DEVELOPMENT AND VALIDATION OF THE PROPENSITY FOR INTER-ROLE
CONFLICT SCALE

by

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B.A., University of Maryland University College, 1995
M.S., Kansas State University, 2002
M.B.A., Kansas State University, 2008

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Psychology
College of Arts and Sciences

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2008

Abstract

New scales were developed to measure conflict between work and school and family and school. These scales displayed adequate psychometric properties. A scale was developed to measure the propensity to experience inter-role conflict. The Propensity for Inter-role Conflict Scale (PIRCS) has excellent psychometric properties as established through exploratory and confirmatory factor analysis and scale and item analysis. PIRCS scores mediated the relationship between 14 of the 15 inter-role conflict to inter-role conflict pairs and displayed incremental validity, beyond known correlates of inter-role conflict, in the prediction of the six forms of inter-role conflict included in the study.

The consequences of inter-role conflict were shown to affect the frequency of conflict between roles. However, this was only true when the data were aggregated. This indicates people take deliberate actions to limit certain forms of inter-role conflict. The boundaries between roles are differentially permeable. The work role boundary was most resistant to inter-role conflict. The family role boundary was least resistant to conflict from other roles.

Personal characteristics affected the amount of inter-role conflict a person experienced. Women experienced significantly more conflict between family and school and school and family than men. Women were more adversely affected by the presence of children in the home than were men.

Work conditions were also related to the experience of inter-role conflict. Working more hours was associated with higher levels of work-to-family and work-to-school conflict. Participants who worked weekends reported higher levels of work-to-family and work-to-school conflict. Employees who perceived greater flexibility at work reported less work-to-family and work-to-school conflict than those with less flexibility.

The more semester hours participants were taking, the more conflict they reported between family and school, school and family and work and school. Spending

more time on homework and study was associated with higher levels of conflict from school to family.

The spillover of conflict between spouses was also demonstrated. The more hours a participant's spouse worked the more conflict the participant experienced from family to school and school to family.

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Dedication

I dedicate this dissertation to my wonderful and supportive wife, Hyunsook.

CHAPTER 1 - Introduction

According to the sociological perspective, behavior is governed by a set of expectations inherent in a particular social role (Linton, 1936). People behave in ways that are consistent with the role to maintain the status that role conveys. However, the expectations of the various roles a person holds frequently conflict. Sarbin (1954) referred to this as inter-role conflict (IRC).

For more than 40 years, researchers in psychology and business have been concerned with conflict between the work and family domains (Wilensky, 1960). The current study addresses four questions which have received little attention over the years. First, research into the causes of IRC has almost exclusively focused on factors external to the individual experiencing conflict. No scale currently exists to measure a person's propensity to experience IRC. This project constructs an instrument to measure the individual difference variable propensity to experience IRC, the Propensity for Inter-role Conflict Scale (PIRCS).

Second, the study of IRC has almost exclusively involved work and family. As we shall see, other roles have received comparatively little attention. Family and work likely constitute the two single most important roles for the majority of adults. Indeed, if it were not for the need to provide for families most adults would probably choose not to work. The need for paid employment creates an environment in which IRC can occur. However, most adults experience roles beyond that of work and family such as members of social organizations including clubs and churches that compete with work

and family for people's time and resources. This project adds to work and family the role of University student and examines IRC between work and family, school and family and work and school.

Third, although Pleck's (1977) hypothesis that the work and family domains are asymmetrically permeable to IRC has been substantiated in numerous studies, the permeability of other roles and the reasons for the differences in permeability have yet to be described. This project adds a third roll setting, school, to the study of asymmetrical permeability of role boundaries and tests whether people are able to control conflict between roles.

Finally, although a number of studies have assessed the crossover of stress from one spouse to another and its relationship to IRC, none have done so in a role other than work and family. In addition to assessing the effects of one's own work and school schedules on IRC, this study begins to examine how one's significant other's work schedule influences one's own experience of IRC.

Wilensky (1960) used two terms, compensation and spillover, to describe the relationship between work and non-work roles. Compensation occurs when a person seeks to fulfill unmet needs from one role in another domain. For example, if a man failed to receive respect and recognition at work, he would seek them at home. If his social and interpersonal needs were not fulfilled at home, he would seek out social and interpersonal relationships at work to compensate. The spillover model states that stress from one role carries over to the other role and may interfere with role performance in the affected domain. If interference takes place, the person will be less able to function and perform role-related responsibilities. Wilensky theorized that

compensation and spillover were independent processes that could occur separately or together. Compensation, when successful, acts as a coping mechanism to reduce or eliminate psychological distress. However, spillover is clearly seen as having negative consequences for people at work and at home.

Wilensky (1960) focused on the effects of stress across role boundaries as the cause of spillover. Research into IRC widened in scope and accelerated in pace following the publication of Schmitt, Colligan, and Fitzgerald's 1980 article attributing "unexplained physical symptoms" to work stress, family discord, and dissatisfaction with salaries and company personnel practices. Subsequent researchers expanded the concept of spillover to include causes other than stress. They named this expanded construct work-family conflict (Greenhaus & Beutell, 1985) or work-family interference (Galinsky, 1986). For purposes of clarity, when talking about directional IRC, the terms Work-Family Conflict (WFC), Family-Work Conflict (FWC), Work-School Conflict (WSC), School-Work Conflict (SWC), Family-School Conflict (FSC) and School-Family Conflict (SFC) will be used. When referring to IRC in general, the term used will be IRC.

Greenhaus and Beutell described three sources of IRC: time-based, strain-based, and behavior-based conflict. Time-based conflict occurs when one role places excessive demands on a person's time. Working overtime and taking work home are examples of time-based WFC. Lost work time due to care of a sick family member or disabled parent constitutes time-based FWC. Strain-based conflict occurs when the demands placed on a person by one role exceed the resources available to the person to cope with those demands. Stress experienced at work may cause a person to be moody or short-tempered resulting in conflict at home. An employee experiencing the

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death or prolonged illness of a family member may be unable to concentrate on work resulting in poor job performance. Behavior-based conflict occurs when behaviors that are adaptive in one role cause dysfunction when displayed in another role. For example, being distant and unemotional at work may be adaptive for a manager but cause conflict at home. If the person is unable to alter his/her behavior when crossing from one role to the other, conflict will occur.

The work-family conflict literature consists of several lines of research including development of a model of the work-family interface, consequences of conflict between the work and family domains, and antecedents of conflict between the domains. Although considerable research into the antecedents of IRC has been conducted, no measure of propensity to experience IRC has yet been developed despite considerable evidence of the role of individual differences in IRC. The following sections briefly describe each of these lines of research and illustrate how that research can be used to develop a scale to measure the propensity to experience conflict between life roles.

Model of the Work-Family Interface

Frone, Russell, and Cooper (1992a) presented "a comprehensive model of the work-family interface" that separated work-family conflict from family-work conflict (p. 65). This allows researchers to explore unique antecedents and consequences of conflict between the two life roles and to test for differences in work family conflict between men and women, members of different racial groups, and people of different ages and levels of education. In the model (see Figure 1), job stressors and job involvement directly affect both WFC and job distress and indirectly affect psychological

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Figure 1 Frone, Russell and Cooper's Model of the Work-Family Interface
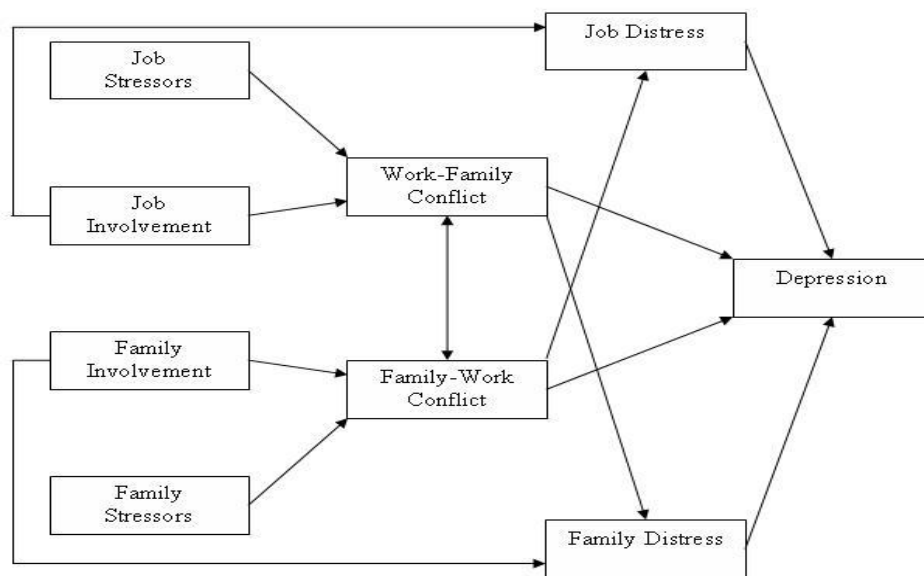
health (i.e., depression) through WFC and job distress. Family stressors and family involvement are related to FWC and family distress which affect psychological health. The two types of conflict, WFC and FWC, are reciprocally related such that high levels of conflict in either direction ultimately feed back and produce conflict in the other direction. WFC was hypothesized to directly affect family distress and FWC to directly affect job distress. Frone et al. explained this relationship as a feedback mechanism. This will be discussed more in a later section.

Frone, Russell, and Cooper tested their model on a sample of 1,933 adults from two racial groups (Blacks and non-Blacks) and three education levels (less than high school graduate, high school graduate, at least some college). The relationships between the variables were explored using structural equation modeling. Within and between groups models were specified to test for differences based on sex, race, and

job type. The between-groups models for sex and race were not significant. There were

no differences in the patterns of relationships between the variables for men and

women or for Blacks and non-Blacks. However, there were two differences in the

models for white-collar and blue-collar workers. Job involvement was marginally related

to WFC among white-collar employees ($p = 0.06$) but not for blue-collar employees. The

path from WFC to family distress was significant for blue-collar workers but not for

white-collar workers.

Hill, Yang, Hawkins, and Ferris (2004) compared the pattern of correlations

between the variables in Frone's model for male and female respondents from 48

countries. Although many of the correlations between elements differed between

nations, the overall pattern of correlations was identical. Invariance of the model across

sex, race, and culture suggests that conflict between roles is not a result of differences

in the ways people are socialized. It seems to result from something we all have in

common and suggests common psychological processes are at work. Psychological

processes were specifically addressed by Frone in a later revision of the model.

In 2003, Carlson and Frone further expanded the model to recognize that conflict

may be either externally or internally generated. Externally generated WFC includes

conditions placed on the employee by the organization such as work schedules and

work deadlines that interfere with role performance away from work. Mental

preoccupation with work that interferes with non-work role performance is an example of

internally generated WFC. Similarly, both external and internal forms of FWC exist.

Externally generated FWC includes having to take a child to a doctor's appointment.

Internally generated FWC would exist if ruminating on marital problems adversely

affected job performance. Carlson and Frone stated that internal interference results from psychological processes. These processes are what individual difference research studies. This idea will be further developed in the sections on personality and affect.

In summary, conflict between work and family occurs. Stress and strain, time constraints, and behavioral carryover are the sources of IRC. Interference can be generated by the environment (external conflict) or within the individual (internal conflict). There is currently no scale to measure one's propensity to experience IRC. Since there is no way to identify a person with a propensity to experience high levels of IRC, actions and policies designed to reduce IRC cannot be implemented at the individual level. Failing to take into account a person's propensity to experience IRC when designing these actions and policies likely reduces their effectiveness.

Distinction between Work-Family Conflict and Family-Work Conflict

A second line of research deals with the relationship between WFC and FWC. WFC and FWC are related, but distinct, constructs. A meta-analytic study of the relationship between WFC and FWC including 9,079 total participants from 25 independent samples showed that, although the mean corrected correlation between WFC and FWC was high ($r = 0.48$), they are distinct constructs (Mesmer-Magnus & Viswesvaran, 2005). WFC correlated more strongly with job stress ($r = 0.41$) than with nonwork stress ($r = 0.17$). While the correlations between FWC and work-related stress ($r = 0.27$) and nonwork stress ($r = 0.23$) were similar, the two constructs have different antecedents. For example, Vinokur, Pierce, and Buck (1999) showed that job stress was related to WFC while family stress was related to FWC. Peeters, Montgomery,

Bakker, and Schaufeli (2005) established that job demands predict work-home interference ($r = 0.44$) and home demands predict home-work interference ($r = 0.40$).

Further support for the distinction between WFC and FWC was provided by Parasuraman, Greenhaus, and Granrose (1992) who found that the relationships between variables within roles was stronger than the relationships among variables between roles for both men and women. Work role stressors were associated with high WFC ($r = 0.51$; $r = 0.51$) and low job satisfaction ($r = -0.47$; $r = -0.38$) for men and women, respectively. Family role stressors predicted family satisfaction for both men ($r = -0.47$) and women ($r = -0.38$) but were unrelated to job satisfaction for men ($r = -0.05$) or women ($r = -0.07$). In a longitudinal study (Frone, Russell, & Cooper, 1997), WFC resulted in heavy alcohol use ($r = 0.12$) while FWC led to depression ($r = 0.28$) and poor physical health ($r = 0.15$).

As a result of this research, WFC and FWC have been treated as separate constructs. Little has been done to explain the strong positive correlation between the two constructs ($r = 0.47$) confirmed by Mesmer-Magnus et.al (2005) using meta-analysis. In Frone's model, the correlation between WFC and FWC is explained as a feedback mechanism. Of course, any feedback that occurs must be mediated by the person common to the two environments. Carlson and Frone's recognition of internal and external forms of IRC is a step toward viewing IRC as an individual difference variable. However, they continued to view WFC and FWC as separate constructs with unique antecedents. Specifically, WFC is assumed to result from a persistent preoccupation with work that causes interference in the non-work role and FWC from a persistent preoccupation with family when at work. The independence of the two

constructs seems to lead researchers away from seeking a universal cause of IRC

despite the recognition that conflict occurs as a result of a psychological process,

preoccupation on the part of the person.

If researchers are to accept Frone's claim that WFC and FWC are independent

constructs, it is important to understand the nature and functioning of the feedback

mechanism that connects them. This feedback mechanism could be understood in

terms of a propensity to experience conflict between multiple roles (Figure 2). People

high in this propensity would experience similar levels of conflict between all of their life

roles. People low in this propensity would experience varying levels of conflict between

their many life roles. Controlling for this propensity would reduce the observed

correlations between the various forms of IRC.

Consequences of WFC

IRC is an important construct because it has adverse consequences for the

individuals concerned, their families, and the companies for which they work. Small and

Riley (1990) surveyed 130 male bank executives and their wives to explore the effects

of stress at work on the home lives of the men. Work stress was measured with a ten-

item scale that asked respondents how often they felt "overwhelmed, frustrated, tense,

agitated, and so on" (p. 54). Stress at work (as reported by the men) was perceived by

the men and the women to adversely affect the men's functioning in four non-work

roles. The correlations between work stress as reported by the men and role

performance based on both the men's and women's reports, respectively, were 0.57

Figure 2 The Role of Propensity for Interrole Conflict in Interrole Conflict

Effects of School ⟶
Effects of Work —··—··—▶
Effects of Family ------▶
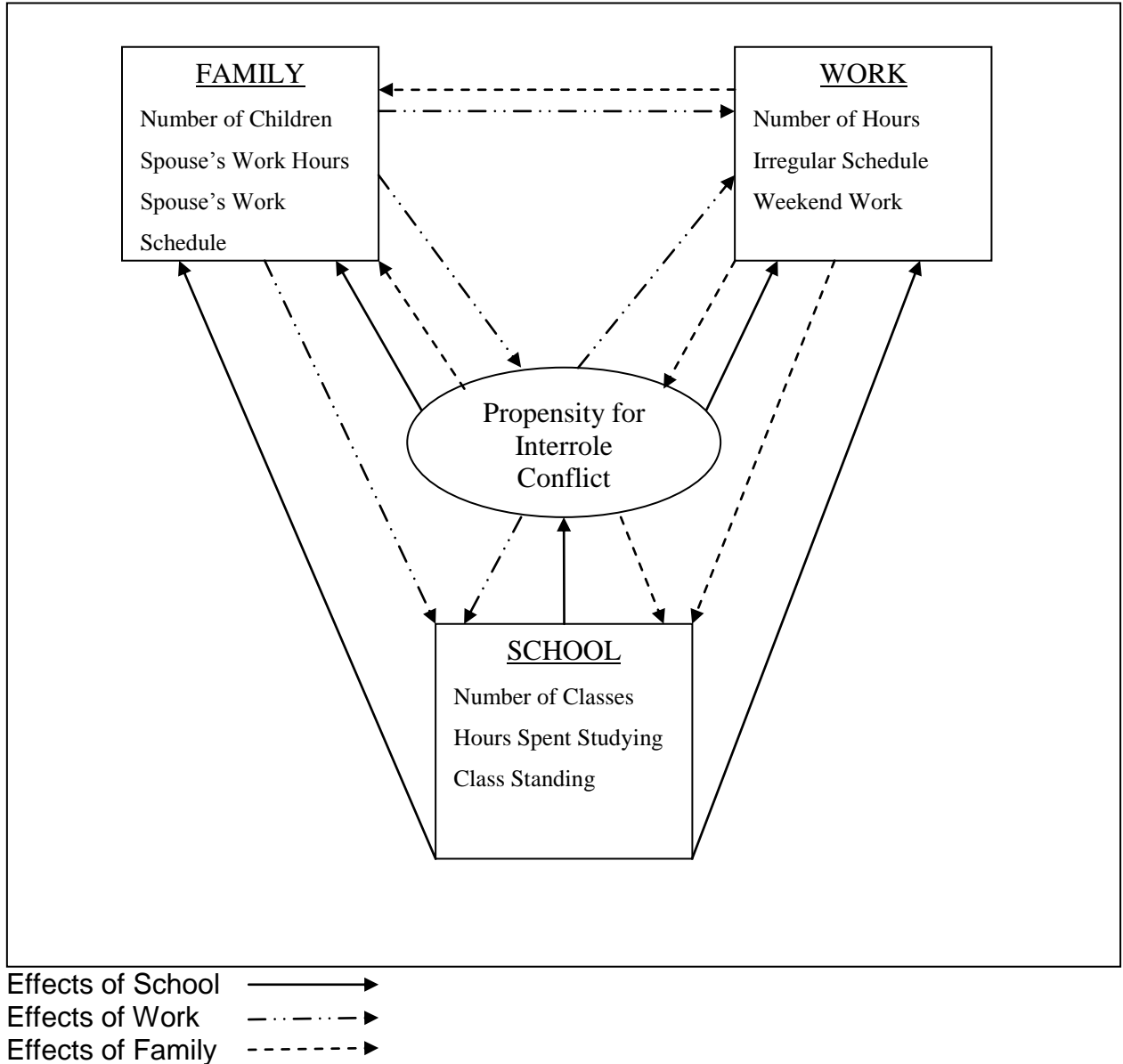
and 0.21 for marital relationship (e.g., I dislike the fact that my spouse is often preoccupied with work), 0.53 and 0.35 for parent-child relationship (e.g., My spouse's working hours interfere with the time he spends with our children), 0.57 and 0.32 for leisure time (e.g., Because my spouse is usually tired after work, he frequently doesn't like doing things for fun), and 0.43 and 0.28 for home management (e.g., My spouse's job interferes with his household responsibilities).

