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How Many Things Should You Do at Once When You Work and Have Family Responsibilities?

Work-Family Conflict and Polychronicity

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Abstract

With factors such as the increase of dual-earner families, work-family conflict (WFC) is of growing concern in today's society. There is a paucity of research examining individual differences (e.g., time preference) that may be associated with experiencing WFC. People with a monochronic time preference prefer to complete one task at a time, whereas those with a polychronic time preference prefer to complete more than one task simultaneously (i.e., multitasking). The present study situated polychronicity in an established model of the work-family interface and assessed the model separately for men and women. We investigated these issues with a sample of 668 Canadian men and women employed in the manufacturing, education, and health sectors. Structural equation modeling (SEM) results indicated that polychronic time preference fits with the work-family interface model as an antecedent. Moreover, our model fit for women but did not fit for men. Implications and suggestions for future research regarding polychronicity and WFC are discussed.

Key Words: work-family balance; work-family conflict; work-family interface; polychronicity

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It is no longer uncommon for families to consist of two working parents who also have family responsibilities (e.g., providing care for their children). The conflict between work and family responsibilities has the potential to create stress for parents both at work and at home. This incongruence between work and family responsibilities has been conceptualized as work-family conflict (WFC) in the organizational sciences literature (e.g., Greenhaus & Beutell, 1985). With factors such as the increase of dual-earner families and the increasing demands of childcare and eldercare, WFC is of growing concern in today's society and has garnered recent attention from researchers (e.g., Ilies et al., 2007).

However, there is a paucity of research examining individual differences (e.g., time preference) that may be associated with experiencing WFC—for a notable exception see Grzywacz & Marks, 2000). Consider the example where a parent in a dual-earner family with two children needs to skim a business report, eat lunch, and arrange for a sitter to watch his/her children. Some people would prefer to complete one task at a time (i.e., monochronic time preference) by skimming the business report, and then eating lunch, and then arranging for the sitter. In contrast, other people would prefer to complete more than one task simultaneously (i.e., polychronic time preference) by making the call to arrange for the sitter while eating lunch and skimming the business report.

Previous research has demonstrated that women have a more polychronic time preference than men (Manrai & Manrai, 1995) and that men and women often experience WFC differently (Carlson, Kacmar, & Williams, 2000; Duxbury & Higgins, 1991; McElwain, Korabik, & Rosin, 2005). However, no previous research that we are aware of has examined the inclusion of

polychronicity into extant WFC models. This is a notable gap in the WFC literature because time-based conflict is an accepted and major form of WFC (Greenhaus & Beutell, 1985) and thus, an analysis between WFC and time preference is long overdue. The focal purpose of the current study is to situate polychronicity in an established model of the work-family interface; in addition, we will also assess our model of polychronicity and the work-family interface separately for men and women. Prior to presenting our study, we first review the WFC and polychronicity literatures as they relate to the current research.

Work-Family Conflict

Based on the earlier work of Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964), Greenhaus and Beutell (1985) conceptualized work-family conflict (WFC) as a type of interrole stress that originates from conflicting responsibilities and interference between the work and family domains. WFC can be discussed in terms of three major forms of conflict: 1) time-based; 2) strain-based; and 3) behaviour-based (Greenhaus & Beutell, 1985). Time-based conflict may result from time demands for one role decreasing the time available to allocate to another role, strain-based conflict may result from strain from one role interfering with another role, and behaviour-based conflict may result from behaviours in one role conflicting with the desired behaviours expected in another role (Greenhaus & Beutell, 1985).

Recently, WFC has been more specifically conceptualized as work interfering with family responsibilities (WIF) and family interfering with work responsibilities (FIW; Frone, Russell, & Cooper, 1992; Gutek, Searle, & Klepa, 1991). The multidimensional measure of WFC (Carlson et al., 2000) assesses six unique dimensions of WFC: time-based WIF, time-based FIW, strain-based WIF, strain-based FIW, behaviour-based WIF, and behaviour-based FIW.

Frone and his colleagues (1992) extended previous models of the work-family interface by hypothesizing a positive reciprocal relationship between WIF and FIW, examining the relationship between family stressors and FIW, directly examining the relationship between family involvement and FIW, and examining the relationship between FIW and job distress. Path analyses using structural equation modeling (SEM) revealed a significant and positive reciprocal relationship between WIF and FIW, family stressors and family involvement were significantly and positively related to FIW, and FIW was significantly and positively related to job distress (Frone et al., 1992). In sum, these findings underscored the importance of differentiating between WIF and FIW in WFC research.

