design lend the most support for the reciprocity approach to negative work-family interaction and psychological well-being as shown in Table 2, which supports the integrative model of the work-family interface (Frone, Yardley et al., 1997). At present the theories of negative (or positive) work-family interaction (Edwards & Rothbard, 2000; Frone et al., 1992; Frone, Yardley et al., 1997) do not, however, guide researchers in terms of appropriate time lag for hypothesized effects to occur. Based on the reviews from cross-sectional studies (Allen et al., 2000; Ford et al., 2007) and on the present and other longitudinal studies (Table 2), it can be concluded that concurrent and short-term longitudinal relations (i.e., weeks or few months) between work-family conflict and psychological strain are more plausible than long-term relations (i.e., a year or more). The present study confirms the notion that with the longer time lags an examination of synchronous effects between work-family conflict and psychological well-being, in addition to cross-lagged effects, may be informative because the long time lag may not capture the phenomenon (O'Driscoll et al., 2004; Steinmetz et al., 2008). On the contrary, the direct and indirect spillover effects between the indicators of psychological well-being from different life domains may occur even across years.

#### **4.4 Methodological evaluation**

The review of research methods used in work-family research from 1980 to 2003 by Casper and colleagues (2007) offers a good framework to evaluate the strengths and limitations of the present study. This evaluation is organized according to the following themes: sample and research design, data collection, analysis methods, and measurement validity.

Knowledge about the work-family interface has thus far been obtained mostly from “experiences of heterosexual, Caucasian, managerial and professional employees in traditional family arrangements”, and therefore it is highly recommended that the sample characteristics are carefully described and comprise representative samples from employees outside of the United States, and that the sample should include non-traditional families (Casper et al., 2007). In the present study, the relevant features of the samples (e.g., age, gender, occupational and marital status, weekly working hours and number of children) were described in detail in the original publications. Attention was also paid to the comparison between the samples and the population from which these samples were derived. The fact that both samples used in the present study (JYLS and the Economic Crisis, Job Insecurity and the Household) have been found to be representative in relation to their original populations (Kinnunen et al., 2000; Pulkkinen, 2006), and that the samples were not restricted to a specific industry, occupational level, or to traditional families enhances the generalization of the present results. At the same time, the age homogeneity of the JYLS participants means that the age range – 33-, 36-, and 42-year olds – has to be kept in mind when interpreting the present results. On the one hand, the present results are most generalizable into countries with rather egalitarian socio-cultural gender expectations and practises, as exemplified in Nordic countries. But on the other hand, recent meta-analyses have shown that there is also considerable symmetry between genders in the prevalence of work-family conflict experiences (Byron, 2005; Demerouti et al., 2004) and in the cross-domain work-family relations (Ford et al., 2007) in other countries as well.

In the present study I was able to utilize two longitudinal data sets, which offered a unique opportunity to study both the stability of the phenomena in focus and the antecedent – outcome relations between them. Longitudinal studies are very rare within work-family research, due to which there exists limited knowledge about both causal relations and other work-family relations over time (Casper et al., 2007). In strict terms, longitudinal design alone is not enough for the confirmation of true cause-effect relations, but a longitudinal-experimental study design would still be indispensable (e.g., Farrington, 1992). Keeping this in mind, the present study’s longitudinal design coupled with method of analysis using multiple dependent variables (path analysis, SEM) and including tests of moderation effects (gender, personality) is among its strengths (cf. Zapf et al., 1996). This is because the analyses aimed at theory testing instead of simple inferential statistics (e.g., correlation, *t* and *z* tests) or examining one dependent variable with a single relation (e.g., multiple and logistic regression, ANCOVA) as used in the majority (79% and 90%, respectively) of work-family interface research (Casper et al., 2007). In addition, the present study aimed to form a comprehensive view of the topic within the limits of sample size instead of narrower approach (e.g., concentrating only to one direction of work-family interface, selected personality traits, or one psychological well-being indicator).

The focus of the present study was the individual experiences of the work-family interface that were collected through self-reports. The reliance on self-

reports is a clear limitation of the present study as it would be preferable to use triangulation in data collection (Casper et al., 2007). This is not because self-reports would be particularly unreliable but because triangulation would strengthen the conclusions if different informants and measures would provide convergent results. The majority of the work-family studies have focused on individual level analysis as did the present study, and thus, I agree that more attention should also be given to the examination of work-family relations at dyadic, group, and organizational levels (cf. Casper et al., 2007; Mauno, Kinnunen, & Pyykkö, 2005). Nevertheless, there are gaps existing in an individual level analysis of work-family interface experiences that are still unexplored and hence, this line of research also deserves to be carried forward.