Grzywacz, Almeida, and McDonald (2002) surveyed participants of two national studies on the effects of work stress on "physical health, psychological well-being, and social responsibility." The National Survey of Midlife Development in the United States measured the effects of ongoing work stress (in the past year); the National Study of Daily Experiences measured the effects of recent work stress (since this time yesterday). The presence of long-term stressors increased the likelihood of adverse outcomes from current work stress. Specifically, an increase of 1 standard deviation in spillover (from long-term work stress) increased the risk of a stressful event away from work by 61% the day of a current work stressor and 63% the day following a stressful event at work. This shows both that stress crosses role boundaries and that the effects persist over time.

The "contagion" of stress between the work and family domains was assessed in a sample of 166 married couples (Bolger, DeLongis, Kessler, & Wethington, 1989). The correlation between having argued with someone at work followed by an argument with the spouse that day or the following day was high ($r = 0.52$). Similarly, arguments at home were followed the next day by arguments at work ($r = 0.49$). Single source bias was minimized because the employee was the source of the work data and the spouse the source of the family data. Stressful situations included "a lot of work" at home or on the job and "tensions or arguments" involving "one's spouse, children, supervisor at work, coworkers, or subordinates" (p. 177).

Kossek and Ozeki (1999) examined the results of WFC, FWC, and IRC (WFC and FWC combined) on job outcomes using meta-analysis. The results are summarized in Table 1. IRC decreases job performance, work commitment, and job involvement and

Table 1 Correlations between WFC, FWC, and IRC and Six Work Outcomes

Work Outcome	WFC	FWC	IRC
Job Performance	-0.03	-0.45	-0.19
Turnover Intentions	0.32	0.17	0.54
Absenteeism	0.18	na	0.17
Organizational Commitment	-0.05	-0.17	-0.27
Job Involvement	0.10	0.07	0.69
Job Burnout	0.20	0.00	0.16

Note: Metaanalytic sample size (n) differs for each analysis; in all cases, $p < .05$

increases job burnout, absenteeism, and turnover intentions. Clearly, IRC should be of

interest to individuals, families, and organizations. Research has shown that "family-

friendly" work policies such as flex time, alternative work schedules (e.g., four 10-hour

days) and on-site child care reduce WFC (Ford, Heinen, & Langkamer, 2007) and

mitigate the negative effects of IRC on job performance, absenteeism, and turnover

intentions (Kossek & Ozeki, 1999).

If organizations could predict which employees are likely to experience IRC, they

would know which employees are most likely to benefit from work-supportive and

family-friendly programs. The following section reviews the antecedents of IRC and

identifies those characteristics of individuals that can serve as the basis for a measure

of propensity to experience IRC. By identifying employees at risk of high levels of IRC,

organizations can begin to tailor individual interventions that augment company-wide

policies and programs that should increase productivity and job commitment and reduce turnover. Employees would benefit by experiencing reduced levels of conflict between the various roles they take.

Antecedents of WFC

Eby, Casper, Lockwood, Bordeaux, and Brinley (2005) reviewed 190 work-family research studies published in "IO/OB" journals from 1980 to 2002. According to the authors, the major antecedents of WFC include: conflict, pressure, and stress at work; unpredictability in work routines and work schedules; long work hours and weekend work; and being self-employed. FWC results from having young children at home, large families, child-care concerns, marital and/or family problems, and greater time demands such as care of a disabled family member. Most of the studies reviewed considered elements, external to the individual experiencing IRC, which create stress and strain.

The effects of individual difference variables on work family conflict are missing from Frone's model. Conflict between work and family is seen as resulting from role-related stress and role involvement. Indeed, much of the work family conflict literature treats the individual as a given. The focus is on external (to the individual) antecedents. Byron (2005) examined the antecedents of IRC using meta-analysis. Although she identified 243 independent data sets of antecedents of work-family conflict, the only individual difference variables included in the meta-analysis were job involvement, family involvement, and coping. This was primarily due to her decision to exclude variables for which fewer than five published studies were available. This emphasizes the dearth of research on individual differences and IRC.

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Individual difference variables have been studied as antecedents of IRC. These studies usually examine the effect of a single personality variable on IRC using existing scales developed to measure the trait in question. Personality variables used in these studies include broad traits such as neuroticism and extroversion from the Five Factor Model (FFM), traits known to relate to stress and strain such as Type A Personality and Negative Affect, and traits related to control over self and interpersonal relations including self-monitoring and emotional intelligence.

Personality and Conflict between Work and Family

Personality can be measured at two levels. Global measures of personality such as the FFM consider personality along broad dimensions. Other measures consider specific aspects of personality such as Type A behavior. Costa and McCrae's version of the FFM assumes that personality traits result from underlying biological and psychological processes that are genetic in origin (John & Robins, 1993). Carlson and Frone (2003) stated that internal sources of conflict are psychological in origin. Frone's model has been shown to apply to people from many different nations and cultures (Hill, Yang, Hawkins, & Ferris, 2004). This is because the relationships among the variables in Frone's model result from genetically-determined psychological processes. By controlling for other personality traits that promote or inhibit IRC, it was possible to develop a unique scale to measure the propensity to experience conflict between roles.

Wayne, Musisca, and Fleeson (2004) correlated the FFM traits with WFC and FWC. Conscientiousness was inversely related to WFC ($r = -0.16$) and FWC ($r = -0.23$). Neuroticism was directly related to WFC ($r = 0.38$) and FWC ($r = 0.30$). The authors suggested the link between Conscientiousness and IRC is the result of better time

management, a hypothesis which was supported by Jex and Elacqua (1999). This is consistent with the time-based source of IRC (Greenhaus & Beutell, 1985). The link from neuroticism to IRC likely results from sensitivity to stress (Schneider, 2004; Gunthert, Cohen, & Armeli, 1999) and propensity to experience negative affect (Larsen, 2000; McNiel & Fleeson, 2006; Gillespie & Martin, 2006). Schmidtke and Heller (2004) demonstrated that unique patterns of brain waves are elicited when neurotics are exposed to mood inducing stimuli. This established the biological link between neuroticism and affect. Edwards and Rothbard (2000) provided the link from affect to IRC. Persistence of negative affect (moods and emotions) causes IRC. Unpleasant and stressful events adversely affect mood and emotion (Edwards & Rothbard).

Affect is composed of valence (positive or negative) and intensity (Batson, Shaw, & Oleson, 1992). Negative affect creates discomfort and increases activity level, presumably in a search for a less aversive state. The more intense the negative affect, the greater the behavioral response. Larsen, Diener, and Emmons (1986) asserted that affect intensity (AI) is an individual difference variable and developed a scale to measure AI based on Larsen's earlier work (1984). High AI people displayed more intense affective responses to daily life events such as an argument with a friend, family member, or coworker than low AIs. Larsen, Diener, and Cropanzano (1987) showed participants images laden with affect inducing stimuli. High AI participants experienced more affect-related cognitions (ruminated on the stimuli), personalized affect-laden stimuli more, and generalized negative stimuli (e.g., thought about how much evil exists in the world) more than low AI participants. Lack of ability to regulate affect is associated with psychopathology (Larsen, 2000), an extreme reaction to stress and

strain, and is consistent with the effects of IRC. Both affect intensity and affect regulation were controlled for in developing the PIRCS.

Emotions are also referred to as affect. Negative affect is directly related to WFC ($r = 0.17$) and FWC ($r = 0.16$) and indirectly related though work and family stress (Stoeva, Chiu, & Greenhaus, 2002; Carlson, 1999). Type A Personality has been shown to predict WFC (Burke, 1988; Carlson, 1999). A person with Type A Personality is described as ambitious, competitive, impatient, aggressive, and prone to experience stress (Spence, Helmreich, & Pred, 1987). The authors divided the construct into two traits: impatience and achievement striving. According to Spence et al., people high in impatience are impatient, irritable, and prone to anger and stress. People that are high in achievement striving are described as active, hard working, and serious about their work. Bruck and Allen (2003) found that only impatience was associated with IRC. This relationship is probably explained by the prominence of negative affect and stress experienced by people high in impatience (Caplan & Jones, 1975).

Many of the antecedents of IRC mentioned above (e.g., long work hours, family responsibilities) can result in stress and strain. However, Lazarus (1990) argued stress should be measured not as the number and intensity of unpleasant events one experiences but by one's perceived level of stress. Perceived stress is measured with Cohen, Kamarck, and Mermelstein's (1983) Perceived Stress Scale (PSS). The PSS contains items that measure perceived stress "in the last month." However, such a situational measure of perceived stress will likely prove better at predicting a person's specific reaction to current conditions than to the propensity to experience stress. For the current study, items based on the PSS were developed to measure overall

propensity to experience stress. For example, the Item "In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?" was rewritten "I feel that difficulties are piling up so high that I cannot overcome them."

Edwards and Rothbard (2000) described segmentation, a third relationship between work and family. Segmentation is actually the lack of a relationship between the two domains and involves keeping the two domains separate and preventing interaction between them. Obviously, this should minimize IRC. The inability to segment the work and family roles is likely to result in higher levels of IRC. Edwards and Rothbard approach role segmentation more as a preference. Lack of role segmentation was assessed in the PIRCS from the point of view of ability rather than preference.

Although attachment style was originally studied as a basis for behavior in infants and children, Hazan and Shaver (1987, 1990) claimed it is relatively stable over time and can serve as a basis for understanding adult relationships in the work context. Sumer and Knight (2001) examined the effect of adult attachment style on the work-family interface. They found that people demonstrating the preoccupied attachment style are more likely to report FWC. Sumer and Knight attribute this to preoccupieds "obsessive focus on their emotions and their intense experience of negative affect" (p. 659). Attachment style plays a critical role in the development of personality and behavior in social situations (Bowlby, 1973). Mikulincer and Florian (2004) summarized a series of experiments that examine the relationship between attachment style and personal adjustment. They stated that "insecure attachment seems to act as a risk factor for the development of distress and maladjustment" (p. 41). Although no measure

of attachment style was used in the study, the underlying construct related to IRC (i.e., distress) was included.

To summarize, conflict between the work and family domains is associated with a number of individual difference variables that relate to susceptibility to stress and strain, persistence of negative affect over time, affect intensity, ability to regulate affect, time management, and lack of role segmentation. By controlling these known predictors of IRC, it will be possible to estimate the incremental predictive validity of the PIRCS.

Hypothesis 1a: The propensity to experience IRC is an individual difference
variable that mediates the relationship between the various forms of inter-role
conflict.

Hypothesis 1b: The propensity to experience IRC will add significant unique
variance to the prediction of IRC after controlling for the effects of positive and
negative affect, affect intensity, affect regulation and time management skills.

Differential Permeability of Work and Family Domains

A second question concerning IRC that has received little attention is the differential permeability of the work and family domains. Pleck (1977) hypothesized that the boundary protecting the family domain is more permeable to the effects of stress from work than the boundary protecting the work domain is permeable to the effects of stress from family. As a result, people should experience higher levels of work to family conflict than family to work conflict. Pleck proposed two mechanisms that should result in differential effects of stress at work and at home for men and women. These so called "structural buffers" segregate the roles of men and women such that men are relegated

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primarily to the role of wage earner and women to the role of caregiver. As a result, Pleck suggested the work and family domains are "asymmetrically permeable" to conflict with men experiencing higher levels of conflict from work to the family and women (who work) experiencing more conflict from the family to work. This hypothesis has only been partially supported in the literature and the focus of the studies was on confirming differential permeability rather than explaining it.

Contrary to Pleck's hypotheses, Duxbury and Higgins (1991) found the correlation between work involvement and WFC was stronger for women ($r = 0.56$) than for men ($r = 0.48$), a difference in variance explained of 8%. Further, while family involvement was associated with higher WFC for men ($r = 0.13$), women with high levels of family involvement experienced lower levels of WFC ($r = -0.15$). Evidence of differential permeability was found by Frone, Russell, and Cooper (1992b) and Grzywacz, Frone, Brewer, and Kovner (2006). For example, in the Grzywacz study, more nurses (91%) reported interference from work to home than from home to work (63%) in the preceding six months. None of these studies examined the reasons for differential permeability.

Einspahr (2003) disagreed with the differential permeability hypothesis. However, the correlation between work boundary permeability and home boundary permeability was low ($r = 0.15$). As a result, Einspahr suggested the difference in permeability between the domains is a function of how comfortable a person feels in engaging in role-spanning behavior and the relative ease of doing so. For example, it may be easier to read work-related e-mail at home than to plan a family meal while at work. The permeability of other life roles (e.g., student) has not been studied.

Drawing on the idea of comfort with engaging in role-spanning behavior, people may perceive the consequences of allowing family to interfere with work to be more severe or more certain (or both) than of allowing work to interfere with family. If an employee allows home to interfere with work, he may fear it will damage his reputation or chances for promotion or even result in dismissal. In contrast, home may be perceived as a place where it is safe to display spillover because the marital relationship is one of mutual support and understanding between partners. An employee may control her behavior at work, thereby preventing spillover from the home, to protect her reputation and her job. At home, she may display the frustrations and stresses that have built up during the day in search of social support and understanding. Two studies provide support for this theory.

Powell and Greenhaus (2006) examined the ways employees attempt to eliminate time conflicts between work and family. They found that family members were more willing to reschedule events than were co-workers when a conflict between a work and family event existed. Further, employees perceived higher levels of support from families than from work. Gutek, Searle, and Klepa (1991) stated that family work is more elastic than paid work. Thus, it is easier to reschedule family work than paid work. If family work is interrupted, it can be picked up again when time allows. These two studies suggest employees perceive their jobs as more rigid and less supportive than their families. Thus, it is likely that people perceive the risk of FWC as greater than the risk of WFC and control their behavior to prevent spillover from home to work but express spillover from work to home in search of support and understanding.

Rotondo, Carlson and Kincaid (2003) identified two coping strategies that reduced FWC. Participants who sought help from other family members with family-related responsibilities and who increased their effort to complete family-related tasks experienced less conflict from family to work. This is the essence of Baltes and Baltes (1990) Selection, Optimization and Compensation (SOC) Model. SOC involves identifying a limited number of goals (selection), devoting one's attention and efforts to achieving those goals (optimization) and trying new strategies such as working harder and seeking advice and assistance to complete the goals (compensation). Baltes and Heydens-Gahir (2003) demonstrated that SOC reduces IRC. Thus, people who experience unacceptably high levels of IRC have tools available to reduce the conflict.

If the perceived risk of conflict between the family and work domains is high, it follows that a person will attempt to prevent conflict between the roles. For example, she might choose to skip lunch to take a child to the doctor's office or enlist another family member to do so rather than take time away during working hours. Similarly, she might avoid voluntary overtime, work extra hard to avoid involuntary overtime or refuse added responsibilities rather than stay late after work or take work home. There is as yet no body of literature examining the relative permeability of other life domains to IRC. However, if people can control the amount of IRC depending on its consequences, there should be a negative correlation between the severity of consequences and the amount of IRC that occurs.