The predominantly detrimental outcomes of WFC have been well documented (e.g., Korabik, Lero, & Whitehead, 2008). For example, WIF has been found to be significantly and negatively related to family performance, whereas FIW has been found to be significantly and negatively related to work performance (Frone, Yardley, & Markel, 1997). Moreover, WIF has been found to be positively related to family withdrawal and FIW has been found to be positively related to work withdrawal (MacEwen & Barling, 1994). Overall, research has consistently provided evidence for the increasing rates of both men and women experiencing WFC and workplace stress (e.g., Duxbury & Higgins, 2001). However, an analysis of whether a person's polychronicity helps to alleviate antecedents to WFC (e.g., work and family overload) has yet to be conducted.

Polychronicity

The traditional view of time management as linear (Hall & Hall, 1987) entails people undertaking one task at a time (e.g., reading work-related emails, then eating lunch, and then making phone calls). This time management preference is known as monochronic (Bluedorn,

Kalliath, Strube, & Martin, 1999; Bluedorn, Kaufman, & Lane, 1992; Hall, 1983; Hall & Hall, 1990; Kaufman, Lane, & Lindquist, 1991). However, a more modern view of time management entails people undertaking two or more tasks simultaneously (e.g., reading work-related emails while eating lunch and making phone calls). This time management preference is known as polychronic (Bluedorn et al., 1999; 1992; Hall, 1983; Hall & Hall, 1990; Kaufman et al., 1991). Monochronic and polychronic time management preferences have been conceptualized as being opposite poles of a single dimension (Hall & Hall, 1990). In support of this, Bluedorn et al. (1999) demonstrated that their measure of polychronicity was unidimensional.

Compared with monochrons, polychrons better manage interruptions in their schedules and they believe that their time preference is highly beneficial for achieving goals (Kaufman-Scarborough & Lindquist, 1999). Monochrons tend to prefer strict time schedules and they believe that their time preference will contribute to achieving daily goals (Kaufman-Scarborough & Lindquist, 1999). In addition, irrespective of culture, people at management levels tend to operate as polychrons because their time is fragmented, their time demands are not under their control, and they must deal with multiple problems simultaneously (Kurke & Aldrich, 1983). Research has also illustrated that polychrons enjoy vocations that have high pressure and involve balancing many tasks while integrating conflicting demands (Kaufman-Scarborough & Lindquist, 1999).

Prior to the development of the four-item Polychronic Attitude Index (PAI; Kaufman et al., 1991), the extant research on polychronicity was predominantly qualitative and observational (Bluedorn et al., 1992). The PAI was an initial attempt to measure polychronic attitudes; however, this scale was psychometrically limited (e.g., a somewhat low alpha coefficient; Kaufman et al., 1991). With the goal of developing a more reliable scale to measure the extent of

an organization's polychronic culture, Bluedorn and his colleagues (1999) modified the original items from the PAI and created new items. The resulting scale was the ten-item Inventory of Polychronic Values (IPV; Bluedorn et al., 1999). The median Cronbach's alpha coefficient observed by Bluedorn et al. (1999) was .84, which was considerably higher than the alpha of .68 for the PAI (Kaufman et al., 1991). Bluedorn et al. (1999) also expounded that the IPV is malleable in the sense that it can be adjusted to provide an equally reliable and valid measure of individual-level polychronicity.

Although the discussion of polychronic time preference dates back to Hall's (1959) anthropological work, the topic has received relatively little research attention in the organizational sciences, with the exception of a few notable endeavours (e.g., Bluedorn & Denhardt, 1988; Slocombe & Bluedorn, 1999). In light of the paucity of research assessing the relationship between important organizational constructs and polychronicity, Slocombe and Bluedorn (1999) supported the notion of investigating the relationship between organizational variables and polychronicity; however, we are not aware of any previous research that has assessed the relationship between WFC and polychronicity.

WFC and Polychronicity: Our Model

Research has provided evidence that employees who work more than 40 hours per week, are highly educated (i.e., at least a college or professional degree), and belong to social groups or clubs highly endorse polychronic attitudes (Kaufman et al., 1991). Additionally, managerial-level employees operate polychronically because of the multiple and simultaneous demands on their time (Kurke & Aldrich, 1983). Thus, it appears that with multiple roles and responsibilities, polychronic attitudes and behaviours are necessary to manage one's time. It has been argued that as a person spends more time in either the work or family domain, he/she will have less time to

allocate to another domain (Greenhaus & Beutell, 1985). However, it is possible that when people are operating polychronically, the time spent on activities for each role may not necessarily be mutually exclusive. Thus, a polychronic person may in fact be willing and able to spend time fulfilling responsibilities in both the work and family domains simultaneously, potentially alleviating the feeling of being overloaded by work and family demands by accomplishing more in a specific time period than a person would when operating monochronically. Moreover, even if people are operating polychronically within one domain (e.g., work) they may complete more tasks and thus, have more time available to allocate to other work or home demands. Thus, polychronicity may be viewed as a coping mechanism for feeling less overloaded by work and family demands.