Casper and colleagues (2007) also pay attention to the fact that evidence for the content and construct validity of the measures used in work-family research are seldom provided. In the present study, the construct validity of the time-based work-family conflict scale used was proven to be very good across the two study samples in my use (Rantanen et al., 2008). In addition, the content and construct validity of the Big Five personality inventory adapted to the Finnish culture has been reported to be good (Pulver et al., 1995), as are also the construct validity of the GHQ measuring psychological distress in both of the present samples (Mäkikangas et al., 2006), and the work-family interface scale used at age 42 in the JYLS including both work-family conflict and enhancement (Kinnunen et al., 2005; Kinnunen et al., 2006). Thus, adapting original, mostly English language measures into Finnish did not change the construct validity of these scales or jeopardize their reliability (cf. Casper et al., 2007).

Lastly, the time-lags in the present studies were not planned or theory driven as preferred (de Lange et al., 2003; Zapf et al., 1996) but predefined due to matters of convenience because the present study was a part of the larger research projects. The long time-lags (from one to six years) may have underestimated the true antecedent - outcome relations in Studies I and III (cf. Zapf et al., 1996). However, as noted earlier, the theories pertaining to the work-family interface do not define an appropriate time-lag in which for example changes in work-family conflict or enhancement are expected to occur, and therefore an explorative approach to this issue served as an important tool for facilitating the theories of the work-family interface, and determining an optimal time lag for future longitudinal work-family interface studies.

#### **4.5 Future directions and implications**

The present study showed that personality traits could act both as predisposing factors to work-family conflict and also to moderate the work-family conflict - psychological well-being linkage. Therefore it would be recommendable to include personality in the studies of negative work-family interaction whenever possible. Also, the positive association between work-family enhancement and

psychological well-being could be examined accordingly to see if this association is dependent on personality. In addition to examining the effect of personality traits on the work-family interface as separate constructs (nomothetic approach), the effect of personality types (ideographic approach) on work-family interface would also be informative (cf. Grant & Langan-Fox, 2006). This is because the latter approach considers an individual as a whole, and although some traits may have a relatively independent effect on the work-family interface (e.g., Neuroticism), the effect of some other traits maybe highly dependable on the configuration of traits (e.g., Extraversion and Openness to Experience) as implied also by the present findings.

Another important personality-related avenue is the consideration of coping strategies as antecedents and moderators of the work-family interface and psychological functioning in different life domains (Friede & Ryan, 2005). In addition to work-family interface specific coping strategies (Somech & Drach-Zahavy, 2007), meaning-focused coping (Folkman & Moskowitz, 2007) and dyadic coping (Berg & Upchurch, 2007) seem relevant. This is because the moderate stability of work-family conflict over the years seen in the present study suggests that this experience can be an ongoing or chronic state for some individuals. In addition, it is emphasized that work-family balance is truly achievable only through the fulfilment of role expectations, which are negotiated and shared with work and family domain role partners (Grzywacz & Carlson, 2007). The meaning-focused and dyadic coping are especially applicable to the prolonged and ongoing stress situations which cannot be solved by an individual alone, and combined coping efforts from significant others are needed (Berg & Upchurch, 2007; Folkman, 2008).

The present finding that, instead of time-based work-family conflict, job exhaustion was a significant precursor of psychological distress over time, supports the fact that in work-family research the investigation of time- and strain-based work-family conflict as separate constructs is warranted (cf. Carlson et al., 2000; Greenhaus & Beutell, 1985) when the focus is to find the primary antecedents of general psychological well-being. In addition to that, determining the accumulative effects of time- and strain-based work-family conflict and domain specific ill-being on general psychological well-being would be informative. Do the adverse experiences pile up for some individuals, or is for example time-based work-family conflict the main issue to some and strain-based work-family conflict and job exhaustion for others? On the other hand, the reversed causality and reciprocity approaches should not be neglected: impaired psychological well-being may induce negative work-family interaction (Steinmetz et al., 2008) or form a maladaptive cycle together with work-family conflict (Demerouti et al., 2004; Kelloway et al., 1999).