Hypothesis 2: The higher the perceived severity of consequences of conflict from one role to another, the lower the level of IRC between them.

Personal Characteristics and Number of Children and Inter-role Conflict

Previous studies have considered the relationship between personal characteristics and IRC. However, these studies have been limited to IRC involving work and family. Other roles have been largely ignored.

Age moderates the relationship between work stress and WFC (β = -0.122; Grzywacz, Almeida, & McDonald, 2002). Evans and Bartolome (1984) reported similar results which they attributed to the centrality of work in the lives of younger employees. They suggested younger employees place greater importance on work because they are seeking to establish themselves as competent, productive workers deserving of raises and promotions. Older employees, they posit, will have already succeeded in establishing a work reputation (or will have failed and given up) and will change their focus to developing other aspects of life such as family relationships, recreation, and concern over broad social issues. As people get older, they may learn new techniques to balance the competing demands of their various roles and experience less IRC. Additionally, as children age, they will become more self-sufficient and demand less assistance and attention from their parents. As a result, the prevalence of IRC should decrease with age and shift such that other roles interfere more with work and work less with other roles.

Previous research has shown differences in the correlations between various antecedents of IRC and their respective outcomes for men and women (Kinnunen & Mauno, 1998) but little difference in the absolute amount of conflict experienced (Duxbury & Higgins, 1991). However, most this research looked at conflict between work and family and dealt with full-time workers. Differences between men and women

in the experience of IRC involving school may occur. Also, students who work may differ from older adults in regards to how they experience IRC. It is possible that male and female students who work experience different levels of all forms of IRC.

The presence of children in the home has been shown to predict FWC (Kinnunen & Mauno, 1998; Brough & Kelling, 2002). College students with children should experience higher levels of conflict between family and school than students without children. For example, the need to take a sick child to a doctor will supersede the need to attend class. Problems obtaining stable child care will directly affect students' ability to attend classes and school-related activities. The presence of children in the home will interfere with students' ability to do homework, read for classes and prepare for exams.

Hypothesis 3a: There is an inverse relationship between age and WFC, FWC, SFC, and
      FSC.

Hypothesis 3b: Men and women will report different levels of WFC, FWC, SFC, FSC,
      WSC and SWC.

Hypothesis 3c: There is a direct relationship between the number of children in the
      home and, FWC, WFC, SFC and FSC.

IRC Involving School

As previously stated, the majority of research involving IRC has focused on interference between work and family. Very few studies including school as a life role have been reported. Nevertheless, involvement in school presents additional opportunities for IRC. For example, if a student spends time in the library researching a paper, this reduces the amount of time available to spend with family or on paid

employment. In fact, participation in any role creates the possibility of conflict with other roles and reduces the time that can be devoted to those roles.

Studies including school and work have typically examined the effects of work on school but not the effects of school on work or family. Markel and Frone (1998) considered the effects of work conditions on the preparation of high school students for college. They reported that the number of hours worked per week was directly related to WSC; however, the effects of school on work were not assessed. Other work and school variables have been shown to relate to conflict between work and school.

Supervisor and social support at work are inversely related to WSC (Adebayo, 2006). This is similar to research cited above that shows that supportive policies at work reduce WFC (Frone & Yardley, 1996). Butler (2007) found that both work-school congruence and job control were inversely related to WSC. The effect of the perceived effectiveness of university support services on WSC was tested by Hammer, Grigsby and Woods (1998). The perceived effectiveness of support services was inversely related to WSC. Rau and Hyland (2002) surveyed MBA students preparing to enter the workforce. Students high in role conflict expressed more of a desire to join a company with flexible work hours than those low in role conflict. Students low in IRC expressed less desire to enter a company offering flex time than one with a traditional schedule. The authors point out the importance of congruence between the characteristics of jobs available and those of the applicant pool at hand.

As previously mentioned, IRC occurs because of time constraints, strain, and behavioral carryover (Greenhaus & Beutell, 1985). Time-based and strain-based IRC have been demonstrated between work and family. The number of hours worked per

24

week is directly related to WFC (Frye & Breaugh, 2004). Similarly, working more hours can be expected to interfere with school since less time is available for reading and homework, writing papers and preparing for exams. Working more hours should also increase FWC and SWC since there are fewer hours remaining in the week to take care of family and school responsibilities.

Since children attend school during the week, they do not have time during the day to take part in family activities and must go to bed in time to get sufficient rest for school the next day. Therefore, families often schedule family activities on the weekend. If a person works on the weekend, this will conflict with family (WFC). Further, university students likely schedule study time and group work on weekends due to conflicts in schedules during the week. Working on the weekend should interfere with school as well as family.

Eby et al. (2005) stated that shift work is associated with higher levels of WFC. An unpredictable work schedule makes it difficult to plan for non-work activities which causes conflict with those non-work activities. Therefore, shift work should interfere with doing homework, writing research papers and studying for exams resulting in higher levels of WSC. As previously mentioned, flexible work policies are associated with lower levels of WFC (Hill et al., 2004). Similarly, flexibility at work should result in lower levels of WSC and prevent interference between both family and school and work.

Job involvement is directly related to WFC (Parasuraman & Simmers, 2001). Similar relationships can be expected between job involvement and WSC. However, people high in job involvement probably take steps to prevent family and school and work from interfering with work and will experience lower levels of these two forms of

IRC. Employees who are involved with their jobs experience higher levels of IRC (Kossek & Ozeki, 1999). Some students work for a company or in an occupation from which they plan to retire while others work to support themselves or supplement their income while in school but plan to search for long-term employment after graduation. The level of involvement with a company will depend, in part, on how long the employee plans to work for the company or in that field. Employees who define their job as "just a job" will be less involved with their jobs and will experience lower levels of WFC and WSC and higher levels of FWC and SWC than employees who plan to stay with their company after graduation.

Hypothesis 4a: Number of hours worked will be directly related to the incidence of WFC, WSC, FWC and SWC.

Hypothesis 4b: Working on the weekend will be associated with higher levels of WFC, FWC, WSC and SWC.

Hypothesis 4c: Flexibility at work will be inversely related to WFC, WSC, FWC and SWC.

Hypothesis 4d: Working a variable schedule (shift work) will be associated with higher levels of WFC, FWC, WSC and SWC than working a fixed schedule.

Hypothesis 4e: Respondents who plan to retire from their current job or consider their current job a career will experience higher levels of WFC and WSC and lower levels of FWC and SWC than those who define their work as "just a job."

School also poses the risk of conflict with both family and work. The more classes a student takes at any one time, the more time they must spend in class, reading and doing homework and preparing for exams. This is consistent with Greenhaus and Beutell's (1985) time-based conflict. The difficulty of classes increases as students advance. Increased course difficulty should consume more of a student's time (time-based conflict) and increase the level of stress on a student (strain-based conflict). Therefore, it can be expected that upper level undergraduate students would experience more SWC, WSC, SFC and FSC than lower level undergraduate students and that graduate students would experience the most IRC of all students.

Hypothesis 5a: The number of semester hours a student takes will be directly related to the amount of SWC, WSC, SFC and FSC the student reports.

Hypothesis 5b: There is a direct relationship between the number of hours spent studying and SWC, WSC, SFC and FSC.

Hypothesis 5c: There is a direct relationship between class standing and the amount of SWC, WSC, SFC and FSC.

Spillover of IRC between Spouses

The crossover of stress from one spouse to the other has received attention in the IRC literature. Westman and Etzion (2005) studied families in which the wife was serving on active duty in the uniformed services. For both men and women, WFC and FWC crossed over from one spouse to the other. Song, Foo and Uy (2008) demonstrated that mood is one mechanism by which IRC can cross over between

spouses. However, no attempt was made to determine the cause of IRC that crossed from one spouse to the other in either study.

A student whose significant other works may not be able to rely on that person for help in caring for the family. Therefore, it can be expected that students with a working spouse will spend more time caring for children and taking care of family responsibilities than students whose spouse stays at home. Having a spouse with a predictable work schedule will be easier to plan for than having a spouse working a variable schedule or shift work. Having a spouse working an unpredictable schedule will likely increase the amount of conflict a student experiences between family and work and family and school.

Since children have school on weekdays, many families schedule family activities during the weekend. It has previously been shown that working on the weekend is associated with higher levels of WFC for the employee. If a spouse works on the weekend, care for children falls to the parent at home. Therefore, it is likely that having a spouse who works weekends will increase the level of conflict between one's family role and both work and school.

Hypothesis 6a: The number of hours a person's spouse works will be directly related to the person's level of WFC, FWC, SFC and FSC.

Hypothesis 6b: A person whose spouse works irregular hours will experience more WFC, FWC, SFC and FSC than a person whose spouse works a regular schedule.

Hypothesis 6c: A person whose spouse works weekends will experience more WFC,

FWC, SFC and FSC than a person whose spouse does not work weekends.

CHAPTER 2 - Method

Participants

The target population for the study consisted of "adult students" at a major Midwestern university. The university defines adult students as meeting any of the following criteria: 25 years of age or older, married, parent, experienced a break in education of three or more years. An e-mail message was sent to 5044 adult students requesting they complete the online survey (Appendix A). A total of 917 students (18.18%) logged onto the online survey and answered one or more questions. After removing incomplete response sets, 823 usable surveys remained for a final response rate of [1]16.32%.

Respondents were asked to indicate their age, sex, and class rank. In order to determine whether the sample represented the underlying population, sample statistics were compared to population parameters (Table 2). As can be seen in the table, sample proportions closely represent population proportions for age and class rank. Sex breakdown was not available for adult students. Therefore, the sex composition of the sample was compared to that of the total student population. For undergraduate students, the proportion of men in the sample was significantly smaller than the proportion of men in the population, $z = 7.15$, $p = .000$. However, for graduate students (who constituted the bulk of the sample), the difference in the proportion of men in the sample did not differ significantly from the proportion of male students in the population,

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[1] The actual response rate cannot be determined precisely due to possible failure of transmission of electronic mail. Thus, the actual response rate likely exceeds 16.32%.

z = 1.91, p = .056. The typical respondent was a female graduate student 33.9 years of

age taking 11 to 15 semester hours of courses who also works 20 to 30 hours per week.

Table 2 Sample and Population Demographics

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Variable	Population[1]	Sample
Under 25	6.7%	6.4%
25-39	72.1%	68.3%
40-59	20.7%	23.9%
60+	0.6%	1.3%
Undergraduate Women	49.0%	70.0%
Undergraduate Men	51.0%	30.0%
Graduate Women	57.2%	62.9%
Graduate Men	42.8%	37.1%
Undergraduate	40.2%	38.8%
Graduate	59.8%	61.2%

1. University as a whole.
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Materials

Participants were asked to provide the demographic data listed above,

information about their work schedule and conditions, the number of semester hours

currently taken, the number of hours spent working on school-related activities, and

information about the work schedule of their significant other (Appendix B). In addition,

respondents were asked to complete several other scales. Summary statistics for these

scales are presented in Table 3.

Table 3 Summary Statistics for Scales Used in the Study

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Variable	n	Number of Items	Cronbach's Alpha	Mean	Standard Deviation	Skew	Kurtosis
Negative Affect	813	7	0.82	14.38	4.13	0.47	-0.16
Positive Affect	818	5	0.88	14.44	3.31	-0.24	-0.41
Time Management	818	5	0.75	11.04	3.10	0.35	-0.23
Affect Intensity	818	4	0.82	7.29	2.67	0.84	0.30
Affect Regulation	816	4	0.81	8.23	2.43	0.47	0.30
Stress	815	5	0.82	8.80	2.88	0.35	-0.55
Work-Family Conflict	822	3	0.90	9.28	3.61	-0.19	-0.92
Family-Work Conflict	821	3	0.87	6.78	3.14	0.64	-0.28
Work-School Conflict	809	3	0.93	8.06	3.62	0.15	-0.97
School-Work Conflict	810	3	0.91	6.24	3.19	0.84	0.04
Family-School Conflict	806	3	0.94	8.56	3.42	0.13	-0.79
School-Family Conflict	805	3	0.93	9.63	3.51	-0.22	-0.82

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Inter-role Conflict

The 6-item work family conflict scale (Grzywacz, Frone, Brewer, & Kovner, 2006)

was adapted to measure six types of inter-role conflict. The original scale measures

conflict from work to family and from family to work. In order to measure conflict

involving school, twelve new items were developed. The new items are parallel versions

of the original items from the work family conflict scale. The original item "In the last six

months, how often did your job or career interfere with your responsibilities at home such as yard work, cooking, cleaning, repairs, shopping, paying the bills, or caring for a family member?" which measures WFC was modified to "In the last six months, how often did your job or career interfere with your responsibilities at school such as attending class, reading, completing assignments or studying for exams?" to measure WSC. The item, "In the last six months, how often did your home life interfere with your job or career?" was modified to "In the last six months, how often did your school interfere with your job or career?" to measure conflict from school to the family. The newly developed items used the same response format as the original items (i.e., Never, Less than once a month, 1 to 3 days per month, 1 to 3 days per week, 4 or more days per week). All eighteen items are presented in Table 4.

The 18 items were subjected to principle axis factoring, a factor analytic technique. A six-factor solution was requested to coincide with the six forms of inter-role conflict in the study. After orthogonal rotation, each of the three items that corresponded to a factor (e.g., WFC) loaded significantly on that factor alone at a level of 0.62 or higher. There were no cross-loadings above 0.32 indicating that cross-loading was not an issue (Tabachnik & Fidell, 2001). The six factors extracted are interpreted as SFC, FSC, WSC, SWC, WFC and FWC, respectively (Table 4). Cronbach's Alpha (Cronbach, 1951) was computed for each form of inter-role conflict. All six scales were internally consistent with Cronbach's Alpha ranging from a low of 0.87 (FWC) to a high of 0.94 (FSC). Cronbach's Alpha exceeded 0.70 for each scale indicating they have adequate internal reliability for use in subsequent analyses (Table 4).

Table 4 Reliability and Factor Loadings of Six Inter-role Conflict Scales

Scale	Item	Cronbach's Alpha	Cronbach's Alpha if Item Deleted	Factor Loading
SFC	In the last six months, how often did school interfere with your responsibilities at home such as yard work, cooking, cleaning, repairs, shopping, paying the bills, or caring for family members?	0.934	0.93	0.79
	In the last six months, how often did school keep you from spending the amount of time you would like to spend with your family?		0.90	0.84
	In the last six months, how often did school interfere with your home life?		0.88	0.89
FSC	In the last six months, how often did your home life interfere with your responsibilities at school such as attending class, reading, completing assignments or studying for exams?	0.939	0.93	0.80
	In the last six months, how often did your home life keep you from spending the amount of time you would like to spend on school?		0.91	0.84
	In the last six months, how often did your home life interfere with school?		0.89	0.86
WSC	In the last six months, how often did your job or career interfere with your responsibilities at school such as attending class, reading, completing assignments or studying for exams?	0.931	0.94	0.75
	In the last six months, how often did your job or career keep you from spending the amount of time that you would like to spend on your school life?		0.89	0.85
	In the last six months, how often did your job or career interfere with your school life?		0.88	0.85
SWC	In the last six months, how often did school interfere with your responsibilities at work such as getting to work on time, accomplishing daily tasks, or working overtime?	0.907	0.91	0.70
	In the last six months, how often did school keep you from spending the amount of time that you would like to spend on your job or career?		0.84	0.88
	In the last six months, how often did your school interfere with your job or career?		0.85	0.83
WFC	In the last six months, how often did your job or career interfere with your responsibilities at home such as yard work, cooking, cleaning, repairs, shopping, paying the bills, or caring for a family member?	0.904	0.89	0.72
	In the last six months, how often did your job or career keep you from spending the amount of time that you would like to spend with your family?		0.84	0.83
	In the last six months, how often did your job or career interfere with your home life?		0.85	0.79
FWC	In the last six months, how often did your home life interfere with your responsibilities at work such as getting to work on time, accomplishing daily tasks, or working overtime?	0.873	0.89	0.62
	In the last six months, how often did your home life keep you from spending the amount of time you would like to spend on your job or career?		0.81	0.77
	In the last six months, how often did your home life interfere with your job or career?		0.76	0.87

Scale Scores

Scores for all scales used in the study were computed by summing the items that constitute the scale. Means, standard deviations and correlations between the scales are presented in Table 5 with reliabilities on the diagonal of the correlation matrix.

Control Variables

Positive and negative affect, time management, affect intensity and affect regulation were included as control variables to demonstrate the incremental predictive validity of the PIRCS. These scales are described in the following paragraphs.