Other variables that have been conceptualized as coping mechanisms that help to alleviate WFC (e.g., social support; Carlson & Perrewé, 1999) have been integrated into the model of work-family conflict in a number of ways (i.e., as antecedents, independent antecedents, or mediators). The first purpose of the current study was to situate polychronicity in the Frone et al. (1992; 1997) model of the work-family interface (see Figure 1).

 Insert Figure 1 about here

Previous research has provided evidence for a positive relationship between role overload and WFC (e.g., Elloy & Mackie, 2002; Fu & Shaffer, 2001). Additionally, Kaufman et al. (1991) reported evidence of a significant and negative correlation between polychronic attitudes and role overload; although not implying causality, participants who endorsed polychronic attitudes were less likely to report feeling overloaded by their multiple roles. It seems to make substantive and theoretical sense to include polychronicity as an antecedent to work and family overload.

Amalgamating the aforementioned findings, we believe that polychronicity is negatively related to work (Path A in Figure 1) and family (Path B in Figure 1) overload. Consistent with the remainder of the Frone et al. (1992; 1997) model and extensions of the Frone model (e.g., McElwain et al., 2005), we expect: 1) work and family overload to be positively related to time-based WIF (Path C in Figure 1) and FIW (Path D in Figure 1), respectively; 2) time-based WIF and FIW to be negatively related to family (Path E in Figure 1) and job satisfaction (Path F in Figure 1), respectively; and 3) family satisfaction and job satisfaction to be positively related to life satisfaction (Paths G and H in Figure 1, respectively).

Although polychronicity has been found to be associated with decreases in role overload (e.g., Kaufman et al., 1991), it is unclear whether polychronicity is associated with other beneficial outcomes. For example, Cotte and Ratneshwar (1999) provided qualitative data showing that polychronic behaviour has both positive and negative meanings for Anglo American women. In addition, Heinen (2005) found that people higher in polychronicity experienced more interrole conflict than those low in polychronicity (i.e., those high in polychronicity do not cope better with multiple roles than those low in polychronicity). Also, role segmentation and blurring theory (e.g., Ashforth, Kreiner, & Fugate, 2000; Desrochers, Hilton, & Larwood, 2005) would support Heinen's findings, namely that when roles are highly integrated there is more opportunity for conflict between the roles. Moreover, there is a literature that discusses polychronicity as being similar to Type A behaviour (e.g., Slocombe & Bluedorn, 1999) and WFC as being positively related to Type A behaviour (e.g., Werbel, 1978). Type A people are typically ambitious, persistent, impatient, and involved in their work (Carlson, 1999). However, other empirical work has provided evidence of a negative relationship between Type A and behaviour-based WFC (e.g., Carlson, 1999).

One explanation for the inconsistencies about whether polychronicity is related to favourable or unfavourable outcomes is that polychronicity has a differential impact on men and women. Because mean gender differences have been found in both the WFC (Carlson et al., 2000; Duxbury & Higgins, 1991; McElwain et al., 2005) and the polychronicity (Manrai & Manrai, 1995) literatures, the second purpose of the current study was to assess our model separately for men and women.

It has been argued that men enact their roles separately (i.e., monochronically), whereas women enact their roles simultaneously (i.e., polychronically; Hall, 1972). In addition, previous work has provided evidence for the notion that men and women accommodate the conflicting demands of work and family differentially, such that women tend to restructure their tasks and time more frequently than men (Karambayya & Reilly, 1992). Because family responsibilities are primarily expected to be those of women, men may not need to operate with a polychronic time orientation as often as women. Thus, we expect that polychronicity will be especially important for women in terms of alleviating work and family overload. In sum, the current study first situates polychronicity within a model of WFC and subsequently assesses our model separately for men and women.