Shifting the variable-oriented approach to the person-oriented approach in the typology of work-family balance in the present study improved our understanding about the totality of work-family interface experience and its relation to the psychological functioning of an individual. The typological approach showed that although the individuals experiencing harmful imbalance between work and family life are at the highest risk for psychological

ill-being, the individuals in the active balance type are also at somewhat risk. Self-esteem and happiness were not especially low among participants in the active balance type but they reported high psychosomatic and depressive symptoms. Instead, the participants in the beneficial imbalance and passive balance types seemed to feel equally well, confirming the notion that segmentation (i.e., no or low interaction between work and family domains) can also be a successful strategy in combining work and family domains instead of often emphasized integration or synergy (Clark, 2000; Kossek et al., 1999).

The practical implications of the present study are now provided. First, because personality plays a role in defining the work-family interface experiences it is worthwhile for parents and other adults raising children to foster psychosocially mature ways of acting, thinking, and feeling in children and adolescents (cf. Pulkkinen, 2002) as these traits – Emotional Stability, Agreeableness and Conscientiousness – show greater malleability in early rather than later stages of the life course (Roberts & DelVecchio, 2000). In adults, instead of trying to influence the core personality traits, the emphasis could be on characteristic adaptations that are more context-bounded (McAdams & Pals, 2006). For example, peer groups directed to adults who have a demanding work-family situation could be formed through occupational health care or child welfare clinics, and in these groups adults could encounter and learn situation-specific coping methods from those who despite similar difficulties seem to do well. Also, pure information given in these groups about typical factors inducing negative and positive work-family interaction experiences might help these adults to reflect on their own situation in terms of what possibilities they have to change the situation and what factors are out of their control (see e.g., Sallinen, Kandolin, & Purola, 2002; Savolainen, Lammi-Taskula, & Salmi, 2004).

Second, the present study emphasizes, in accord with others (e.g., Ahola & Hakanen, 2007; Hättinen, Kinnunen, Pekkonen, & Kalimo, 2007), that the prevention and reduction of job exhaustion in today's competitive employment environment is one of the most important and challenging tasks of working life and society in general. This is because job exhaustion reduces the psychological well-being of individuals, leading to long absences from work (Bakker, Demerouti, de Boer, & Schaufeli, 2003). Job exhaustion also reduces motivation and performance at work (e.g., Halbesleben & Bowler, 2007). Social-psychological interventions are needed both on individual and organizational levels, since it has been shown that burnout as well as engagement at work are contagious, often shared experiences in work teams (Bakker, van Emmerik, & Euwema, 2006). These crossover effects are also likely to impact on the individual work-related affective experiences.

Third, the suggested typology of work-family balance can be used as a tool for targeting work-family interventions or benefits to those adults who are especially at risk for impaired mental health and sick leave due to negative work-family interaction (Väänänen et al., 2008). It maybe that not all adults experiencing harmful imbalance or active balance, nor their employees and partners, are conscious about the individual strategies, organizational tools, and

possibilities offered by society to combine work and family lives as easily and efficiently as possible. In addition, strategies and policies promoting adults' recovery from daily efforts at work and in family are important, because proper recuperation is considered vital for the role performance and psychological well-being of individuals (Demerouti, Taris, & Bakker, 2007; Sonnentag & Fritz, 2007).

In conclusion, the present theories pertaining to the work-family interface offer a rather exhaustive picture of this field, and work-family research would benefit from construct refinement aiming at convergence rather than on divergence, which is today seen especially in relation to definitions of positive work-family interaction (cf. Table 1). The suggested typology of work-family balance in the present study combines the premises of role stress (Kahn et al., 1964), role accumulation (Sieber, 1974), and role balance (Marks & MacDermid, 1996) theories into a single model that also considers the bi-directionality of work-family interaction in a measurement level (Frone, 2003; Greenhaus & Beutell, 1985). Hence, the suggested typology of work-family balance provides a theory-based method to approach work-family interface as recommended (Grzywacz & Carlson, 2007), while at the same time the vast theoretical base is brought under a general umbrella through which both researchers and practitioners in the field may grasp the phenomena in a cost-effective manner.

## YHTEENVETO

### Työn ja perheen vuorovaikutuksen yhteys psyykkiseen hyvinvointiin sekä persoonallisuuteen pitkittäistutkimuksen näkökulmasta

Suomalaisista aikuisista 40 % pitää työn ja perheen yhteen sovittamista ongelmallisena vähintään silloin tällöin (Toivanen & Kauppinen, 2007). Sekä työ että perhe voivat viedä toisiltaan niin käytettävissä olevaa aikaa kuin henkistä ja fyysistä energiaakin. Tämän *työn ja perheen välisen ristiriidan* on psykologisissa teorioissa oletettu johtavan yksilön psyykkisen hyvinvoinnin laskuun; tutkimustulokset eivät tosin varauksetta tue näin suoraa syy-seuraus-olettamusta (Allen ym., 2000; O'Driscoll ym., 2006; Rantanen & Kinnunen, 2005). Viime aikoina on tutkimuksissa nostettu esiin myös *työn ja perheen välisen tuen* mahdollisuus. Sen mukaan sekä työ että perhe voivat tarjota voimavaroja toisilleen, kuten sosiaalista tukea, palautumista ja toimeentuloa (Barnett & Hyde, 2001; Frone, 2003). Tässä tutkimuksessa tarkasteltiin työn ja perheen välisen ristiriidan ja tuen lisäksi myös kolmatta mahdollisuutta – *työn ja perheen välistä tasapainoa*.