State-Trait Anxiety Inventory

The 20-item State-Trait Anxiety Inventory (STAI; Spielberger, 1983) is a well-established measure of positive (9 Items) and negative affect (11 items; Appendix C). The trait version was used in this study to measure trait-based positive and negative affect." Positive affect items included "I feel pleasant" and "I am content." Negative affect items included "I feel nervous and restless" and "I feel that difficulties are piling up so that I cannot overcome them." The measure utilized a 4-point Lykert-type scale with the following options: 1 = "Almost never," 2 = "Sometimes," 3 = "Often," 4 = "Almost always." Cronbach's Alpha was 0.82 for negative affect and 0.88 for positive affect

Table 5 Means, Standard Deviations, Correlations and Reliabilities of Scales in the Study

	Mean	Standard Deviation	PIRC	Negative Affect	Positive Affect	Time Management	Affect Intensity	Affect Regulation	Stress	WFC	FWC	WSC	SWC	FSC	SFC
PIRC	9.18	3.10	0.82												
Negative Affect	14.38	4.13	0.50	0.82											
Positive Affect	14.44	3.31	-0.35	-0.62	0.88										
Time Management	11.04	3.10	0.57	0.48	-0.36	0.75									
Affect Intensity	7.29	2.67	0.45	0.62	-0.44	0.43	0.82								
Affect Regulation	8.23	2.43	-0.02	-0.06	0.11	-0.01	-0.06	0.81							
Stress	8.80	2.88	0.57	0.72	-0.51	0.49	0.66	-0.03	0.82						
WFC	9.28	3.61	0.40	0.19	-0.14	0.32	0.18	0.03	0.29	0.90					
FWC	6.78	3.14	0.28	0.21	-0.18	0.30	0.19	0.05	0.23	0.47	0.87				
WSC	8.06	3.62	0.28	0.14	-0.15	0.24	0.10	0.01	0.18	0.55	0.33	0.93			
SWC	6.24	3.19	0.27	0.18	-0.18	0.23	0.20	0.00	0.22	0.35	0.46	0.50	0.91		
FSC	8.56	3.42	0.37	0.23	-0.20	0.39	0.19	-0.02	0.31	0.27	0.44	0.31	0.28	0.94	
SFC	9.63	3.51	0.44	0.34	-0.22	0.38	0.27	-0.04	0.42	0.37	0.31	0.25	0.33	0.56	0.93

Note.   Listwise N = 761. Reliabilities are on the diagonal. Significance level for correlations is $r = .10$, $p < .01$; $r = .12$, $p < .001$.

Time Management

Time management was measured with six items (Nelson, 2003). Behavior-based items were selected for brevity and applicability to theory from Nelson's 33-item scale.Examples of time management questions include "I underestimate the time it will take me to finish tasks" and "I feel I am always 'putting out fires' at work and at home." The measure utilized a 4-point Lykert-type scale with the following options: 1 = "Almost never," 2 = "Sometimes," 3 = "Often," 4 = "Almost always" (see Appendix D). Cronbach's Alpha was 0.75.

The Affect Intensity Scale

Affect intensity was measured with the four-item Affect Intensity Scale (Larsen, Diener, & Emmons, 1986). The Affect Intensity Scale (AIS) measures the degree to which a person experiences intense emotions across situations. Examples of items from this scale include "My moods are very intense" and "My friends would describe me as tense or high-strung." The measure utilized a 4-point Lykert-type scale with the following options: 1 = "Almost never," 2 = "Sometimes," 3 = "Often," 4 = "Almost always." See Appendix E for the items measuring affect intensity. Cronbach's Alpha was 0.82.

Affect Regulation

Items assessing affect regulation were adapted from the 59-item Inventory of Cognitive Affect Regulation Strategies developed by Kamholz, Hays, Carver, Gulliver, and Perlman (2006). Examples of affect intensity items include, "When something is

bothering me, I try to forget about it" and "When something is bothering me, I concentrate on something else." The measure utilized a 4-point Lykert-type scale with the following options: 1 = "Almost never," 2 = "Sometimes," 3 = "Often," 4 = "Almost always." The items chosen are presented in Appendix F. Cronbach's Alpha was 0.81.

Stress

Items to measure stress were adapted from the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983). Items measuring stress include "I experience a significant amount of stress" and "I get 'stressed out' over relatively unimportant things." The measure utilized a 4-point Lykert-type scale with the following options: 1 = "Almost never," 2 = "Sometimes," 3 = "Often," 4 = "Almost always." and are presented in Appendix G. Cronbach's Alpha was 0.82.

Propensity for Inter-role Conflict (PIRCS)

Seven items were developed to measure a person's disposition to experience inter-role conflict. Scale items were developed with two constructs in mind. Items relate to inability to maintain separation between one's various roles and purposeful efforts to maintain that separation. Examples of items intended to measure inability to maintain separation between one's roles include "I have a hard time keeping my work time, school time and family time separate" and "Different areas of my life are in conflict." Items to measure purposeful attempts to prevent inter-role conflict include "I try hard to prevent work, school and family from interfering with one another" and "I strive to give

100% to my family, 100% to my school and 100% to my job." The measure utilized a 4-point Lykert-type scale with the following options: 1 = "Almost never," 2 = "Sometimes," 3 = "Often," 4 = "Almost always." The seven items are presented in Appendix H.

Consequences of Inter-role Conflict

Several items were developed to measure the perceived consequences of two types of inter-role conflict. These items were intended to be used independently, not as a scale. As this is a new line of research in inter-role conflict, there was no existing scale to use or extant items to modify. Two sets of items were developed to measure two examples of inter-role conflict across the three roles. The first type of inter-role conflict involves being late arriving to home, work or school as a result of one of the other role locations (e.g., How severe would the consequences be if you were to get home from work 1 hour late because of work?). This type of inter-role conflict would be consistent with working overtime, leaving home late as a result of taking care of family or staying after class to talk with the instructor, study in the library or work with other students.

The second type of inter-role conflict involves taking care of business from one role while at another role location (e.g., How severe would the consequences be if you were to spend time at home taking care of work business?). This type of inter-role conflict is related to the permeability of role boundaries. Parallel items were developed for each type of inter-role conflict between each of the three roles in the study. The measurement scale was "Not at all severe," "A little bit severe," Quite severe" and "Extremely severe." The items are presented in Appendix I.

Procedure

In accordance with Institutional Review Board procedures, participation was voluntary and participants were informed of the conditions of the experiment and that it was research. Respondents were assured they could withdraw from the study at any time and for any reason. They were provided contact information for the researchers and the University Compliance Office Institutional Review Board. Respondents were encouraged to e-mail the researcher for a copy of the final report and several did so. Participants were recruited by electronic mail. The recruitment e-mail message promised participants anonymity, informed them the results would be published in summary format and stated that the decision to complete the survey constituted informed consent. See Appendix A for communications to adult students.

All questions were administered using the university's online survey system. Use of this system provided a number of advantages. First, using the electronic survey system eliminated the need to print thousands of copies of the survey. This resulted in considerable savings from costs of paper, printing, and delivery. Second, the online survey eliminated the need for a researcher to enter survey responses by hand. This reduced overall measurement error and further reduced the cost of the experiment. Third, the online system allowed the survey to be tailored to the respondent. Specifically, the use of conditional branching shortened the length of the survey by eliminating questions that did not pertain to a particular respondent. For example, if a respondent was not currently employed, no further questions about work were asked. Finally, the online survey system prevented respondents from returning to an answer provided earlier in the survey. Therefore, respondents could not change answers

provided early in the survey after seeing later questions. This reduced the ability of respondents to purposely bias the results.

Once the e-mail notification of the survey was sent, students were given 5 days to complete the survey. At the end of the fifth day, a single reminder was sent to students who had neither completed the survey nor "opted out" and they were given an additional five days to complete the survey. After a total of ten days, the survey closed and further attempts to respond were denied by the survey system.

Respondents were provided an incentive to complete the survey in the original message announcing the survey and in the reminder message. Each participant was allowed to enter his or her name in a drawing for one of ten $20 gift certificates from an online retailer. To maintain anonymity, entry of the participant's name and contact data was performed in a separate survey that opened from within the online survey. It was not possible to match the names of drawing entrants with a response set from the main survey. Therefore, anonymity was maintained.

The list of e-mail addresses for adult students was provided by the Office of Adult Student Services. This list was delivered directly to the survey administration personnel who uploaded the addresses to the survey system. At no time did this list come into the possession of the researchers.

Planned Analyses

The first hypothesis states that PIRC is an individual difference variable that mediates the relationship between the various forms of inter-role conflict and will add significant incremental variance in the prediction of inter-role conflict after controlling for

the effects of positive and negative affect, affect intensity, affect regulation and time management. There are three stages to this analysis. First, it is necessary to demonstrate that the PIRCS has good psychometric properties. This involves establishing the factor structure of the scale through exploratory factor analysis on part of the sample and confirming that factor structure on an independent holdout subset of the sample. Having established the factor structure of the PIRCS, it next must be subjected to item and scale analysis. If the PIRCS passes both of these tests, the second step is to test its ability to mediate the relationship between the various forms of inter-role conflict. However, prior to conducting the factor analysis of the items purported to measure inter-role conflict, it is necessary to eliminate mono-method bias as an explanation for the observed covariance between the individual items.

According to Podsakoff, MacKenzie, Lee and Podsakoff (2003), mono-method bias can confound the results of factor analysis by causing otherwise unrelated questions to covary. Mono-method bias can be eliminated as a source of concern by subjecting all items from the various scales to a single factor analysis. If the first factor extracted accounts for less than 50% of the total variance among the items from the various scales included in the study, mono-method bias does not pose a serious threat to the subsequent factor analysis and can be ruled out as the sole explanation for covariation between the items that load on a factor. In other words, the factors that result from exploratory factor analysis are the result of measurement of a common construct rather than an artifact of the measurement scale and experimental method. Factor analysis will be conducted using principle axis factoring rather than principle components analysis (PCA). Principle axis factor is superior to PCA for exploratory

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factor analysis because it uses only common variance among the items (covariance) when estimating the factor structure and because confirmatory factor analysis, the final step in scale development, uses structural equation modeling which is based on the covariance matrix. Thus, for the confirmatory factor analysis to have the greatest probability of success, a researcher should use a factor analytic technique (based on covariance) rather than analyzing all the variance in the items as in PCA.

If the factors extracted in exploratory factor analysis are reliable, they must be confirmed through confirmatory factor analysis. This will be performed using structural equations modeling in AMOS (Arbuckle & Wothke, 1999). Confirmatory factor analysis tests the proposed structural relationships between the several variables and conducts a chi-squared test of model fit. If the chi-squared value is significant for the degrees of freedom tested, the model may still be considered acceptable if the fit indices have acceptable values. If the chi-squared value is not significant, no further justification of the model is required.

The next step in establishing the factor structure of the PIRCS is to estimate its reliability by subjecting the final scale to item and scale analysis. The items that survive the factor analysis will be tested using Cronbach's alpha. A scale is considered reliable if it has an internal consistency (Cronbach's alpha) of .70 or greater and the removal of any item reduces the reliability of the resulting scale.

The second step in establishing the utility of the PIRCS is to show it mediates the relationship between the various forms of inter-role conflict. This can be accomplished using mediated-multiple regression. In step one of the regression, one form of inter-role conflict is regressed on another form of inter-role conflict. In subsequent steps of the

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multiple regression, PIRC scale (i.e., factor) scores are entered one at a time into the regression equation. If PIRC factors mediate the relationship between the two forms of inter-role conflict, the regression coefficient for each PIRC factor will be statistically significant, the regression coefficient of the original predictor form of inter-role conflict will be diminished, and the percentage of variance explained in the outcome form of inter-role conflict will increase significantly. Since there are six forms of inter-role conflict (WFC, FWC, WSC, SWC, SFC, FSC), a total of fifteen tests of mediation must be conducted. Due to the increased likelihood of committing a Type I error when conducting multiple statistical tests on a single set of variables, the threshold for statistical significance must be adjusted by dividing the p-value by the number of tests conducted.

It is also possible that PIRC moderates the relationship between the various forms of inter-role conflict. To test for moderation, a series of moderated-multiple regression analyses will be conducted. The technique to test moderation is more involved than for mediation. In moderation, it is necessary to show that the predictor is related to the criterion variable, the moderator is related to both the predictor and criterion and the interaction between the predictor and moderator adds a significant amount of variance to the overall multiple regression. The interaction term is calculated by centering both variables and multiplying one by the other (Aiken & West, 1991). Both mediation and moderation should be tested since a variable can act as both a mediator and a moderator between the same two variables (Muller, Judd, & Yzerbyt, 2005). As in the case of the mediation analyses above, there are fifteen tests of moderation to be conducted.

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The final step in establishing the utility of the PIRCS is to determine whether it adds significant additional variance explained in the various forms of inter-role conflict after controlling for the effects of known correlates of inter-role conflict. To test this hypothesis, a multiple regression analysis will be conducted for each of the six forms of inter-role conflict included in the study. In step one of each analysis, positive and negative affect, affect intensity, affect regulation and time management will be entered as predictors of each of the six forms of inter-role conflict (these variables are treated as covariates and their effects on the criterion variable are controlled). In step two of each of the six analyses, PIRC factor scores will be entered into the regression. If the addition of PIRC factors adds significant variance in the prediction of inter-role conflict, the PIRCS will have demonstrated its utility as a new instrument in the study of inter-role conflict.

The second hypothesis states that the higher the perceived consequences of a particular form of inter-role conflict, the lower the incidence of that form of inter-role conflict. To test this hypothesis, each item measuring consequences of inter-role conflict will be correlated with the associated form of inter-role conflict. If the perceived consequences of inter-role conflict (e.g., WFC) are high, the incidence of that form of conflict (i.e., WFC) should be low. Thus, a negative correlation between consequences and frequency of inter-role conflict is expected.

The third hypothesis states that there is an inverse relationship between age and inter-role conflict (3a) and a direct relationship between the number of children in the home and inter-role conflict (3c). These two hypotheses will be tested by regression.

Hypothesis 3b states that men and women will experience different levels of inter-role conflict. This hypothesis will tested with ANOVA followed by post-hoc analysis.

Hypotheses 4a through 4e deal with the effects of one's work conditions on the experience of inter-role conflict. Number of hours worked per week (4a) and perceived flexibility at work (4c) will be tested using correlation. Direct relationships between the number of hours worked per week and WFC, FWC, WSC and SWC are expected. Inverse relationships between flexibility at work and WFC, FWC, WSC and SWC are expected. Weekend work (4b), shift work (4d) and work definition (4e) are categorical variables and will be tested with ANOVA followed by post-hoc analysis. People working a variable schedule will experience higher levels of WFC, FWC, WSC and SWC than those working a regular schedule. People who work on the weekend will experience more WFC, FWC, WSC and SWC than those who do not work on the weekend. People who define their job as "just a job" will experience more WFC, FWC, WSC and SWC than those who plan to retire from their current job.

Hypotheses 5a through 5c consider the effects of school as a life role on both work and family. Hypothesis 5a (number of semester hours taken) and 5b (number of hours per week spent studying) will be tested with correlation. Direct relationships are expected between the number of hours spent studying and SWC, WSC, SFC and FSC for both hypotheses. Hypothesis 5c predicts that class standing is directly related to inter-role conflict. Since class standing is an ordinal variable, these two hypotheses will be tested using ANOVA with post-hoc analysis. Higher class standing is expected to result in greater SWC, WSC, SFC and DSC.

Finally, hypotheses 6a through 6c predict that a person's significant other's work schedule spills over and causes inter-role conflict for the person. WFC, FWC, SFC and FSC will be regressed on the number of hours worked per week (6a). In each case, a positive regression coefficient is expected. Shift work (6b) and weekend work (6c) are categorical variables and must be tested using ANOVA with post hoc analysis. It is expected that having a significant other who works a variable shift or weekends will be associated with higher levels of WFC, FWC, SFC and FSC than having a significant other who works a regular day shift and does not work weekends.

CHAPTER 3 - Results

Descriptive Statistics

Descriptive statistics were calculated for the variables in the study (Table 6). The typical participant was a married female, aged 33.9 years, with no children living at home, working between 20 and 30 hours per week on an irregular schedule including the occasional weekend, was a graduate student taking between 11 and 15 semester hours of credit and spent an average of 15.5 hours per week on school-related activities outside of class.

Table 6 Descriptive Statistics for Variables Included in the Study

Variable	Mean	Standard Deviation
Age in Years	33.94	9.25
Hours Spent on School Activities	15.50	13.30
PIRC	9.18	3.10
Negative Affect	14.38	4.13
Positive Affect	14.44	3.31
Time Management	11.04	3.10
Affect Intensity	7.29	2.67
Affect Regulation	8.23	2.43
Stress	8.80	2.88
WFC	9.28	3.61
FWC	6.78	3.14
WSC	8.06	3.62
SWC	6.24	3.19
FSC	8.56	3.42
SFC	9.63	3.51

Utility of the PIRCS

The first hypothesis states that the PIRCS measures a disposition that mediates the relationship between the various forms of inter-role conflict (1a) and adds significant incremental variance in the prediction of inter-role conflict after controlling for positive and negative affect, affect intensity, affect regulation and time management (1b). Podsakoff, MacKenzie, Lee and Podsakoff (2003) caution that, when developing a new scale, it is necessary to determine the observed covariation between the items in the scale occurred because the items measure a common construct rather than as a result of mono-method bias (e.g., method and measurement scale) . The authors suggest that the presence of method bias can be determined by subjecting all items from the various self-report scales to a single exploratory factor analysis. If the first factor extracted accounts for less than 50% of the total variance in the data set, mono-method bias is not a major source of concern and factor analysis of the new scale may commence. Prior to exploring the factor structure of the PIRCS, items from all the scales used in the study were subjected to exploratory factor analysis. The first factor extracted accounted for 27.4% of total variance. Therefore, any covariation between the items from the PIRCS cannot be attributed to method bias alone.