Method

Participants

Participants were 668 Canadian men and women. Listwise deletion¹ reduced our sample size to 623 (93% of the original sample). Independent samples *t*-tests revealed no significant differences ($p > .05$) in terms of gender, age, and level of education, between participants who provided complete data and participants who did not provide complete data. Our sample consisted of 336 men (54%) and 287 women (46%). Participants were employed in three sectors:

1) manufacturing ($N = 502$; 81%); 2) education ($N = 92$; 15%); and 3) health ($N = 29$; 5%). Of our participants, 306 had managerial a job (49%), 303 had a nonmanagerial job (49%), and 14 did not report whether they had a managerial or a nonmanagerial job (2%). The mean age of our participants was 39.53 ($SD = 9.01$).

Measures

Time-based WIF and FIW. Three items from the multidimensional measure of WFC (Carlson et al., 2000) assessed time-based WIF and three items assessed time-based FIW. A sample time-based WIF item is, “My work keeps me from my family activities more than I would like” and a sample time-based FIW item is, “The time I spend on family responsibilities often interferes with my work”. A six-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6) was used, with higher scores indicating higher levels of conflict.

Polychronicity. Five items from the ten-item Inventory of Polychronic Values (IPV; Bluedorn et al., 1999) were administered to participants. A sample item is, “I like to juggle several activities at the same time”. A six-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6) was used, with higher scores indicating higher levels of polychronicity. Although the IPV was originally designed to assess cultural polychronicity, we assessed individual-level polychronicity in the current study; Bluedorn et al. (1999) explained that the IPV could be slightly adjusted to provide an equally reliable and valid measure of individual-level polychronicity.

Work and family overload. Work and family overload were both assessed with four items from Peterson et al. (1995) and one item created by the international researchers collecting the data. Instructions were modified to be relevant to either one’s work or home role. A sample item is, “I feel overburdened in my role”. A six-point Likert-type scale ranging from *strongly disagree*

(1) to *strongly agree* (6) was used, with higher scores indicating higher levels of work and family overload.

Job satisfaction. Two items from the Job Diagnostics Survey (JDS; Hackman & Oldham, 1975) were administered. The items were: “Generally speaking, I am very satisfied with my present job” and “I am generally satisfied with the kind of work I do in my present job”. A six-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6) was used, with higher scores indicating higher levels of job satisfaction.

Family satisfaction. Three items were adapted from the JDS (Hackman & Oldham, 1975) and one item was created by the international researchers collecting the data; these four items assessed family satisfaction. A sample item is, “I am generally satisfied with the role I play in my family”. A six-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6) was used, with higher scores indicating higher levels of family satisfaction.

Life satisfaction. Five items from the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) were administered to participants. A sample item is, “In most ways my life is close to ideal”. A six-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (6) was used, with higher scores indicating higher levels of life satisfaction.

Demographics. Participants were asked to report demographic characteristics such as their gender, age, work sector, job type (managerial or nonmanagerial), and level of education.

Procedure

The data reported in the current study were obtained as part of a large-scale multinational study of the work-family interface (Project 3535; as described in Korabik, Lero, & Ayman, 2003). Due to ethics and privacy regulations in Canada, we were not allowed to contact potential participants directly. Once we had obtained permission from organizations to conduct

the research in their workplace, we used several means of making employees aware of the study. These included: 1) emails sent to the employees by organizational representatives; 2) presentations given to those who were interested by the researchers or by organizational representatives; and 3) flyers placed in employee mailboxes or posted on bulletin boards. Data were collected by both online and paper and pencil surveys. Surveys were available in both English and French, with the French version having been translated from the English and then backtranslated.

Analytic Strategy

SEM analyses were conducted using AMOS 5.0 (Arbuckle, 2003); the parameters were estimated using maximum likelihood (ML) estimation. ML estimation examines how likely it is that the observed values of the exogenous (i.e., predictor) variables predict the observed values of the endogenous (i.e., criterion) variables (Chou & Bentler, 1995). For our SEM analyses we assessed the following goodness-of-fit statistics: 1) chi-square (χ^2); 2) nonnormed fit index (NNFI; Bentler & Bonnet, 1980); 3) comparative fit index (CFI; Bentler, 1990); and 4) root-mean-square error of approximation (RMSEA; Steiger, 1990). The following statistics indicate acceptable fit of the data to the model being assessed: 1) NNFI and CFI values greater than .90 (Bentler, 1992); and 2) RMSEA values no greater than .08 (Browne, & Cudeck, 1993). Low and nonsignificant chi-square statistics are indicative of good model fit; however, the chi-square statistic is highly sensitive to sample size and theoretically has no upper bounds, essentially meaning that its values may not be interpretable in a standardized way.