Tutkimusaineistoina oli kaksi suomalaista pitkittäistutkimusta. Näistä ensimmäinen on professori Lea Pulkkisen vuonna 1968 aloittama, johtama ja edelleen jatkuva Lapsesta aikuiseksi -pitkittäistutkimus (JYLS, Jyväskylä Longitudinal Study of Personality and Social Development) (Pulkinen, 1996; Pulkinen ym., 2003; Pulkinen, 2006). Tutkittavat, 12 Jyväskylän alueelta satunnaisesti valittua kokonaista koululuokkaa ( $N = 369$ , 196 poikaa ja 173 tyttöä), olivat ensimmäisessä aineistonkeruuvaiheessa pääasiassa 8-vuotiaita. Tässä väitöskirjassa hyödynnettiin vuosina 1992, 1995 ja 2001 kerättyjä aikuisiän aineistoja tutkittavien ollessa vastaavasti 33-, 36- ja 42-vuotiaita. Aineiston osallistumisprosentti on pysynyt korkeana: tutkittavien ollessa 42-vuotiaita 83 % osallistui tutkimukseen, ja nämä osallistujat ovat edelleen siviilisäädyltään, perhemuodoltaan, lasten lukumäärältään, sekä työ- ja työttömyystilanteeltaan edustava otos vuonna 1959 syntyneistä suomalaisista (Pulkinen ym., 2003).

Toinen tässä tutkimuksessa hyödynnetty pitkittäistutkimusaineisto on professori Ulla Kinnusen johtama Kotitalous, työ ja hyvinvointi -tutkimus, joka perustuu Väestörekisteristä otettuun työikäisten (25 - 59-vuotiaat) satunnaisotokseen ( $N = 1\ 878$ ) (Kinnunen ym., 2000). Kyselytutkimukseen vastasi 851 henkilöä vuonna 1999 (vastausprosentti 45 %), joista 655 (77 %) osallistui kyselytutkimukseen myös vuotta myöhemmin. Tutkittavien on alhaisesta vastausprosentista huolimatta todettu edustavan hyvin suomalaisia aikuisia sukupuolen, iän, siviilisäädyn ja maantieteellisen sijainnin näkökulmista (Kinnunen ym., 2000).

Tutkimuksen *ensimmäisenä tavoitteena* oli selvittää, voidaanko viittä suurta persoonallisuuden piirrettä (McCrae & Costa, 2003) – neuroottisuutta, ekstrasversiota, avoimuutta, sovinollisuutta ja tunnollisuutta – pitää ennakoivina riski- tai voimavaratekijöinä työn ja perheen välisen ristiriidan sekä tuen kokeumuksille. Aikaisemmissa tutkimuksissa näitä yksilön sisäisiä tekijöitä on tut-

kittu hyvin vähän ja painopiste on ollut työhön ja perheeseen liittyvissä tilannetekijöissä (esim. viikoittainen työtuntimäärä, lasten lukumäärä) (Kinnunen & Mauno, 2008; Lahelma ym., 2005). Lisäksi tutkittiin, ovatko persoonallisuuden piirteet psyykkiseltä pahoinvoinnilta suojaavia tai sille altistavia, haavoittavia tekijöitä silloin, kun työn ja perheen vaatimukset ovat ristiriidassa keskenään.