Prior to factor analysis of the PIRCS, responses were separated into two groups. The development group (60% of the responses chosen at random) was used for the exploratory factor analysis. The remaining cases, the holdout group, were subjected to confirmatory factor analysis. In order to determine the factor structure of the PIRCS, responses on the seven items from the scale were subjected to factor analysis using SPSS. Principle axis factoring yielded two factors with eigenvalues

greater than unity (Table 7). The first factor accounted for 41.80% of the variance and

the second factor 20.31% of the variance in the seven items. The scree plot also

indicated that two factors should be considered.

Table 7 Factor Analysis of PIRCS Items

Factor	Eigenvalue	% Variance Explained	Cumulative % Variance Explained
1	2.93	41.80	41.80
2	1.42	20.31	62.11
3	0.83	11.89	74.01
4	0.58	8.33	82.34
5	0.53	7.61	89.95
6	0.44	6.30	96.25
7	0.26	3.75	100.00

An examination of the communalities indicated one item (I strive to give 100% to

my family, 100% to my school and 100% to my job) was essentially unrelated to the

rest. Its communality in extraction was 0.11 indicating it shares only 11% of its variance

with the two factors in the scale. This item was dropped. Factor loading scores (Table 8)

indicated that one item (I tend to leave "work stuff" at work, "home stuff" at home and

"school stuff" at school) cross loaded on both factors even after factor rotation.

Tabachnik and Fidell (2001) define cross loading as an item with a loading of .32 or

greater (10% of item variance in common with the factor) on two or more factors. Cross

loading poses a problem for defining factors since a single item is shared by two or

more factors and causes otherwise independent factors to covary.

In the present case, the factor loadings for this item were both greater than 0.40

and opposite in direction. Cross loading continued to be a problem after orthogonal

rotation of the two factors. Gordon, Philpot, Burt, Thompson, and Spiller (1980) stated

Table 8 Communalities of PIRCS Items

Item	Communalities	
	Initial	Extraction
I have a hard time keeping my work time, school time and family time separate	0.624	0.796
My work, school and family life frequently overlap each other	0.528	0.591
Different areas of my life are in conflict	0.343	0.409
I am not very good at keeping the different parts of my life separate from one another	0.391	0.424
I tend to leave 'work stuff' at work, 'school stuff' at school and 'home stuff' at home	0.353	0.430
I try hard to prevent work, school and family from interfering with each other	0.247	0.704
I strive to give 100% to my family, 100% to my school and 100% to my job	0.086	0.108

items that cross-load on two or more factors such that the difference in the factor loadings is less than 0.05 should be dropped since such items cannot be empirically assigned to a particular factor. The difference in factor loadings for the cross-loaded item was 0.001. Thus, this item was eliminated. The item "I try hard to prevent work, school and family from interfering with each other" failed to load significantly on the first factor and no other items loaded on the second factor so this item was dropped. The final scale consisted of one four-item factor. Communalities and factor loadings are presented in Table 9. This factor can be interpreted as inability to maintain separation between life roles.

Confirmatory factor analysis of the four-item scale was conducted using AMOS. Factor loadings for the four items were constrained at the levels indicated by exploratory factor analysis. In the initial model, independence of the error terms for the four items

Table 9 Factor Loadings for PIRCS Items

Item	Communalities		Factor Loading
	Initial	Extraction	
I have a hard time keeping my work time, school time and family time separate	0.608	0.803	0.896
My work, school and family life frequently overlap each other	0.516	0.574	0.758
Different areas of my life are in conflict	0.330	0.395	0.629
I am not very good at keeping the different parts of my life separate from one another	0.385	0.423	0.651

was assumed. This model did not fit the data well, χ^2 (5) = 19.285, p =.002. For this test, statistical significance indicates poor model fit. An examination of the modification indices suggested correlation between the error terms for items 1 and 3 and items 2 and 4. The respecified model fit the data well, χ^2 (3) = 3.661, p = 0.300. If the chi-squared test is non-significant, it is not necessary to examine the fit indices to provide justification for the model.

Reliability of the PIRCS

The reliability of the four-item PIRCS was analyzed using Cronbach's Alpha. Cronbach's Alpha for the four-item scale was 0.82. Deletion of any scale item reduced α. Therefore, no items need be deleted to achieve an internally reliable scale (Table 10). Tukey's test of nonadditivity was not significant, F (1, 816) = 3.22, p = 0.07. Therefore, when computing the score for the PIRCS, it is not necessary to consider the case-by-item interactions. Rather, scores may simply be computed by adding together the individual values.

Table 10 Reliability of the PIRCS

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I am not very good at keeping the different parts of my life separate from one another	0.589	0.801
I have a hard time keeping my work time, school time and family time separate	0.758	0.720
My work, school and family life frequently overlap each other	0.666	0.766
Different areas of my life are in conflict	0.574	0.808

Note. Cronbach's Alpha for 4-item scale is 0.822.

Criterion-related Validity of the PIRCS

The next step to establish the disposition propensity for inter-role conflict involves demonstrating that the relationships between the various forms of inter-role conflict are mediated by the disposition. Mediation is a third variable effect in which the relationship between a predictor and its related criterion results from their shared relationship with an intervening variable. If this intervening variable is controlled, the relationship between the predictor and criterion is diminished.

There are a number of advantages and disadvantages to Baron and Kenny's (1986) method of mediator-multiple regression (Preacher & Hayes, 2004; Frazier, Ticks & Barron, 2004). The major advantage is that the analysis is simple to conduct and provides results that are easy to interpret. There are, however, a number of disadvantages. First, Frazier et al state the technique lacks statistical power when the effect size or sample is small. This does not pose a serious threat to the current study because the sample size, more than 800 participants, is more than adequate to detect even a small effect size. Other limitations are more troubling.

Mediator analysis assumes causation. The predictor causes the mediator which affects the outcome. With mediator-multiple regression, it is not possible to determine the direction of the effect. From an analytic point of view, it is equally plausible that the outcome is the cause and the predictor the effect with the mediator acting as an intermediary. Adherence to theory can alleviate concerns over the direction of causation to a large extent, but not completely. Without an experimental manipulation, it is not possible to definitively determine causality. In the current study, "cause" and "effect" are assumed to switch places depending on the direction of the analysis (e.g., WFC acts through PIRC to cause FWC and FWC works through PIRC to cause WFC). PIRC provides a mechanism for the feedback loop in Frone's model.

Another shortcoming of mediator analysis is that it does not guarantee all mediating variables have been identified. Given the complex nature of human behavior, it is unlikely a single variable mediates the relationship between a predictor and its associated outcome. The identification of a mediator is a first step in the process, not an end to the process. Measurement error also poses problems for mediator analysis. An imperfectly measured mediator underestimates the degree of mediation and overestimates the direct effect of the predictor on its criterion. Despite the shortcomings of mediator analysis, it does serve to elucidate, to some extent, the complexity of human behavior by "filling in the spaces" in the causal chain between predictor and outcome.

In order to test hypothesis 1b, a series of mediator multiple regression analyses were conducted. For each analysis, one form of inter-role conflict was regressed on another in step one of multiple regression. In step two, the PIRC score was entered into

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the regression. If the variance explained by the combined set of predictors exceeds that of the single predictor, and the regression coefficient associated with the first predictor drops in magnitude, PIRC partially or fully mediates the relationship between the two forms of inter-role conflict. If the regression coefficient associated with the first predictor drops below statistical significance ($p > 0.05$), the mediator fully explains the relationship between the first predictor in the model and the criterion of interest. With six forms of inter-role conflict, there are a total of 15 pairs of inter-role conflict mediations to test. However, given the large number of tests to be run, a Bonferroni adjustment must be made to α to compensate for the increased chance of committing a Type I error (i.e., 54% probability of at least one Type I error). For the following analyses, the correct adjustment results in a level of significance of $p < 0.003$ for an overall α of 0.05. The results of all 15 mediator-multiple regression analyses are reported in Table 11.

WFC was regressed on FWC. In step two of the analysis, PIRC score was entered into the equation. The addition of the PIRC score increased the percentage of variance explained in WFC by 1.1%, $p = 0.001$, and the regression coefficient for FWC dropped from 0.476 to 0.431. Thus, PIRC partially mediated the relationship between FWC and WFC.

The relationship between FSC and FWC was partially mediated by PIRC. PIRC accounted for an additional 1.6% of the variance in FWC after FSC while the regression coefficient for FSC dropped from 0.450 to 0.399. PIRC partially mediated the relationship between SFC and FWC accounting for an additional 2.7% of the variance in FWC. The regression coefficient for SFC dropped from 0.321 to 0.241 with the addition of PIRC. PIRC partially mediated the relationship between WSC and FWC. PIRC

Table 11 PIRC as a Mediator of the Relationship between Six Forms of Inter-role Conflict

	Predictors	β	P	ΔR^2	P
		Family Work Conflict			
Step 1	WFC	0.476	0.000	0.226	0.000
Step 2	WFC	0.431	0.000	0.011	0.001
	PIRC	0.112	0.001		
Step 1	FSC	0.450	0.000	0.202	0.000
Step 2	FSC	0.399	0.000	0.016	0.000
	PIRC	0.138	0.000		
Step 1	SFC	0.321	0.000	0.103	0.000
Step 2	SFC	0.241	0.000	0.027	0.000
	PIRC	0.182	0.000		
Step 1	WSC	0.334	0.000	0.111	0.000
Step 2	WSC	0.274	0.000	0.037	0.000
	PIRC	0.203	0.000		
Step 1	SWC	0.471	0.000	0.221	0.000
Step 2	SWC	0.424	0.000	0.025	0.000
	PIRC	0.166	0.000		
		Family School Conflict			
	Predictors	β	P	ΔR^2	P
Step 1	WFC	0.270	0.000	0.073	0.000
Step 2	WFC	0.147	0.000	0.083	0.000
	PIRC	0.314	0.000		
Step 1	SFC	0.558	0.000	0.312	0.000
Step 2	SFC	0.491	0.000	0.019	0.000
	PIRC	0.153	0.000		
Step 1	WSC	0.320	0.000	0.102	0.000
Step 2	WSC	0.231	0.000	0.083	0.000
	PIRC	0.301	0.000		
Step 1	SWC	0.287	0.000	0.082	0.000
Step 2	SWC	0.199	0.000	0.090	0.000
	PIRC	0.313	0.000		

Table 11 (Continued)

PIRC as a Mediator of the Relationship between Forms of Inter-role Conflict

	School Work Conflict				
	Predictors	β	P	ΔR^2	P
Step 1	WFC	0.354	0.000	0.126	0.000
Step 2	WFC	0.289	0.000	0.022	0.000
	PIRC	0.161	0.000		
Step 1	WSC	0.509	0.000	0.259	0.000
Step 2	WSC	0.467	0.000	0.018	0.000
	PIRC	0.141	0.000		
Step 1	SFC	0.339	0.000	0.115	0.000
Step 2	SFC	0.266	0.000	0.022	0.000
	PIRC	0.165	0.000		
	School Family Conflict				
	Predictors	β	P	ΔR^2	P
Step 1	WFC	0.376	0.000	0.141	0.000
Step 2	WFC	0.239	0.000	0.101	0.000
	PIRC	0.346	0.000		
Step 1	WSC	0.260	0.000	0.068	0.000
Step 2	WSC	0.141	0.000	0.148	0.000
	PIRC	0.402	0.000		
	Work School Conflict				
	Predictors	β	P	ΔR^2	P
Step 1	WFC	0.551	0.000	0.303	0.000
Step 2	WFC	0.516	0.000	0.006	0.008
	PIRC	0.085	0.008		

accounted for an additional 3.7% of variance in FWC and the regression coefficient for WSC dropped from 0.334 to 0.274. The relationship between SWC and FWC was partially mediated by PIRC. PIRC accounted for 2.5% of the variance in FWC after SWC and reduced the regression coefficient for SWC from 0.471 to 0.424.

PIRC partially mediated the relationships between all forms of inter-role conflict and FSC. For each analysis, FSC was regressed on the appropriate form of inter-role conflict in step 1 of the analysis. In step two, PIRC entered the regression equation. For WFC, PIRC accounted for an additional 8.3% of the variance in FSC. The regression coefficient for WFC dropped from 0.270 to 0.147. After SFC, PIRC accounted for an additional 1.9% of the variance in FSC while the regression coefficient for SFC dropped from 0.558 to 0.491. PIRC accounted for an additional 8.3% of the variance in FSC after WSC reducing the regression coefficient for WSC from 0.320 to 0.231. Finally, PIRC explained an additional 9.0% of the variance in FSC after SWC. The regression coefficient for SWC dropped from 0.287 to 0.199.

PIRC also mediated the relationships between forms of inter-role conflict and SWC. PIRC explained an additional 2.2% of the variance in SWC after WFC. The regression coefficient for WFC dropped from 0.354 to 0.289. PIRC explained 1.8% incremental variance in the relationship between WSC and SWC with the regression coefficient for WSC dropping from 0.509 to 0.467. The relationship between SFC and SWC was partially mediated by PIRC which accounted for an additional 2.2% of the variance in SWC. The regression coefficient for SFC dropped from 0.339 to 0.226.

The relationship between WFC and SFC was partially mediated by PIRC which accounted for an additional 10.1% of the variance in SFC. The regression coefficient for WFC dropped from 0.376 to 0.239 with the addition of PIRC. PIRC also partially mediated the relationship between WSC and SFC. PIRC accounted for an additional 14.8% of the variance in SFC and reduced the regression coefficient for WSC from 0.260 to 0.141.

PIRC failed to account for a statistically significant amount of additional variance explained in WSC after WFC (p = 0.008). Therefore, PIRC partially mediated 14 of the 15 relationships between the various forms of inter-role conflict measured in the present study accounting for between 1.1% and 14.8% of the variance in inter-role conflict.

A second type of third-variable effect is referred to as moderation. In moderation, the relationship between a predictor and its associated criterion depends on the level of the moderating variable. Both moderation and mediation can occur in the same relationship between a predictor and its criterion. For example, the mediator may work more effectively for men than for women or for white collar than blue collar workers (Muller, Judd & Yzerbyt, 2005). In order to establish moderation, the predictor and the supposed moderator are entered into multiple regression in steps 1 and 2 of the analysis. In step 3, the interaction between the predictor and moderator is entered. If the interaction between the predictor and moderator adds significant variance to the overall regression, moderation exists.

For the present data, all fifteen inter-role conflict relationships examined above in mediator-multiple regression were again tested but from the viewpoint of moderation. As with mediation, the threshold for statistical significance was adjusted to account for the increased risk of committing a type 1 error when multiple tests are conducted. None of the fifteen interactions were statistically significant (i.e., p > 0.003 in all 15 cases) and the incremental variance explained was marginal in each case ranging from 0.4% to 0.7%. A case for moderation by the PIRC is clearly missing. Nevertheless, hypothesis 1a received strong support.

Incremental Variance of PIRC after Known Predictors of IRC

Hypothesis 1b deals with the incremental validity of the PIRCS. Theory and previous research have identified a number of variables that are or should be associated with inter-role conflict. The question of incremental validity deals with the extent to which a new scale improves the prediction of a criterion of interest beyond what can be accomplished using extant scales. In order to test for incremental validity, each of the other variables presumed to predict inter-role conflict is entered into the multiple regression equation either simultaneously or one at a time. In the final step, PIRC is entered. If PIRC explains a significant amount of additional variance in the criterion, it will have demonstrated incremental validity. In order to maintain an overall α of 0.05, the threshold for statistical significance must be reduced to 0.0083.

For each form of inter-role conflict, negative affect, positive affect, time management, affect intensity and affect regulation were entered into the regression equation in subsequent steps. PIRC was entered at step six. PIRC explained an additional 6.8% of the variance in WFC, $p = 0.000$ (Table 12). PIRC explained an additional 1.1% of the variance in FWC, $p = 0.001$. For WSC, PIRC added 3.5% of variance explained, $p = 0.000$. PIRC added 2.0% variance explained in SWC, $p = 0.000$. PIRC improved prediction of FSC by 2.8%, $p = 0.000$. Finally, PIRC increased variance explained in SFC by 5.1%, $p = 0.000$. There is strong support for hypothesis 1b.