For variables with three or fewer items (i.e., time-based WIF and FIW and job satisfaction), the items were each entered into the structural equation model as indicators of their corresponding latent (i.e., unobserved) variable. For variables with more than three items (i.e.,

polychronicity, work and family overload, and family and life satisfaction), item parcels were created and were used as indicators of their corresponding latent variable. The focal advantage of using item parcelling is that it can help to produce a more stable factor solution by reducing the participant-to-item ratio (Little, Cunningham, & Shahar, 2002).

SEM models require that the data have a multivariate normal distribution (Byrne, 2001). Due to a Mardia's (1970) coefficient greater than 1.96 observed in the current data (i.e., significant kurtosis), bootstrapping—resampling from the original sample's data (e.g., West, Finch, & Curran, 1995)—was invoked to deal with the nonnormal data in the current sample. Specifically, we performed 500 ML bootstrapping sample replications with a 90% bias-corrected confidence interval for all SEM analyses.

The results that follow present our findings from the: 1) confirmatory factor analysis (CFA) to assess the measurement model; 2) model fit and path coefficient analyses to assess our structural model; and 3) separate analyses of our model for each gender.

Results

Table 1 presents the means, standard deviations, internal consistency reliabilities, and intercorrelations of the focal study variables.

 Insert Table 1 about here

Confirmatory factor analysis (CFA). The overall measurement model provided evidence of good fit, $\chi^2(107, N = 623) = 312.13, p < .01$; NNFI = .95; CFI = .97; RMSEA = .06 (90% confidence interval (CI) = .05–.06); thus, we proceeded to test our model of polychronicity and the work-family interface (see Figure 1).

Polychronicity and WFC model. In support of the first purpose of the current paper, our model of polychronicity and the work-family interface² provided evidence of acceptable fit, χ^2 (127, $N = 623$) = 608.99, $p < .01$; NNFI = .90; CFI = .92; RMSEA = .08 (90% CI = .07–.08); thus, we proceeded to assess the standardized beta (i.e., path) coefficients (see Figure 2). Consistent with our expectations there was a significant and negative path coefficient from polychronicity to work overload ($\beta = -.15$, $p < .01$). However, there was not a significant path from polychronicity to family overload ($\beta = -.05$, $p > .05$), although the observed path coefficient was in the expected direction. Thus, it appears that polychronic time orientation has a beneficial impact in terms of being associated with reduced overload experienced in the work, but not the family, domain. The remainder of the model conformed to our expectations and previous research (e.g., Frone et al., 1992; 1997; McElwain et al., 2005) as work overload was positively related to time-based WIF ($\beta = .64$, $p < .01$), family overload was positively related to time-based FIW ($\beta = .33$, $p < .01$), time-based WIF was negatively related to family satisfaction ($\beta = -.29$, $p < .01$), time-based FIW was marginally negatively related to job satisfaction ($\beta = -.10$, $p < .05$), family satisfaction was positively related to life satisfaction ($\beta = .74$, $p < .01$), and job satisfaction was positively related to life satisfaction ($\beta = .32$, $p < .01$).

 Insert Figure 2 about here

In sum, our model of polychronicity and the work-family interface had acceptable fit and the path coefficients were all supported with the exception of the path between polychronicity and family overload. However, it is possible that the relationship between polychronicity and WFC is different for men and women; thus, next we present the results of our model as it specifically relates to men and women.

The impact of gender on our model. The second purpose of the current paper was to assess our model of polychronicity and the work-family interface separately for men and women. Table 2 presents the intercorrelations of the focal study variables separately for men and women. Table 3 presents the means and standard deviations of the focal study variables separately for men and women; as well as the *t*-tests for gender differences. As displayed in Table 3, men reported experiencing significantly more time-based WIF than women, whereas women reported a more polychronic attitude than men and more family overload than men.

 Insert Tables 2 and 3 about here

It is necessary to establish baseline models for both men and women before testing for the invariance (i.e., equivalence) of our structural model paths across men and women (Byrne, 2001). When our model of polychronicity and the work-family interface was analyzed for men, there was negative error variance and the model was thus, not admissible. However, when assessing our model for women, the model provided evidence of acceptable fit, $\chi^2(127, N = 287) = 367.26, p < .01$; NNFI = .90; CFI = .92; RMSEA = .08 (90% CI = .07–.09); thus, we proceeded to assess the standardized beta coefficients for women (see Figure 3). Consistent with our expectations and the model for both genders there was a significant and negative path from polychronicity to work overload for women ($\beta = -.16, p < .05$). Also consistent with our expectations, yet divergent from the model for both genders combined, there was a significant and negative path coefficient from polychronicity to family overload for women ($\beta = -.16, p < .05$). Thus, it appears that polychronic time orientation has a beneficial impact in terms of being negatively related to overload experienced in both the work and family domains for women. The majority of the remainder of the model conformed to our expectations and the model for both