Tulokset osoittivat, että yksilöiden väliset erot viidessä suuressa persoonallisuuden piirteessä olivat huomattavan pysyviä aikuisuudessa. 33-vuotiaana mitatut piirteet selittivät keskimäärin noin 70 % samojen piirteiden vaihtelusta 42-vuotiaana. Samanaikaisesti yksilöiden väliset erot työn ja perheen välisen ristiriidan tuntemuksissa osoittivat vähäisempää pysyvyyttä. 36-vuotiaana mitattu työstä perheeseen suuntautuva ristiriita selitti noin 50 % ja perheestä työhön suuntautuva ristiriita vain noin 25 % samojen tuntemusten vaihtelusta 42-vuotiaana. Tämä tarkoittaa, että yksilöiden välillä on tapahtunut paljonkin muutoksia kuuden vuoden aikavälillä työn ja perheen välisen ristiriidan tuntemuksissa. Kun persoonallisuuden piirteiden ja työn ja perheen välisen ristiriidan pysyvyyttä verrataan toisiinsa, voidaan työn ja perheen välisen ristiriidan tuntemusten todeta olevan alttiimpia muutokselle, kun taas persoonallisuuden voidaan tulkita olevan todennäköinen työn ja perheen välistä vuorovaikutusta ennakoiva ja selittävä tekijä.

Tätä päätelmää tukien tulokset osoittivat, että 33-vuotiaana mitattu neuroottisuus oli riskitekijä sekä työstä perheeseen että perheestä työhön suuntautuvan ristiriidan kokemiselle 36-vuotiaana. Tutkittavat, jotka olivat muita neuroottisempia, tunsivat työn ja perheen välistä ristiriita muita enemmän. Syynä tähän on todennäköisesti neuroottisuuden sisältyvä taipumus kokea kielteisiä tunnetiloja, nähdä ympäröivä maailma ja ihmissuhteet uhkaavina sekä vaikeus käsitellä stressiä aiheuttavia tilanteita (McCrae & Costa, 2003). Neuroottisuus oli naisilla myös haavoittuvuustekijä vahvistaen työstä perheeseen suuntautuvan ristiriidan ja psyykkisen kuormittuneisuuden välistä yhteyttä. Sen sijaan miehillä tämä yhteys työn ja perheen välisen ristiriidan ja psyykkisen kuormittuneisuuden välillä ilmeni riippumatta siitä, kuinka neuroottisia he olivat.

Tutkimuksen *toisena tavoitteena* oli etsiä pitkittäistutkimusasetelmalla vastausta siihen, onko työn ja perheen välinen ristiriita alhaisen psyykkisen hyvinvoinnin syy, seuraus vai molempia yhtäaikaisesti. Aikaisemmat tutkimukset tästä teemasta ovat olleet useimmiten (94 %) poikkileikkaustutkimuksia (Casper ym., 2007), joiden perusteella ei voida päätellä syy-seuraus-suhteita (Zapf ym., 1996). Normaalin kausaalisuusoletuksen mukaan työn ja perheen välinen ristiriita heikentää hyvinvointia, kun taas käänteisen kausaalisuuden mukaan alhainen hyvinvointi altistaa työn ja perheen välisen ristiriidan kokemukselle. Sen sijaan vastavuoroisen kausaalisuusoletuksen mukaan työn ja perheen välinen ristiriita ja alhainen hyvinvointi muodostavat itseään ylläpitävä kehän, jossa nämä kokemukset vahvistavat toisiaan. Vastoin odotuksia työn ja perheen välinen ristiriita ei ollut yhteydessä alhaiseen psyykkiseen hyvinvointiin vuoden eikä kuuden vuoden aikavälillä. Näin ollen normaali, käänteinen tai vastavuoroinen kausaalisuus työn ja perheen välisen ristiriidan ja alhaisen hyvinvoinnin välillä ei saanut tukea tästä tutkimuksesta.

Tässä yhteydessä tutkittiin myös sitä, miten alhaisen hyvinvoinnin eri ilmentäjät – uupumusasteinen väsymys työssä, parisuhdeongelmat, vanhemmuuteen liittyvä stressi ja elämänalueisiin sitomaton, yleinen psyykkinen kuormittuneisuus – olivat yhteydessä toisiinsa yli ajan. Tulokset osoittivat, että uupumusasteinen väsymys työssä edelsi yleistä psyykkistä kuormittuneisuutta sekä vuoden että kuuden vuoden aikavälillä. Lisäksi parisuhdeongelmat edelsivät vuoden aikavälillä psyykkistä kuormittuneisuutta, joka puolestaan edelsi vanhemmuuden tuntemista stressiä aiheuttavaksi. Nämä tulokset korostavat mielekkään ja hyvinvointia ylläpitävän työn sekä parisuhteen merkitystä yksilön henkiselle hyvinvoinnille, joka puolestaan on voimavara tasapainoisen vanhemmuuden näkökulmasta.