Table 12 Incremental Validity of the PIRCS

Criterion	Predictor	ΔR^2	F Change	Degrees of Freedom	Significance (F Change)
WFC	Negative Affect	0.038	31.00	1, 788	0.000
	Positive Affect	0.001	0.79	1, 787	0.373
	Time Management	0.063	54.76	1, 786	0.000
	Affect Intensity	0.000	0.37	1, 785	0.545
	Affect Regulation	0.001	0.68	1, 784	0.409
	PIRC	0.068	63.98	1, 783	0.000
FWC	Negative Affect	0.044	36.08	1, 787	0.000
	Positive Affect	0.004	3.04	1, 786	0.082
	Time Management	0.052	45.33	1, 785	0.000
	Affect Intensity	0.001	0.71	1, 784	0.399
	Affect Regulation	0.003	2.73	1, 783	0.099
	PIRC	0.011	10.16	1, 782	0.001
WSC	Negative Affect	0.021	16.37	1, 776	0.000
	Positive Affect	0.006	5.07	1, 775	0.025
	Time Management	0.034	28.39	1, 774	0.000
	Affect Intensity	0.001	0.42	1, 773	0.519
	Affect Regulation	0.000	0.16	1, 772	0.693
	PIRC	0.035	29.59	1, 771	0.000
SWC	Negative Affect	0.033	26.59	1, 777	0.000
	Positive Affect	0.007	5.27	1, 776	0.022
	Time Management	0.023	19.08	1, 775	0.000
	Affect Intensity	0.008	6.92	1, 774	0.009
	Affect Regulation	0.000	0.28	1, 773	0.598
	PIRC	0.020	16.58	1, 772	0.000
FSC	Negative Affect	0.055	44.89	1, 774	0.000
	Positive Affect	0.005	4.04	1, 773	0.045
	Time Management	0.094	86.21	1, 772	0.000
	Affect Intensity	0.000	0.06	1, 771	0.804
	Affect Regulation	0.000	0.06	1, 770	0.809
	PIRC	0.028	26.29	1, 769	0.000
SFC	Negative Affect	0.115	100.63	1, 773	0.000
	Positive Affect	0.000	0.09	1, 772	0.768
	Time Management	0.060	56.38	1, 771	0.000
	Affect Intensity	0.000	0.44	1, 770	0.507
	Affect Regulation	0.001	0.50	1, 769	0.481
	PIRC	0.051	50.72	1, 768	0.000

Consequences of Inter-role Conflict

Hypothesis 2 stated the higher the perceived consequences of a particular form of inter-role conflict, the lower the frequency of that form of IRC. Contrary to expectations, the severity of inter-role conflict is *positively* correlated with inter-role conflict in every case save one (i.e., Spend time at work taking care of family business). Note that, again, the P-value denoting statistical significance had to be adjusted (i.e., *p* < 0.0042) to maintain an overall Type I error rate of 0.05.

To explore the unexpected finding of positive correlations between the consequences of inter-role conflict and the prevalence of the relevant form of inter-role conflict (e.g., getting home late from work and WFC), the means for all six forms of conflict for the six items relating to being "late" and the six items related to an "invasion" of one role by another were calculated. Next, the correlation between the six forms of inter-role conflict and the corresponding six "invasion" consequences items was calculated. Since each analysis consisted of the overall mean consequence rating for that type of inter-role conflict (i.e., invasion) and the corresponding form of inter-role conflict, the sample size for the analysis is six in each case.

As predicted, the more severe the perceived consequences of role invasion by another role, the less often such conflict occurred, $r = -0.836$, $p = 0.038$ (Table 13). The correlation between the six "late" consequences items and the corresponding forms of inter-role conflict did not reach classical significance, $r = -0.703$, $p = 0.12$. The consequences of being late were perceived as more severe than of bringing work from another role in four of the six cases. This result is worthy of further consideration. Hypothesis 2 received partial support.

Table 13 Means for 6 Forms of Inter-role Conflict and Difference between Consequences of Being Late and of Role Invasion

Category	IRC	Late	Invasion	t	df	p
SFC	9.63	1.45	1.39	2.245	788	0.025
WFC	9.28	1.45	1.43	0.907	788	0.365
FSC	8.56	1.94	1.70	7.942	786	0.000
WSC	8.06	1.93	1.67	8.336	784	0.000
FWC	6.78	1.87	1.72	4.708	790	0.000
SWC	6.24	1.88	1.73	4.720	787	0.000

Note: The threshold for statistical significance for the difference between means is $p = 0.0083$

Although not originally hypothesized, an examination of the means for the six forms of inter-role conflict showed that family was most susceptible to inter-role conflict and work was least susceptible to inter-role conflict. To test whether these differences were statistically significant, a series of paired samples ANOVAs were run comparing the various forms of inter-role conflict in descending order. The threshold for statistical significance for these tests must be reduced to 0.01 to maintain an overall α of 0.05. Although the difference between SFC and WFC was not statistically significant, all the other differences were significant indicating that family was the most susceptible to inter-role conflict followed by school and that work was the least susceptible to conflict between roles (Table 14).

Table 14 Comparison of Means for Six Forms of Inter-role Conflict

Means Compared	Difference	t	df	p
SFC - WFC	0.347	2.467	803	0.014 (ns)
WFC - FSC	0.723	4.819	804	0.000
FSC - WSC	0.459	3.149	798	0.002
WSC - FWC	1.278	9.287	807	0.000
FWC - SWC	0.548	4.796	808	0.000

Personal Characteristics and Inter-role Conflict

Hypotheses 3a through 3c state that characteristics of the individual and family size affect the prevalence of inter-role conflict. Participants were asked for their age, sex and the number of children living with them in their present home. In order to test the relationships between inter-role conflict and age, WFC, FWC, FSC and SFC were regressed on age (hypothesis 3a). In each case, the threshold for statistical significance is set at 0.0125. The relationship between age and FWC, $\beta = -0.082$, $p = 0.010$ and between age and SFC, $\beta = -0.109$, $p = .001$, both one-tailed, were statistically significant in the predicted direction. The relationship between age and FSC, $\beta = -0.078$, $p = 0.013$, approached statistical significance. However, the effect accounted for 0.6% of the variance in FSC. The regression coefficient for WFC, $\beta = 0.011$, $p = 0.382$, was not statistically significant or in the predicted direction.

It is possible the negative correlations between age and both SFC and FSC result from older students taking fewer courses rather than learning to better manage their time. The relationships between age and SFC and age and FSC were further

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examined using mediated multiple regression. SFC was regressed on age in step 1. In step 2, number of semester hours taken entered the regression. Step 2 accounted for an additional 3.2% of the variance in SFC and the regression coefficient for age dropped below statistical significance, β = -0.047, p = 0.193. However, the interaction between age and semester hours taken did not add a significant amount of variance to the regression, F (1, 801) = 0.254, p = 0.614. The same was found for FSC. When number of semester hours taken entered the regression at step two, the regression coefficient for age dropped below statistical significance, β = -0.049, p = 0.179. Inclusion of the interaction term did not improve prediction, F (1, 802) = 0.000, p = 0.985. The apparent relationships between age and FSC and SFC are the result of older students taking fewer classes. There was minimal support for hypothesis 3a.

Hypothesis 3b predicted that men and women would report different levels of inter-role conflict. To maintain an overall α of 0.05, the adjusted threshold for statistical significance was reduced to 0.0083. Women reported more FSC, t (804) = 3.895, p = 0.000, and SFC, t (803) = 4.274, p = 0.000, than men (Table 15). There were no other differences in inter-role conflict between men and women. Hypothesis 3b received partial support.

Hypothesis 3c stated that the number of children in the home would be positively correlated with WFC, FWC, SFC, and FSC. A programming glitch prevented a large portion of respondents from being asked the number of children living in their home. Only participants whose significant other was working a regular 8 to 5 shift were asked to report the number of children. Nevertheless, the relationship between number of children living in the participant's home and all four forms of inter-role conflict was

statistically significant after adjusting for multiple significance tests (i.e., $p = 0.0125$).

Number of children living at home correlated with FWC (0.268, $p = 0.000$), WFC (0.168, $p = .009$), FSC (0.412, $p = 0.000$), and SFC (0.216, $p = 0.001$), all one-tailed tests. The presence of children in the home created more opportunity for family to interfere with work and school than for work and school to interfere with family.

Table 15 Differences in Inter-role Conflict between Men and Women

| Conflict | Men | | Women | | Difference | t | df | p |
	Mean	SD	Mean	SD				
WFC	9.117	3.433	9.359	3.694	0.242	0.935	820	0.350
FWC	6.847	3.197	6.750	3.109	0.097	0.416	819	0.677
WSC	8.170	3.506	7.998	3.676	0.172	0.649	807	0.516
SWC	6.158	3.013	6.280	3.285	0.122	0.529	808	0.597
FSC	7.913	3.264	8.893	3.447	0.980	3.963	804	0.000
SFC	8.905	3.583	10.008	3.409	1.102	4.207	803	0.000

Note: Equal variances not assumed.

The finding that children in the home are associated with higher levels of WFC, FWC, SFC and FSC was explored by calculating separate correlations for men and women. Women were more adversely affected by the presence of children in the home than men (Table 16). For men, only the correlation between number of children and

Table 16 Relationship between Number of Children Living in the Home and Inter-role Conflict for Men and Women

Conflict	Overall[1]	Men[2]	Women[3]
FWC	0.268	0.204	0.421
WFC	0.168	0.122	0.283
FSC	0.412	0.402	0.548
SFC	0.216	0.224	0.317

Note: For $P = 0.0125$; 1 n = 194, $r = 0.161$; 2 n = 87, $r = 0.241$; 3 n = 107 $r = 0.218$

FSC was significant, $r = 0.402$, $p = 0.000$. For women, number of children was correlated with FWC (0.421, $p = 0.000$), WFC (0.283, $p = 0.002$), FSC (0.548, $p = 0.000$), and SFC (0.317, $p = 0.001$), all one-tailed tests. In every case, the correlation between number of children at home and inter-role conflict was stronger for women than for men. Hypothesis 3c was supported.

Work Conditions and Inter-role Conflict

Hypotheses 4a – 4e examine the relationship between a person's work conditions and inter-role conflict. Questions assessed the number of hours the person works per week, the shift the employee works, whether the employee works on the weekends, the degree of flexibility the person perceives from the job and how the person defines the job.

Hypothesis 4a stated that a direct relationship exists between the number of hours worked per week and WFC, FWC, WSC and SWC. With four correlations being computed, the individual P-value for statistical significance should be adjusted down to

0.0125 to maintain an overall α level of 0.05. The correlation between the number of hours worked per week and WFC was statistically significant, $r = 0.236$, $p = 0.000$. Similarly, working more hours resulted in higher levels of WSC, $r = 0.414$, $p = 0.000$, and SWC, $r = 0.169$, $p = 0.000$. However, the correlation between the number of hours worked and FWC was not statistically significant, $r = 0.032$, $p = 0.180$, one-tailed. Hypothesis 4a received partial support.

The more often employees work on the weekend (hypothesis 4b), the more WFC, $r = 0.298$, $p = 0.000$, and WSC they reported, $r = 0.195$, $p = 0.000$. Again, the threshold for statistical significance was adjusted to 0.0125 to prevent the risk of making a Type I error from exceeding 5%. Working weekends was not significantly correlated with FWC, $r = 0.029$, $p = 0.226$, one-tailed. The relationship between the frequency of working weekends and SWC was statistically significant but not of much practical importance, $r = 0.090$, $p = 0.009$, one-tailed. In order to further explore this relationship, and to rule out the possibility that working weekends simply meant working more hours, the partial correlation between working on the weekend and SWC was tested controlling for total number of hours worked per week. The partial correlation was statistically significant indicating that the relationship between weekend work and SWC was not simply the result of working more hours, $r_p = 0.089$, $p = 0.011$, one-tailed. Hypothesis 4b received partial support.

Employees who perceived greater flexibility at work (hypothesis 4c) reported less WFC than those with less flexibility, $r = -0.153$, $p = 0.000$. Flexibility at work was also related to lower levels of WSC, $r = -0.160$, $p = 0.000$. However, flexibility at work did not

indicate less FWC, $r = 0.041$, $p = 0.140$, or SWC, $r = -0.015$, $p = 0.174$, one-tailed. Hypothesis 4c received partial support.

A series of ANOVAs were run in order to examine the relationship between work schedule and inter-role conflict (hypothesis 4d). After correcting for the increased probability of committing a Type I error, the threshold for statistical significance was set at 0.0125. The ANOVAs for WFC ($p = 0.059$), FWC ($p = 0.052$) and WSC ($p = 0.287$) failed to reach statistical significance. The ANOVA for work schedule and SWC was statistically significant, $F(3, 670) = 3.401$, $p = 0.009$. Tukey's HSD indicated participants who work *only* on the weekend experienced less SWC than those working irregular hours. Hypothesis 4d received only modest support.

The relationship between a person's definition of their job and inter-role conflict (hypothesis 4e) was analyzed in a series of ANOVAs. With four tests being conducted, the threshold for statistical significance was adjusted down to 0.0125. The differences in the means for the different work definitions were not statistically significant. Hypothesis 4e received no support.

School and Inter-role Conflict

Hypotheses 5a through 5c consider the effects of aspects of the participant's school work and schedule on inter-role conflict. The more hours of coursework participants were taking (hypothesis 5a), the more conflict they reported between family and school (FSC), $r = 0.114$, $p = 0.001$. Similarly, taking a heavy load of classes was associated with higher SFC, $r = 0.232$, $p = 0.000$. However, the more courses participants were taking, the less WSC they reported, $r = -0.115$, $p = 0.001$. Although

statistically significant, this was contrary to the predicted direction of the relationship. The number of credit hours taken and SWC was not significant, $r = 0.043$, $p = 0.056$. Hypothesis 5a received partial support.

Participants were asked how many hours they spend "reading for school, doing homework or class assignments, or studying for exams" (hypothesis 5b). The correlations between number of hours spent on school-related activities and FSC and SWC were not statistically significant. Participants who reported spending more hours working on school-related business experienced more SFC, $r = 0.212$, $p = 0.000$. Hypothesis 5b received partial support.

As with the finding that the number of classes taken is negatively correlated with WSC, more time spent studying was associated with less WSC, $r = -0.132$, $p = .000$. Perhaps students who can afford to take a heavy load of classes and spend large amounts of time studying simply do not need to work as many hours as those who take fewer courses. This could be because they have a spouse that supplements the family income or because the student receives a scholarship or graduate assistantship. Whichever is the case, work schedule may moderate the relationship between number of semester hours taken and WSC and time spent studying and WSC.

To test this hypothesis, WSC was regressed on number of semester hours taken in step 1 of moderator-multiple regression. In step 2, number of hours worked per week was entered into the equation. At step 3, the interaction between hours taken and hours worked was entered into the equation (Table 17). Number of semester hours taken accounted for 1.2% of the variance in WSC, $F(1, 807) = 10.748$, $p = 0.001$. The addition of number of hours worked per week added 16.9% of additional variance to the

regression equation, $F(2, 806) = 90.035$, $p = 0.000$. The interaction added 3.1% to variance explained, $F(3, 805) = 73.493$, $p = 0.000$. Further, the sign on the regression coefficient for number of semester hours taken reversed when number of hours worked entered the equation. Finally, the coefficient for the interaction term between number of semester hours taken and number of hours worked was positive and statistically significant. This indicates that taking more semester hours and working more hours have a multiplicative effect on WSC. Number of hours worked moderates the relationship between number of semester hours taken and WSC.

To test whether number of hours worked moderates the relationship between number of hours spent studying and WSC, WSC was regressed on number of hours spent studying, number of hours worked, and the interaction between the two variables. Study hours accounted for 1.6% of the variance in WSC, $F(1, 807) = 14.264$, $p = 0.000$. When number of hours worked per week entered the equation at step 2, the regression coefficient for number of hours spent studying dropped to non-significance. The addition of hours worked increased variance explained by 15.4%, $F(2, 806) = 83.708$, $p = 0.000$. Finally, when the interaction between hours spent studying and hours worked entered the equation at step 3, the regression coefficient for the interaction was significant and explained an additional 0.6% of the variance in WSC, $F(3, 805) = 58.444$, $p = 0.000$.

Table 17 Interaction between Number of Hours Worked and Semester Hours and Number of Hours Worked and Study Hours in the Prediction of WSC

Step	Predictors	β	P	ΔR^2	P
Step 1	Semester Hours Taken	-0.115	0.001	1.2	0.001
Step 2	Semester Hours Taken	0.120	0.001		
	Hours Worked per Week	0.474	0.000	16.9	0.000
Step 3	Semester Hours Taken	0.173	0.000		
	Hours Worked per Week	0.483	0.000	3.1	0.000
	Semester Hours x Work Hours	0.187	0.000		
Step 1	Study Hours Per Week	-0.132	0.000	1.6	0.000
Step 2	Study Hours Per Week	0.015	0.667		
	Hours Worked per Week	0.420	0.000	15.4	0.000
Step 3	Study Hours Per Week	0.075	0.070		
	Hours Worked per Week	0.432	0.000	0.6	0.000
	Study Hours x Work Hours	0.100	0.010		

The number of hours per week a student works moderates the relationships between the number of semester hours taken and WSC and between the number of hours spent on school-related activities and WSC. Students who do not need to work full time experience less conflict from work to school than those who work more.