genders combined as work overload was positively related to time-based WIF ($\beta = .66, p < .01$), family overload was positively related to time-based FIW ($\beta = .39, p < .01$), time-based WIF was negatively related to family satisfaction ($\beta = -.33, p < .01$), time-based FIW was negatively related to job satisfaction ($\beta = -.12, p < .10$), family satisfaction was positively related to life satisfaction ($\beta = .75, p < .01$), and job satisfaction was positively related to life satisfaction ($\beta = .36, p < .01$).

 Insert Figure 3 about here

In sum, our model of polychronicity and the work-family interface fit when analyzed separately for women; however, our model did not fit when analyzed separately for men. Thus, although a direct comparison with our model for men alone was not possible, our data suggest that women benefit from having a polychronic time orientation as evidenced by the significant and negative relationships between polychronicity and work and family overload.

Discussion

We first sought to theoretically and empirically integrate polychronicity into a model of WFC (e.g., Frone et al., 1992; 1997). Subsequently, we sought to assess the path coefficients in our model of polychronicity and the work-family interface. Lastly, we sought to assess our model separately for men and women.

Overall, our results provide evidence that polychronicity should be conceptualized as an antecedent variable when considered in terms of the work-family interface (see Figure 1). Both the measurement and structural models provided evidence of acceptable fit to the data. Moreover, the hypothesized antecedent model of polychronicity and the work-family interface made both theoretical and substantive sense. Most importantly for the purposes of the current

study, polychronicity was found to be associated with lower levels of work overload; possibly implying that people with a more polychronic time orientation experience less feelings of being overloaded by work responsibilities. However, the hypothesized antecedent model did not find the same benefit of operating with a polychronic time orientation in terms of experiencing fewer feelings of being overloaded by family responsibilities. This unexpected finding was most likely due to the fact that the hypothesized antecedent model was initially assessed with both genders combined. When analyzing the antecedent model separately for each gender, the model fit for women but did not fit for men. Looking to the means for men and women (see Table 3), it is clear that women reported significantly more family overload than men. It is possible that men did not face the same demands in terms of family responsibilities and therefore, did not benefit from acting with a more polychronic time orientation in terms of family overload. This finding and explanation can help to elucidate why the model did not fit the data for men but did fit the data for women.

The relationships in our antecedent model of polychronicity and the work-family interface were consistent with previous research (e.g., Frone et al., 1992; 1997; McElwain et al., 2005). Specifically, the overload variables, time-based WIF and FIW, and satisfaction variables all related to each other as expected. Moreover, our complex, multivariable model had reasonable overall fit indices when considered for both genders combined and for women alone. A major strength of the current study was that it has provided an initial integration of the WFC and polychronicity literatures. Although this study was a well-planned and much needed assessment of WFC and polychronicity, it is not without limitations.

Limitations and Future Research Directions

First, the data analyzed in the current study were collected from a single source at one point in time; thus, common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff & Organ, 1986) may be an issue. Although the data were collected from a single source, the participants represented both men and women from a diverse variety of work sectors (i.e., manufacturing, education, and health). Nonetheless, future research should include multi-source ratings to help alleviate response subjectivity. Moreover, the nature of the research design and analyses could not lead to causal conclusions in terms of the relationships in our model of polychronicity and the work-family interface (e.g., Newcomb, 1990). Future research would benefit from assessing the causal directions of our model using a longitudinal or prospective research design.

Second, the gender analyses could not be conducted with a more traditional moderation analysis because the baseline antecedent model for men was not admissible. However, this result in itself helps to elucidate the importance of polychronicity in terms of gender. Based on the fact that the model fit for women but did not fit for men, we can conclude that polychronicity is important for women in terms of reducing both work and family overload. It is also intuitive that the model fit well for women as they reported significantly more polychronicity and family overload than men.

Third, the hypothesized model of polychronicity and the work-family interface included only one of the three major forms of WIF and FIW (i.e., time-based; Greenhaus & Beutell, 1985). Although it might be intriguing to include the other major forms of WIF and FIW in the model (i.e., strain- and behaviour-based), polychronicity was most accurately associated with time-based WIF and FIW. Because demands from both roles can be accomplished simultaneously when operating with a polychronic time orientation, time-based conflict may be

reduced (i.e., there will be more time available to allocate to other responsibilities and tasks when operating with a polychronic time preference). Although it is unclear how polychronicity would theoretically relate to strain- and behaviour-based WIF and FIW, it would nonetheless be interesting for future research to assess these relationships in an exploratory manner.