*Kolmantena tavoitteena* oli työn ja perheen välisen tasapainon käsitteen teoreettinen kehittäminen ja testaaminen. Vaikka työn ja perheen välinen tasapaino mielletään usein näiden elämänalueiden yhteen sovittamisen ongelmattomuudeksi, tyydyttävyydeksi ja harmoniaksi (Clark, 2000; Clarke ym., 2004), on työn ja perheen välisen tasapainon käsite psykologisessa tutkimuksessa vasta muotoutumassa (Castrén, 2007; Grzywacz & Carlson, 2007; Tetrick & Buffardi, 2006).

Tässä tutkimuksessa työn ja perheen välinen tasapaino ja epätasapaino määritettiin työn ja perheen välisen tuen ja ristiriidan neliulotteiseksi typologiaksi, jota kuvio 1 havainnollistaa (ks. myös Rantanen & Kinnunen, 2005, s. 240). Olennaista tässä typologiassa tasapainon kannalta on työn ja perheen välisen tuen ja ristiriidan symmetrisyys: kun työn ja perheen katsotaan toisaalta tukevan toinen toistaan sekä toisaalta olevan ristiriidassa keskenään, on kyse aktiivisesta tasapainosta. Kun taas työn ja perheen ei katsota tukevan toisiaan eikä olevan ristiriidassa keskenään, on kyse passiivisesta tasapainosta.

Työ ja perhe tukevat toisiaan	Työ ja perhe ovat ristiriidassa keskenään	
	Kyllä	Ei
Kyllä	<b>Aktiivinen tasapaino</b>	<b>Suotuisa epätasapaino</b>
Ei	<b>Haitallinen epätasapaino</b>	<b>Passiivinen tasapaino</b>

KUVIO 1 Työn ja perheen välisen (epä)tasapainon tyypit.

Työn ja perheen välisen epätasapainon kannalta on puolestaan olennaista tuen ja ristiriidan epäsymmetrisyys. Tämä epäsymmetrisyys on suotuisaa silloin, kun työn ja perheen katsotaan tukevan toisiaan mutta niiden ei tunneta olevan ristiriidassa keskenään. Vastaavasti, kun työn ja perheen tunnetaan olevan ristiriidassa keskenään ilman että näiden elämänalueiden katsottaisiin tukevan toinen toistaan, on kyse työn ja perheen välisestä haitallisesta epätasapainosta. Tutkittavista lähes puolet (48,4 %) kuului 42-vuotiaana suotuisaan epätasapainotyyppiin, kun taas haitalliseen epätasapainotyyppiin kuului heistä alle kym-

menesosa (8,9 %). Aktiiviseen tasapainotyyppiin kuului noin kuudesosa (16,4 %) ja passiiviseen tasapainotyyppiin noin neljäsosa (26,3 %) tutkittavista.

Edellä kuvatun typologian pätevyyttä tutkittaessa havaittiin odotusten mukaisesti, että suotuisaa ja haitallista epätasapainotyyppiä erottivat toisistaan nimenomaisesti psyykinen hyvinvointi ja psykososiaalista kypsyyttä kuvastava persoonallisuus. Aktiivista ja passiivista tasapainotyyppiä puolestaan erottivat toisistaan nimenomaisesti työhön ja perheeseen sitoutuminen sekä aktiivisuutta ja osallistuvuutta kuvastava persoonallisuus. Tutkittavat, jotka kuuluivat suotuisaan epätasapainotyyppiin, tunsivat itsensä kaikkein onnellisimmiksi, heillä oli korkein itsetunto, ja he raportoivat vähiten psykosomaattisia sekä masentuneisuuden oireita. Sitä vastoin tutkittavat, jotka kuuluivat haitalliseen epätasapainotyyppiin, tunsivat itsensä vähiten onnellisiksi, heillä oli alhaisin itsetunto, ja he raportoivat eniten psykosomaattisia sekä masentuneisuuden oireita. Aktiiviselle tasapainotyyppille olivat myös ominaisia psykosomaattiset ja masentuneisuuden oireet. Sen sijaan passiivinen tasapainotyyppi ei eronnut onnellisuudeltaan eikä vähäisten psykosomaattisten sekä masentuneisuuden oireiltaan suotuisasta epätasapainotyyppistä.