Hypothesis 5c stated that WSC, SWC, FSC and SFC would increase as a student progresses through college. Testing four effects called for reducing the threshold for statistical significance to 0.0125. The results of the ANOVA for class standing and inter-role conflict were statistically significant for FSC, $F(5,800) = 7.180$, and for SFC, $F(5,799) = 5.672$, $p = 0.000$ for both tests. However, contrary to the prediction, post-hoc analysis indicated that graduate students reported less conflict than undergraduate students for both FSC and SFC. Despite the highly significant results, hypothesis 5c was not supported.

Spillover of inter-role conflict between Spouses

Hypotheses 6a through 6c examine the possibility that one's spouse's work conditions could affect one's own experience of inter-role conflict. Participants were asked to report the number of hours per week worked, the frequency of weekend work and whether the significant other was engaged in shift work.

The threshold for statistical significance was set at 0.0125. The more hours per week the spouse worked (hypothesis 6a), the more FSC the participant reported, $r = 0.124$, $p = 0.000$. Similarly, when the spouse works more hours, the participant reported higher levels of SFC, $r = 0.121$, $p = 0.000$. Number of hours worked per week was not related to WSC, $r = -0.049$, $p = 0.087$, or SWC, $r = -0.037$, $p = 0.154$, both one tailed tests. Whether or not the spouse worked weekends (hypothesis 6b) was unrelated to inter-role conflict for the respondent. The relationship between the spouse's work schedule and the participant's inter-role conflict (hypothesis 6c) was explored in a series

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of ANOVAs. None of the tests was statistically significant. Hypothesis 6a received

partial support. Hypotheses 6b and 6c received no support.

CHAPTER 4 - Discussion

Summary of Findings

The main purpose of this study was to expand understanding of IRC by developing an instrument to measure the propensity to experience IRC (PIRCS), to test the utility of the PIRCS to explain the strong correlation between various forms of IRC and improve prediction of IRC after controlling for several established personality variables that predict IRC. In addition, the study tested the theory that people can control the frequency of IRC and do so in according to the perceived severity of the consequences of interference between roles. The remaining hypotheses stated that characteristics of the person, the person's work and school situations and the work situation of the person's significant other relate to the frequency of experiencing IRC.

The PIRCS was shown through exploratory and confirmatory factor analysis and scale and item analysis to have acceptable psychometric properties. PIRC scores mediated the relationship between 14 of the 15 pairs of IRC accounting for between 1.1% and 14.8% of the variance in the various forms of IRC. Although there was strong evidence that PIRC mediated the relationships between the various forms of IRC, there was no evidence of moderation. This partially explains the strong positive correlation between WFC and FWC found in previous research and extends this to include conflict involving school. PIRC partially explains the feedback loop from Frone's model of IRC.

Not only did PIRC mediate the relationship between the various forms of IRC, but it also added significant unique variance in the prediction of all six forms of IRC (WFC, FWC, WSC, SWC, FSC and SFC) after controlling for the effects of positive and negative affect, affect intensity, affect regulation, and time management. PIRC added between 1.1% and 6.8% of variance to the prediction of the six forms of IRC beyond that explained by the control variables.

Although the individual correlations between the consequences of IRC items and the corresponding levels of IRC were statistically significant, the directions of the relationships were opposite of the predictions. However, when the data were aggregated, it was found that the more severe the perceived consequences of a particular form of IRC, the less often it occurred. This partially explains the differential permeability of role boundaries to IRC and extends this to a new role, school. It appears people purposely take steps to prevent IRC when its consequences are perceived as severe.

Differential permeability was examined from the point of view of overall frequency of IRC. The most common IRC involved family, next was school and work experienced the least IRC. This indicates that the family boundary is the most permeable to IRC followed by school and work is the least permeable of the three role boundaries.

Hypothesis three stated that characteristics of the individual (i.e., age, sex, and number of children) are related to IRC. Age was not related to the experience of IRC. However, women reported higher levels of FSC and SFC than men and the more children in the home, the more FWC, FSC and SFC participants reported. It was found

that these relationships were stronger for women than for men and that, for women, the more children in the home, the more WFC they experienced as well.

Hypothesis four tested the effects of a person's work conditions on their experience of IRC. It was demonstrated that the more hours participants worked per week, the more WFC, WSC and SWC they experienced. The more participants worked on the weekends, the more WFC and WSC they reported. The greater the flexibility at work, the less the WFC and WSC reported. Although unexpected, participants who worked a variable shift experienced more SFC than those working an 8 to 5 schedule. There was no relationship between a person's definition for work and any form of IRC tested.

Hypothesis five examined the effects of school on work and family. The more semester hours of credit students took and the more hours they spent on school-related activities, the more school interfered with family and work interfered with school. Although it was hypothesized that students would experience higher levels of IRC as they progress through school, the highest levels of conflict between roles occurred for freshman and sophomores. Graduate students reported the lowest levels of IRC.

Hypothesis six examined the extent to which a participant's significant other's work conditions cross over to cause IRC for the participant. The more hours the significant other worked, the more FSC and SFC the participant reported. The frequency of weekend work and shift work on the part of the significant other were unrelated to a participant's level of IRC.

Limitations of the Study

The primary limitation of the study involves the method of data collection. All of the data were collected at one point in time and using one method, a web-based survey. There is some concern that gathering data for multiple variables using a common technique can result in covariation among otherwise unrelated variables or overstate the magnitude of the relationship between related variables (Campbell & Fiske, 1959). This is referred to as method bias. The data were evaluated for the presence of method bias using the technique developed by Podsakoff, MacKenzie, Lee and Podsakoff (2003). Since the results of two separate exploratory factor analyses on two subsets of the data conducted to identify the presence of method bias were negative, mono-method bias appears not to pose a significant threat to the internal validity of the study.

Method bias may also be caused by certain troublesome variables. Watson, Pennebaker and Folger (1987) expressed concern over one variable included in the present study, negative affect. The authors suggested negative affect poses a particular risk for method bias since it represents an underlying general negative view of the world. Spector (2006) reviewed evidence of the potential biasing effect of negative affect on observed correlations between variables. The fact that studies including negative affect have shown positive, negative and non-significant correlations between variables led Spector to conclude the evidence for bias resulting from inclusion of negative affect is weak at best.

Perhaps the most critical limitation of the study involves the development of the PIRCS. Both the exploratory and confirmatory factor analyses were conducted on, essentially, the same data. Although the development and holdout groups were

randomly determined from the larger data set, the possibility exists that an unrecognized flaw in the research design caused the two halves of the data to covary. Thus, the apparently adequate psychometric properties of the scale may have resulted from shared error variance rather than shared measurement of the disposition propensity to experience IRC. Moreover, it is not possible to determine the extent of this threat from the existing data. Therefore, it will be important to replicate these results.

Finally, this study made use of a correlational design. Thus, it is not possible to establish causation. In order to make causal attributions between the variables in the study, it will be necessary to replicate theses results using an experimental design. It is also not possible to eliminate a state explanation for the propensity for inter-role conflict. It is possible that participants were responding according to how they felt at the time they completed the survey rather than from the point of view of steady traits. A time-series study would go far in eliminating a state explanation for the PIRC.

Contributions of the Study

The population from which the sample used in this study was drawn is adult college students. Despite being students, 84% of respondents were working at the time the study occurred. Two-thirds of all respondents reported working at least 20 hours per week. The response rate, roughly 18% of all adult students, is similar to that obtained in other anonymous online surveys and exceeds that of most postal surveys (Dillman, 2000). More importantly, the means and correlations observed in this study are quite similar to results obtained in other studies of adult non-students. For example, the meta-analytic estimate of the correlation between work-family conflict and family-work conflict is 0.47 (Mesmer-Magnus & Viswesvaran, 2005). The same correlation in the present

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study was 0.48. Although the temptation to dismiss the results of a survey of students with regards to IRC involving work may be high, there is evidence these results are meaningful and can be generalized beyond adult students.

New scales were developed to test WSC, SWC, FSC and SFC. These new scales, based on Frone's original IRC scale that measures WFC and FWC (Grzywacz, Frone, Brewer, & Kovner, 2006), had excellent psychometric properties. Future research should make use of these scales when testing IRC involving school. The PIRC, which also displayed excellent psychometric properties, mediated the relationships between the various forms of IRC. This partially explained both the strong correlation between WFC and FWC (Mesmer-Magnus et al., 2005) and the feedback mechanism theorized by Frone, Russell and Cooper (1992a). In fourteen of fifteen role-conflict to role-conflict relationships, PIRC added between 1.1% and 14.8% of variance explained in the relationships between the various forms of IRC. The average improvement in variance explained for these fourteen cases was 5.0%.

The PIRC also added unique prediction in the incidence of IRC after controlling for the effects of five established predictors of IRC. Further, the improvements in total variance explained in IRC were not trivial ranging from 1.1% to 6.8% and averaging nearly 4% of incremental variance explained. Not only did PIRC add unique variance, overall it was the best predictor of IRC in the present study. Future research into the causes of IRC should strongly consider including the PIRCS, particularly if the person as a source of IRC is of interest.

The inclusion of school as a role environment made it possible to examine the differential permeability (Pleck, 1977) of three roles as opposed to two. This replicated

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previous research (Frone, Russell & Cooper, 1992b; Grzywacz, Frone, Brewer & Kovner, 2006) and extended these two studies by adding in school as a role environment. The highest levels of IRC were reported between work and both school and family. IRC involving school was less prevalent and family was associated with the least amount of IRC. School is an important consideration for members of the population in this study. Roles that are held in high regard probably cause more interference than less important roles. However, this is a subject for future consideration. What is clear is that a hierarchy of role environments exists. Work is high and family at or near the bottom in this hierarchy.

This study also indicated that people are able to control the frequency of interference between roles and that they do so, in part, in response to the severity of conflict between roles. Einspahr (2003) suggested differential permeability is a function of how comfortable a person is in engaging in role-spanning behavior and how easy it is to do so. The results of the present study suggest that IRC occurs when the consequences one suffers for allowing it to happen are low. This is consistent with operant learning theory (Skinner, 1936) which states that a behavior which is followed by an unpleasant response is less likely to occur in the future. In fact, Skinner believed negative consequences create a drive to *avoid* the behavior thought to have caused the undesirable outcome. This would explain the positive correlations between the incidence of IRC and its consequences. If one never experiences IRC, there is no way to know how severe the consequences are. However, once those consequences become known the person develops a drive to avoid it in the future.

If home or school interferes with work often enough, a person could expect to lose her/his job and income. However, since students pay to attend school, they are unlikely to be expelled unless their performance is very poor for an extended time. The purpose of obtaining a college degree is to get a job. Therefore, this role must be protected. In contrast, family is likely perceived as a source of support. People avoid interference with work whenever possible, minimize interference with school and do so by taking time away from family and bringing work home from the job and from school. Evidence was provided by Kember and associates (2005) who found that part-time students made sacrifices in the order social life first, family second and work last in order to find time to study and attend class.

An alternative interpretation puts family at the top of the hierarchy. People sacrifice family to benefit work and school in the short run because success in these two role environments benefits the family in the long run. In either case, the finding that people can control the amount of IRC that occurs indicates they "protect" some role environments at the expense of others. It is unclear how other roles (e.g., membership in a social organization such as a church) would fit into the role hierarchy in terms of the frequency of IRC. This is an area for future research.

The consequences of allowing the responsibilities from one role to delay the participant's arrival to another role location were perceived as more severe than those of allowing one role to invade another. Plainly speaking, it is worse to be late when crossing role boundaries than to bring work from another role with you. This is an entirely new area of research for IRC. This was not true for interference from either work or school to home. Participants were ambivalent with regard to the form of the

interference (i.e., being late or bringing work home) when work or school interfered with home. These effects could only be observed at the aggregate level. Whether this indicates the need for better measures of the severity of consequences is unclear. Perhaps a wider variety of examples of IRC, presented in semantic differential or forced ranking format, would elicit less ambiguous results. Nevertheless, this should prove a fruitful area for future research.

In contrast to the predictions of Evans and Bartolome (1984), participant age was essentially unrelated to IRC. Although older participants reported less FWC, the difference was unremarkable. This could reflect the fact that participants are students. It is unlikely many of them are well enough established in their companies to shift their focus from work to family as suggested by Evans et al. Women reported more FSC and SFC than men. Further, the relationships between the number of children living in the home and IRC were stronger for women than for men just as in the Duxbury and Higgins (1991) study. The present study extended Duxbury's work by demonstrating differences in correlations between men and women for IRC involving school. This suggests the traditional gender roles Pleck (1977) described exist today relatively unchanged.

The relationships between work and IRC were consistent with previous research. Greenhaus and Beutell (1985) theorized that constraints on time result in IRC. This was empirically demonstrated in regards to WFC (Frye & Breaugh, 2004). In the present study, working more hours per week was associated with more WFC, WSC and SWC. A time constraint from any role environment increases the risk of IRC between all role locations. This was expected since there are a finite number of hours available per

week. Each role environment has time set aside for itself. Work, school and family functions are normally scheduled to minimize conflict. Work and school typically occur during the day on weekdays. Students who work do so after school or take evening and distance education classes which allow them to work during the day. Family activities are usually scheduled on weekends.

Participants who worked weekends reported more IRC than who those worked during the week. Whenever one role environment encroaches on the time of another, conflict will occur (Fenwick & Tausig 2004; Presser 2003). The finding that the consequences of being late arriving at a role location are more severe than bringing work from the other role environment emphasizes the importance of protecting the time allocated to each role. Carrying work to another role location is a strategy by which people can minimize IRC. Conflict still occurs, but sharing time (e.g., using time at school to take care of family business) is less severe than stealing time (i.e., being late).

Time constraints resulting from demands from school (e.g., taking more courses or spending more time studying) were associated with higher levels of IRC. Increased workload from school was also associated with higher levels of interference from family to school. The simple fact there are only 24 hours in a day partially explains the IRC feedback mechanism Frone and colleagues postulated. When high time demands are placed by more than one role, the effect is multiplicative. This is evidenced by the significant interaction between working more hours and taking more courses in the prediction of WSC and SWC demonstrated in this study.

Finally, the crossover of stress, strain and time constraints between spouses has been demonstrated in the past to increase IRC (Westman 2001; Westman & Etzion,

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2005). Westman reviewed no fewer than 29 studies of crossover between spouses. However, not one considered a role other than work and family. The present study demonstrates that crossover between spouses correlates with IRC in other roles as well.

Areas for Future Research

The correlation between the severity of consequences of a particular form of IRC and its frequency should not be positive. It is contrary to human nature to seek out (or refuse to avoid) unpleasant consequences. At the aggregate level, the more severe the consequences the less often a form of IRC occurred in the current study. The development of an instrument to demonstrate, at the level of the individual, that adverse consequences motivate people to avoid IRC should be an area for further research.

The particular form this instrument should take is unclear. One possibility is to require participants to rank the various examples of IRC from least to most severe. Then, these rankings could be correlated with the frequency of the corresponding forms of IRC. Perhaps the questions, as drafted in the current study, were too vague. Examples of consequences could be provided and participants asked to rate the likelihood of an outcome occurring in response to a particular incident of IRC. For example, "How likely would you be to get into an argument with your spouse if you were to get home from work 1 hour late" versus "How likely would you be to get into an argument with your spouse if you were to get home from school 1 hour late."

Alternatively, it may be that avoiding the forms of IRC included in the present study is difficult. Perhaps it would have been better to ask how much effort a person would expend to prevent the form of IRC in question. For example, a person might be willing to exceed the speed limit by 15 miles per hour to avoid getting to work late but not to avoid getting home from work late.

Another area for suggested research involves examining the role hierarchy that exists. It is apparent from the study and previous research that more is done to prevent conflict with work than with family. This suggests that certain roles are held in higher regard than others. It would be informative to know whether a universal hierarchy exists or, if not, what criteria determine the hierarchy among the roles. Also, to what extent do people choose to sacrifice family in the short-term to promote their careers which benefit the family in the long-term. This would address Evans and Bartolome's theory that the importance of the work role decreases and that of the family role increases over time. Perhaps it is not the relative importance of the two roles. Rather, it may be that how the relative importance is *expressed* changes over time.

Although the results failed to reach classical statistical significance in the present study, the relationship between living situation (i.e., alone, single parent, married, living together) and IRC is intriguing. Participants who were single with children or divorced and living with children in their home reported the highest level of five of the six forms on IRC included in the study. In the sixth case, it was a close second. Married participants reported lower levels of all six forms of IRC. It was intriguing that participants who were living with a significant other reported levels of IRC nearly equal to, and in one case higher than, divorced participants with children in their home. What

is the critical difference between living together and being married that results in such different levels of IRC? An answer to this question could provide insight into methods to reduce IRC.

Finally, one of the most important areas for future research involves identifying strategies to combat IRC. More experienced students reported lower levels of IRC. Are they better at regulating IRC because of experience or do students who are better at regulating IRC advance further in school? The need to identify successful means of preventing IRC is clear. If these strategies can be taught to new employees and incoming freshman to college, it would improve their success in balancing the various life roles resulting in better role performance, life satisfaction and mental health.