Fourth, the measure of polychronicity used in the current study (Bluedorn et al., 1999) does not specify whether the items refer to polychronic time orientations being used at work, at home, or both at work and at home. Future research should develop and validate measures of polychronic time orientation that are specific to: 1) the work domain; 2) the family domain; and 3) both the work and family domains. It is intuitive to expect that polychronic time orientation at work would be associated with less work overload and that polychronic time orientation at home would be associated with less family overload. Moreover, within domains, future research should involve a further explication of task influences. Specifically, it is possible that for each person some tasks are undertaken polychronically while other tasks are undertaken monochronically. For example, if a person needs to read an important piece of literature, that person may want to do so with no other distractions (i.e., he/she will focus solely on reading that piece of literature). However, if a person needs to undertake a more monotonous task (e.g., data entry), he/she may also be able to watch his/her children or carry on a conversation with his/her spouse while entering data. Perhaps the difficulty of a task and the amount of attention required to complete a task will impact the time preference that a person uses when undertaking that specific task. Thus, a person's time preference may be different depending on the task at hand.

Lastly, we did not assess cultural differences in terms of our model of polychronicity and the work-family interface. Hall (1959) noted that there are also cultural differences in terms of how polychronically cultures act. Because time is perceived differently across cultures, it is

necessary for future research to assess cultural differences in our model of polychronicity and the work-family interface. It is possible that cultural differences will impact a person's time preference. Previous research has purported that Latin American women did not predominantly endorse polychronic attitudes as often as Anglo American women (Cotte & Ratneshwar, 1999). Moreover, Tinsley (1998) reported that polychronic values were endorsed significantly more often by managers from an American culture than by managers from a Japanese culture. The extant WFC literature would benefit from future research that would address potential cultural differences in dealing with WFC.

It is also important to note that although the original conceptual literature that discussed cultural differences in terms of polychronicity (Graham, 1981; Hall, 1959) expected people from more collectivistic cultures to be more polychronic than people from more individualistic cultures, accumulating empirical results support the opposite prediction (e.g., Cotte & Ratneshwar, 1999; Tinsley, 1998). Namely, that people from individualistic cultures are more likely to endorse polychronic attitudes than people from collectivistic cultures. These incongruous findings beckon for future research to further elucidate the cultural differences in terms of polychronicity and the work-family interface.

Conclusion

In light of the evidence provided in the current paper for the positioning of polychronicity as an antecedent in the WFC model, it is possible that there will be beneficial results of time management training for employees (e.g., Macan, 1994). Specifically, it may be important to train monochrons that work and have a family to be more polychronic; for example, monochrons can be taught to allocate time in their daily schedules to account for unplanned interruptions (Kaufman-Scarborough & Lindquist, 1999). Overall, it appears that it is beneficial for people—

especially women—to do more than one thing at once (i.e., multitask) when they work and have family responsibilities.

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Footnotes

¹ SEM models require complete data (Byrne, 2001); thus, the pattern of missing data in the current study was assessed. A missing value analysis of the indicators for each of the latent variables in the model provided evidence that for these indicators, data were missing completely at random (MCAR). Specifically, the result of Little's MCAR test (Little & Rubin, 1987) was: $\chi^2(258, N = 668) = 260.99, p > .05$. Because of the nonsignificant MCAR test and the finding that there were no significant differences ($p > .05$) among the demographic variables assessed for the participants who did and did not provide complete data, the data can be considered MCAR; thus, listwise deletion—removing participants who did not have complete data for the latent variable indicators—was the most appropriate method for dealing with incomplete data in the current study. Participants who did not report their gender were also deleted.

² Polychronicity can be conceptualized as a coping mechanism for dealing with WFC. Because coping mechanisms can be integrated into the work-family interface in a number of ways (e.g., Carlson & Perrewé, 1999), we also assessed three other competing models that integrate polychronicity into the work-family interface: the independent antecedent, partially mediating, and fully mediating models. We compared the fit indices from each of these three possible models to the hypothesized antecedent model. We could not differentiate between the four models on the basis of the goodness-of-fit indicators (i.e., NNFI, CFI, and RMSEA). However, although the models showed equivalent levels of fit, the path coefficients demonstrated that polychronicity did not partially or fully mediate the relationships between work and family overload and time-based WIF and FIW. Therefore, the hypothesized model was accepted as the best model for elucidating the relationship of polychronicity with the work-family interface.