Suotuisaa epätasapainotyyppiä edustavien tutkittavien persoonallisuuteen liittyi psykososiaalinen kypsyyks: vähäinen neuroottisuus ja korkea sovinnollisuus sekä tunnollisuus (mm. Caspi ym., 2005; Hogan & Roberts, 2004). Sen sijaan tutkittavilla, jotka edustivat haitallista epätasapainotyyppiä, persoonallisuuden profiili oli juuri päinvastainen, kuvastaen psykososiaalista kypsymättömyyttä: korkea neuroottisuus ja alhainen sovinnollisuus sekä tunnollisuus. Lisäksi he olivat muita tutkittavia avoimempia uusille kokemuksille. Aktiiviselle tasapainotyyppille olivat ominaisia sekä kielteiset että myönteiset tunteet ja toimintatavat. Ne ilmenivät korkeana neuroottisuutena ja ekstraversiona eli ulospäinsuuntautuneisuutena sekä aktiivisuutena. Sen sijaan passiiviselle tasapainotyyppille olivat ominaisia vähäinen ulospäinsuuntautuneisuus, avoimuus ja tunnollisuus. Nämä piirteet kuvastavat vetäytyvyyttä ja vähäistä osallistuvuutta.

Tutkittavat, jotka kuuluivat aktiiviseen tasapainotyyppiin, tekivät kaikista pisintä työviikkoa, käyttivät eniten aikaa kodin- ja lastenhoitoon sekä kodin korjaustöihin ja tunsivat uhrautuvansa usein muiden vuoksi sekä työssä että kotona. Näissä tekijöissä he poikkesivat erityisesti suotuisan epätasapainotyyppin ja passiivisen tasapainotyyppin tutkittavista. Lisäksi sekä haitalliselle epätasapainotyyppille että aktiiviselle tasapainotyyppille oli leimallista itseen käytettävissä olevan ajan puute, kun taas suotuisalle epätasapainotyyppille ja passiiviselle tasapainotyyppille jäi riittävästi omaa aikaa. Työhön, perheeseen ja omaan terveyteen suunnatuilta ajatuksiltaan ja teoiltaan erottui etenkin haitallinen tasapainotyyppi, joka keskittyi muista eroten selvästi enemmän työhön kuin perheeseen ja omaan terveyteensä.

*Johtopäätöksinä* tutkimuksen tuloksista voidaan todeta ensinnäkin, että tilannetekijöiden lisäksi yksilön persoonallisuus on yhteydessä siihen, miten hän tulkitsee työn ja perheen yhteen sovittamisen vaatimukset, haasteet ja voimarat sekä kuinka työn ja perheen välisen ristiriidan ja tuen tuntemukset ovat yhteydessä yksilön psyykkisen hyvinvointiin. Näin ollen persoonallisuuden

huomioon ottaminen sekä työn ja perheen välistä vuorovaikutusta kuvaavissa teorioissa (Edwards & Rothbard, 2000; Frone, Yardley ym., 1997) että tulevassa tutkimuksessa on perusteltua ja suositeltavaa. Viidestä suuresta persoonallisuuden piirteestä eritoten neuroottisuuden rooli riski- ja haavoittuvuustekijänä sekä sovinnollisuuden ja tunnollisuuden roolit voimavaratekijöinä työn ja perheen yhteen sovittamisen näkökulmasta ovat selkeitä. Sen sijaan ulospäinsuuntautuneisuuden ja avoimuuden yhteydet työn ja perheen yhteen sovittamiseen eivät ole näin yksiselitteisiä, vaan näiden piirteiden roolit riski- tai voimavaratekijöinä näyttävät riippuvan siitä, minkä muiden persoonallisuuden piirteiden kanssa ne ilmenevät.

Toiseksi näyttää siltä, että työn ja perheen välinen ristiriita ei ole senkaltaisen kokemus, jolla olisi erityisen kauaskantoisia hyvinvointivaikutuksia. Toisin sanoen työn ja perheen välinen ristiriita ilmenee todennäköisesti joko samanaikaisesti alhaisen psyykkisen hyvinvoinnin kanssa (esim. Allen ym., 2000; O'Driscoll ym., 2004; Steinmetz ym., 2008) tai näiden kahden kokemuksen väliset syy-seurausyhteydet näyttävät vuotta lyhyemmällä aikavälillä (mm. Kelloway ym., 1999; Leiter & Durup, 1996). Uupumusasteinen väsymys työssä taas on mielentila, jolla on jopa vuosien kestoinen heikentävä vaikutus yleiseen psyykkiseen hyvinvointiin. Nämä tulokset yhdessä korostavat sitä, että niin työn ja perheen yhteen sovittamisen kuin yksilöiden psyykkisen hyvinvoinnin kannalta on erittäin olennaista ehkäistä ja vähentää aikuisten uupumista ja riittämättömyyden tunteita työssään, sillä nämä tuntemukset uhkaavat yksilöä tämän päivän kilpailuhenkisessä ja globaalistuvassa työelämässä.