Practical Implications and Recommendations

The PIRCS is a useful tool for studying IRC. The scale has demonstrated its ability to identify and measure a disposition that predisposes people to experience high levels of IRC between family and work, family and school and work and school. An understanding of the dispositional sources of IRC will improve studies seeking to identity the nomological network of antecedents of conflict between roles. In addition to seeking out conditions in the workplace and the home that cause IRC, researchers can look at personality as a contributor.

The dispositional nature of IRC poses both the threat of adverse treatment of employees and a possible basis for remediating this harmful phenomenon.

Organizations may decide to use the PIRCS for human resources decisions. If this occurs, employees with a propensity to experience IRC may be selected against when companies make decisions concerning selection, placement, and retention of applicants and existing employees. Although IRC has been shown to relate to outcomes important to organizations including job performance, turnover, drug and alcohol addiction and mental illness, organizations should resist the urge to use PIRCS scores as a basis for discriminating between employees.

While the PIRCS identified people at risk for higher levels of IRC, the underlying disposition explained, at most, 15% of the variance in inter-role conflict. The majority of the variance in each form of IRC was attributable to other antecedents. Many of these causes are subject to some level of control by organizations themselves. Programs such as on-site daycare and flexible work schedules can reduce the incidence of IRC and mitigate its effects.

Rather, companies should use the PIRCS, if at all, as a diagnostic tool to identify employees that may need additional attention and consideration in order to perform to their full potential. The costs of employee turnover are very high. If an organization can use the PIRCS as a way to aid its employees rather than as a weapon to use against them, employee performance and the company's bottom line should both benefit.

Organizations should also realize that women are likely to be more adversely affected by IRC than men. They will experience higher levels of IRC than men and may be more subject to crossover from their husbands' work conditions than men are to their wives' work stress. When situations arise in families that call for a parent to care for a child unexpectedly, it is more likely a woman will provide the care than a man.

Companies should keep this in mind when establishing human resource policies concerning absences and tardiness. Female employees with children will periodically require time off from work to provide care for a family member and may be less able to travel for work, stay late or work weekends than male employees. They should be granted additional leniency to compensate for this need. Further, role interference will be more acutely felt by women than men. Policies that reduce the adverse consequences of IRC for women will reduce the amount of stress they experience and should both increase their performance and decrease turnover.

Finally, organizations should take advantage of the fact that people can regulate IRC and set up a system of incentives for employees who prevent outside roles from interfering with work. This, coupled with effective family-friendly programs, will enable conscientious employees to focus on work when at work and maintain high levels of productivity and low absenteeism.

Colleges and universities should consider IRC for a number of reasons. First, these institutions hire large numbers of employees. Thus, they should heed the advice offered to other organizations and create an environment that minimizes IRC. Second, students who experience IRC face an added hurdle when seeking an education. Further, many students are also employees of the university. The loss of one of these students also creates employee turnover costing the university money. Universities should consider how a student's home and work situations can affect his/her success as a student. Universities need to find ways to enable students to focus more on school and less on work. This is not a new idea. However, if universities desire their students get a quality education and graduate, they should increase their efforts to provide

scholarships, generous work-study programs and other programs that allow students to be students.

Universities should also consider programs that allow students to participate in classes when they must be away from school to care for family or travel for work. Students should be granted the opportunity to view lectures and participate in their classes using network technologies. Most educational institutions possess the equipment and expertise needed to make courses available to students over the World Wide Web or closed-circuit television. Internet 2 was developed primarily as a research and educational tool. There are minimal bandwidth issues and most major colleges and universities are connected. If students need to participate in a class using this technology from time to time, they should have the option to do so rather than be forced to decide between taking care of a family member or work-related responsibility and attending class.

Finally, the ability to identify people who are at risk for high levels of IRC could serve as the basis for corrective action. Researchers should begin to seek ways to counteract the adverse effects of this disposition by focusing on the particular attitudes and behaviors that facilitate IRC. If people can be trained to control these attitudes and avoid these behaviors, it may be possible to counteract the adverse effects of this harmful disposition. Graduate students in this experiment reported lower levels of IRC than undergraduate students. Some of this may be due to maturation which manifests itself in the form of strategies that prevent conflict between roles. Future research should examine the strategies people employ to prevent IRC. Those strategies that work can be taught to people with a high propensity for IRC. They will benefit from the

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expertise that comes with experience without having to suffer the consequences of

learning by trial and error.

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Appendix A - Communications to Potential Participants

Initial Message

Dear Adult Student,

At the bottom of this page is a link to a survey about conflict between school, work, and family. Although this is for my dissertation, I will be sharing the results with Adult Student Services so they can better understand how much conflict students experience. This will help them to develop policies to help students like you. If you choose to complete the survey, you may enter a drawing for one of ten $20 Amazon.com gift certificates.

Participation is strictly voluntary and there is no penalty for not completing the survey. Failure to complete this survey will NOT affect your status as a student. All responses will be kept completely anonymous. KSU's Institutional Review Board has reviewed this study and approved the content.

The survey will require approximately 15 minutes of your time. If you have any questions please contact any of the following:

Dr. Rick Scheidt (Committee Chair, KSU Institutional Review Board), rscheidt@ksu.edu, 785-532-3224

Dr. Clive Fullagar, fullagar@ksu.edu, 532-0608

David Egleston, deglesto@ksu.edu

If you would like a copy of the findings of this study, e-mail David Egleston and I will send you an electronic copy when it is available. If you are willing to complete the

survey, follow the link below. Doing so constitutes informed consent. Thank you for your time!

David Egleston

Reminder Message

Dear Adult Student,

This is a polite reminder that there is still time to complete the conflict survey and participate in the drawing for one of ten $20 Amazon.com gift certificates.

If you are willing to share 15 minutes of your time, please follow the link below.

Thank you.

David Egleston

Appendix B - Demographics

What is your current work situation?

        I am not currently employed

        I work fewer than 20 hours per week

        I work 20 to 30 hours per week

        I work 31 to 40 hours per week

        I usually work more than 40 hours per week

Which of the following best describes your work schedule?

        I work a traditional 8-5 schedule

        I work a regular schedule but not 8-5

        I work only on the weekends

        I work irregular hours

How often do you work on the weekend?

        Never

        Seldom

        Occasionally

        Frequently

        All the time

Which of the following phrases best describes your current job?

        It's just a job

        I am just here because of my significant other

        It's my career

        I plan to retire from this position

How much flexibility do you have at your current job?

        None

        A little bit

        Some

        A lot

Please describe your current living situation.
    Live alone
    Single or divorced but live with children
    Married and live together
    Live with a significant other

What is your significant other's current work situation?
    Not currently employed
    Works fewer than 20 hours per week
    Works 20 to 30 hours per week
    Works 31 to 40 hours per week
    Usually works more than 40 hours per week

Which of the following best describes your significant other's work schedule?
    Works a traditional 8-5 schedule
    Works a regular schedule but not 8-5
    Works only on the weekend
    Works irregular hours

How often does your significant other work on the weekend?
    Never
    Seldom
    Occasionally
    Frequently
    All the time

How many children currently live with you in your home?
    0
    1
    2
    3
    4
    5 or more

What is your current class standing?
    Freshman
    Sophomore
    Junior
    Senior
    Graduate student
    Post-graduate student

How many semester hours are you currently taking altogether?

      0

      1-5

      6-10

      11-15

      16-20

      More than 20

On average, how many hours per week do you spend reading for school, doing homework or class assignments, or studying for exams? Please type in the number of hours with no decimals.

How old are you today in years?

Are you a male or female?

      Male

      Female

Appendix C - Positive and Negative Affect

Response set

1 = Almost never

2 = Sometimes

3 = Often

4 = Almost always

Positive Affect

I feel pleasant

I feel satisfied with myself

I feel rested

I am calm, cool and collected

I am happy

I feel secure

I make decisions easily

I am content

I am a steady person

Negative Affect

I feel nervous and restless

I wish I could be as happy as others seem to be

I feel like a failure

I feel that difficulties are piling up so that I cannot overcome them

I worry too much over something that doesn't matter

I have disturbing thoughts

I lack self-confidence

I feel inadequate

Some unimportant thought runs through my mind and bothers me

I take disappointments so keenly that I can't put them out of my mind

I get in a state of tension or turmoil as I think over my recent concerns and interests

Note, items in italics were included in the analysis.

Appendix D - Time Management

Response set

1 = Almost never

2 = Sometimes

3 = Often

4 = Almost always

Items

I underestimate the time it will take to finish tasks

I feel I am not in control of my time

I must spend a lot of time on unimportant tasks

I find it difficult to keep to a schedule because of interruptions

I find myself procrastinating on tasks I don't like but that must be done

I feel like I am always putting out fires at work and at home

Note, items in italics were included in the analysis.

Appendix E - Affect Intensity

Response set

1 = Almost never

2 = Sometimes

3 = Often

4 = Almost always

Items

I have a hard time remaining calm when trying things occur

My moods are very intense

My friends would describe me as tense or high strung

I tend to get very excited or very upset

Note, all four items were included in the analysis.

Appendix F - Affect Regulation

Response set

1 = Almost never

2 = Sometimes

3 = Often

4 = Almost always

Items

When something is bothering me, I try to forget about it

When something is bothering me, I concentrate on something else

When something is bothering me, I try to forget the whole thing

When something is bothering me, I tend to think about it over and over

When something is bothering me, I distract myself by thinking of other things

Note, items in italics were included in the analysis.

Appendix G - Stress

Response set

1 = Almost never

2 = Sometimes

3 = Often

4 = Almost always

Items

I find myself feeling stressed out

When I experience stress, I just try to ignore it

I find it hard not to react when something stressful happens

I experience a significant amount of stress

Stress affects me more than it does others

I get 'stressed out' over relatively unimportant things

Note, items in italics were included in the analysis.

Appendix H - PIRCS

Response set

1 = Almost never

2 = Sometimes

3 = Often

4 = Almost always

Items

I am not very good at keeping the different parts of my life separate from one another

I have a hard time keeping my work time, school time and family time separate

My work, school and family life frequently overlap each other

I tend to leave 'work stuff' at work, 'school stuff' at school and 'home stuff' at home

I try hard to prevent work, school and family from interfering with each other

Different areas of my life are in conflict

I strive to give 100% to my family, 100% to my school and 100% to my job

Note, items in italics were included in the analysis.

Appendix I - Consequences of Interrole Conflict

Response set

1 = Not at all severe

2 = A little bit severe

3 = Quite severe

4 = Extremely severe

Items

How severe would the consequences be if you were to get home from work 1 hour late because of work?

How severe would the consequences be if you were to get home from school 1 hour late because of school?

How severe would the consequences be if you were to get to work 1 hour late because of family?

How severe would the consequences be if you were to get to work 1 hour late because of school?

How severe would the consequences be if you were to get to school 1 hour late because of family?

How severe would the consequences be if you were to get to school 1 hour late because of work?

How severe would the consequences be if you were to spend time at work taking care of family business?

How severe would the consequences be if you were to spend time at work taking care of school business?

How severe would the consequences be if you were to spend time at home taking care of work business?

How severe would the consequences be if you were to spend time at home taking care of school business?

How severe would the consequences be if you were to spend time at school taking care of work business?

How severe would the consequences be if you were to spend time at school taking care of family business?

Note, all twelve items were included in the analysis.

Appendix J - Research Instrument

What is your current work situation?
>I am not currently employed
>I work fewer than 20 hours per week
>I work 20 to 30 hours per week
>I work 31 to 40 hours per week
>I usually work more than 40 hours per week

Which of the following best describes your work schedule?
>I work a traditional 8-5 schedule
>I work a regular schedule but not 8-5
>I work only on the weekends
>I work irregular hours

How often do you work on the weekend?
>Never
>Seldom
>Occasionally
>Frequently
>All the time

Which of the following phrases best describes your current job?
>It's just a job
>I am just here because of my significant other
>It's my career
>I plan to retire from this position

How much flexibility do you have at your current job?
>None
>A little bit
>Some
> A lot

Please describe your current living situation.
     Live alone
     Single or divorced but live with children
     Married and live together
     Live with a significant other

What is your significant other's current work situation?
     Not currently employed
     Works fewer than 20 hours per week
     Works 20 to 30 hours per week
     Works 31 to 40 hours per week
     Usually works more than 40 hours per week

Which of the following best describes your significant other's work schedule?
     Works a traditional 8-5 schedule
     Works a regular schedule but not 8-5
     Works only on the weekend
     Works irregular hours

How often does your significant other work on the weekend?
     Never
     Seldom
     Occasionally
     Frequently
     All the time

How many children currently live with you in your home?
     0
     1
     2
     3
     4
     5 or more

What is your current class standing?
     Freshman
     Sophomore
     Junior
     Senior
     Graduate student
     Post-graduate student

How many semester hours are you currently taking altogether?

0
1-5
6-10
11-15
16-20
More than 20

On average, how many hours per week do you spend reading for school, doing homework or class assignments, or studying for exams? Please type in the number of hours with no decimals.

☐

How old are you today in years?

☐

Are you a male or female?
Male
Female

Response set for following scales

1 = Almost never

2 = Sometimes

3 = Often

4 = Almost always

Positive Affect

I feel pleasant

I feel satisfied with myself

I am happy

I feel secure

I am content

Negative Affect

I feel nervous and restless

I wish I could be as happy as others seem to be

I feel that difficulties are piling up so that I cannot overcome them

I worry too much over something that doesn't matter

Some unimportant thought runs through my mind and bothers me

I take disappointments so keenly that I can't put them out of my mind

I get in a state of tension or turmoil as I think over my recent concerns and interests

Time Management

I underestimate the time it will take to finish tasks

I feel I am not in control of my time

I must spend a lot of time on unimportant tasks

I find it difficult to keep to a schedule because of interruptions

I feel like I am always putting out fires at work and at home

Affect Intensity

I have a hard time remaining calm when trying things occur

My moods are very intense

My friends would describe me as tense or high strung

I tend to get very excited or very upset

Affect Regulation

When something is bothering me, I try to forget about it

When something is bothering me, I concentrate on something else

When something is bothering me, I try to forget the whole thing

When something is bothering me, I distract myself by thinking of other things

Stress

I find myself feeling stressed out

I find it hard not to react when something stressful happens

I experience a significant amount of stress

Stress affects me more than it does others

I get 'stressed out' over relatively unimportant things

PIRCS

I am not very good at keeping the different parts of my life separate from one another

I have a hard time keeping my work time, school time and family time separate

My work, school and family life frequently overlap each other

Different areas of my life are in conflict

Conflict between Work and Family

In the last six months, how often did your job or career interfere with your responsibilities at home such as yard work, cooking, cleaning, repairs, shopping, paying the bills, or caring for a family member?

In the last six months, how often did your job or career keep you from spending the amount of time that you would like to spend with your family?
In the last six months, how often did your job or career interfere with your home life?

In the last six months, how often did your home life interfere with your responsibilities at work such as getting to work on time, accomplishing daily tasks, or working overtime?

In the last six months, how often did your home life keep you from spending the amount of time you would like to spend on your job or career?
In the last six months, how often did your home life interfere with your job or career?

Conflict between Work and School

In the last six months, how often did your job or career interfere with your responsibilities at school such as attending class, reading, completing assignments or studying for exams?

In the last six months, how often did your job or career keep you from spending the amount of time that you would like to spend on your school life?

In the last six months, how often did your job or career interfere with your school life?
In the last six months, how often did school interfere with your responsibilities at work such as getting to work on time, accomplishing daily tasks, or working overtime?

In the last six months, how often did school keep you from spending the amount of time that you would like to spend on your job or career?
In the last six months, how often did your school interfere with your job or career?

Conflict between School and Family

In the last six months, how often did your home life interfere with your responsibilities at school such as attending class, reading, completing assignments or studying for exams?

In the last six months, how often did your home life keep you from spending the amount of time you would like to spend on school?

In the last six months, how often did your home life interfere with school?
In the last six months, how often did school interfere with your responsibilities at home such as yard work, cooking, cleaning, repairs, shopping, paying the bills, or caring for a family member?

In the last six months, how often did school keep you from spending the amount of time you would like to spend with your family?

In the last six months, how often did school interfere with your home life?

Response set for following scale

1 = Not at all severe

2 = A little bit severe

3 = Quite severe

4 = Extremely severe

Consequences of Interrole Conflict

How severe would the consequences be if you were to get home from work 1 hour late because of work?

How severe would the consequences be if you were to get home from school 1 hour late because of school?

How severe would the consequences be if you were to get to work 1 hour late because of family?

How severe would the consequences be if you were to get to work 1 hour late because of school?

How severe would the consequences be if you were to get to school 1 hour late because of family?

How severe would the consequences be if you were to get to school 1 hour late because of work?

How severe would the consequences be if you were to spend time at work taking care of family business?

How severe would the consequences be if you were to spend time at work taking care of school business?

How severe would the consequences be if you were to spend time at home taking care of work business?

How severe would the consequences be if you were to spend time at home taking care of school business?

How severe would the consequences be if you were to spend time at school taking care of work business?

How severe would the consequences be if you were to spend time at school taking care of family business?