Kolmanneksi, työn ja perheen vuorovaikutuksen eri ulottuvuuksia (ristiriita, tuki) on mielekäästä tarkastella kokonaisvaltaisena tuntemuksena työn ja perheen välisestä tasapainosta yksilön elämässä. Tämä harvemmin käytetty tytopologinen ja yksilökeskeinen lähestymistapa osoitti, että sekä työn ja perheen vahva myönteinen vuorovaikutus (suotuisa epätasapaino) että näiden elämänalueiden vähäinen vuorovaikutus (passiivinen tasapaino) olivat yhteydessä psyykkiseen hyvinvointiin. Se osoittaa, että usein korostetun onnistuneen työn ja perheen yhteen sovittamisen lisäksi näiden elämänalueiden erillisinä pitäminen voi olla hyvinvointia tukeva toimintatapa. Psyykkisen hyvinvoinnin ylläpitämisen kannalta koettu työn ja perheen välinen ristiriita näyttää kuitenkin aina olevan riski, sillä haitallisen epätasapainotyyppin lisäksi myös aktiivinen tasapainotyyppi kärsi psykosomaattisista ja masentuneisuuden oireista. Aktiivisen tasapainotyyppin kokema työn ja perheen välinen tuki ei siis kumonnut työn ja perheen välisen ristiriidan kokemuksen kielteistä yhteyttä psyykkiseen hyvinvointiin.

*Käytännön tasolla* tämän väitöskirjan tulokset korostavat sitä, että lasten ja nuorten kasvatuksessa on tiedollisten ja taidollisten valmiuksien lisäksi hyvin tärkeää keskittyä myös psykososiaalisten ominaisuuksien tukemiseen: kuten kielteisten tunteiden ja haasteellisten tilanteiden hallinnan tietoiseen opetteluun (vähäinen neuroottisuus ts. tunne-elämän tasapainoisuus), muiden ihmisten tunteet ja mielipiteet huomioon ottavaan käyttäytymiseen (sovinnollisuus) sekä vastuuntuntoisiin ja huolellisiin toimintatapoihin (tunnollisuus) (ks. myös Pulkkinen, 2002). Näin siksi, että mainitut persoonallisuuden ominaisuudet

ovat alttiimpia muutoksille lapsuudessa kuin aikuisuudessa (Roberts & DelVecchio, 2000), jolloin ne määrittävät mm. työn ja perheen yhteen sovittamisen tuntemuksia, kuten tämä tutkimus osoitti.

Sen sijaan aikuisille, jotka kärsivät vakavista työn ja perheen yhteen sovittamisen ongelmista, olisi hyödyllisiä jakaa entistä tarkempaa tietoa näitä ongelmia yleisimmin aiheuttavista ja ehkäisevistä tekijöistä, jotta he voisivat pohdita omaa tilannettaan ja mahdollisuuksiaan itse vaikuttaa kyseisiin tekijöihin (ks. esim. Sallinen ym., 2002; Savolainen ym., 2004). Lisäksi apua voisivat antaa vertaisryhmät, joissa keskityttäisiin sellaisten toimintamallien ja käytännön esimerkkien kokeilemiseen, jotka ovat tuottaneet onnistumisen kokemuksia työn ja perheen yhteen sovittamisessa.

Työorganisaatioiden tulisi erityisesti tunnistaa ja puuttua ajoissa tekijöihin, jotka aiheuttavat henkistä uupumusta sekä ongelmia työn ja perheen yhteen sovittamisessa. Näistä tekijöistä on paljon tutkittua tietoa (Kauppinen ym., 2007; Kinnunen, Feldt, & Mauno, 2005). Niihin puuttumattomuus voi olla yhteydessä alhaiseen psyykkiseen hyvinvointiin, jonka vuoksi myös työmotivaatio ja työsuoritus ovat vaarassa heikentyä (Halbesleben & Bowler, 2007) sekä työstä poissaolot lisääntyä (Väänänen ym., 2008). Tämän tutkimuksen perusteella etenkin työhön liittyvään henkiseen kuormittavuuteen tulee keskittyä esimerkiksi joustavien työaikojen tai lyhennetyn työpäivän mahdollisuuksien lisäksi. Nämä työaikakäytännöt ovat ensiarvoisen tärkeitä työn ja perheen aikataulujen yhteen sovittamisen tukemisessa, mutta eivät välttämättä riittäviä toimenpiteitä yksilön ja hänen perheensä hyvinvoinnin kannalta, jos työ on sisällöltään tai toimintaympäristöltään henkisesti hyvin kuormittavaa.

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