Table 1

Means, Standard Deviations, Internal Consistency Reliabilities, and Intercorrelations

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Age	39.53	9.01	--									
2. Gender	1.46	.50	.07 ^t	--								
3. Time-Based WIF	3.82	1.19	-.10*	-.15**	.88							
4. Time-Based FIW	2.61	.94	.03	.03	.26**	.68						
5. Polychronicity	3.11	.85	.00	.10*	-.03	.00	.75					
6. Work Overload	3.54	1.18	-.03	-.05	.58**	.17**	-.14**	.92				
7. Family Overload	2.79	1.10	.07 ^t	.26**	.18**	.27**	-.02	.24**	.93			
8. Job Satisfaction	4.31	1.10	.11**	.07 ^t	-.33**	-.08*	.16**	-.40**	-.07 ^t	.86		
9. Family Satisfaction	4.61	.82	.10*	-.03	-.23**	-.18**	-.02	-.24**	-.34**	.20**	.70	
10. Life Satisfaction	3.95	.98	-.04	-.01	-.30**	-.17**	.13**	-.31**	-.30**	.40**	.62**	.89

Note. *N* ranges between 615 and 623, coefficient alphas are on the diagonal in bold. Gender: 1 = male and 2 = female. Higher scores represent more of the quality in question. WIF = work interference with family. FIW = family interference with work.

^t*p* < .10; **p* < .05; ***p* < .01.

Table 2

Intercorrelations of the Focal Study Variables Presented Separately for Men and Women

	1	2	3	4	5	6	7	8	9
1. Age	--	-.17**	.03	-.02	-.07	.06	.14*	.15**	-.02
2. Time-Based WIF	.01	--	.33**	-.02	.60**	.21**	-.27**	-.27**	.29**
3. Time-Based FIW	.02	.21**	--	-.02	.17**	.31**	-.08	-.16**	-.17**
4. Polychronicity	.02	-.02	.01	--	-.11 ^t	-.10 ^t	.12*	.01	.13*
5. Work Overload	.02	.55**	.17**	-.16**	--	.26**	-.43**	-.28**	-.32**
6. Family Overload	.05	.25**	.23**	.00	.27**	--	-.13*	-.33**	-.36**
7. Job Satisfaction	.07	-.38**	-.09	.18**	-.37**	-.04	--	.19**	.43**
8. Family Satisfaction	.04	-.19**	-.20**	-.04	-.21**	-.36**	.21**	--	.66**
9. Life Satisfaction	-.07	-.32**	-.16**	.12**	-.31**	-.25**	.38**	.57**	--

Note. *N* ranges between 284 and 336, the intercorrelations for men are presented below the diagonal and the intercorrelations for women are presented above the diagonal. Higher scores represent more of the quality in question. WIF = work interference with family. FIW = family interference with work.

^t $p < .10$; * $p < .05$; ** $p < .01$.

Table 3

Descriptive Statistics and Gender Differences of Focal Study Variables

Variable	<i>M</i>	<i>SD</i>	<i>t</i>
Time-Based WIF	Men = 3.98 Women = 3.63	Men = 1.10 Women = 1.26	3.62**
Time-Based FIW	Men = 2.58 Women = 2.65	Men = .91 Women = .97	-.86
Polychronicity	Men = 3.04 Women = 3.20	Men = .83 Women = .88	-2.44*
Work Overload	Men = 3.59 Women = 3.48	Men = 1.14 Women = 1.23	1.23
Family Overload	Men = 2.52 Women = 3.10	Men = .92 Women = 1.21	-6.55**
Job Satisfaction	Men = 4.24 Women = 4.39	Men = 1.10 Women = 1.10	-1.75 ^t
Family Satisfaction	Men = 4.63 Women = 4.59	Men = .74 Women = .90	.67
Life Satisfaction	Men = 3.95 Women = 3.94	Men = .92 Women = 1.04	.19

Note. $N = 623$ (336 men and 287 women); ^t $p < .10$; * $p < .05$; ** $p < .01$.

Figure Captions

Figure 1. Antecedent Model of Polychronicity and the Work-Family Interface

Figure 2. Antecedent Model of Polychronicity and the Work-Family Interface—Both Genders
Combined

Figure 3. Antecedent Model of Polychronicity and the Work-Family Interface—Women

Figure 1.

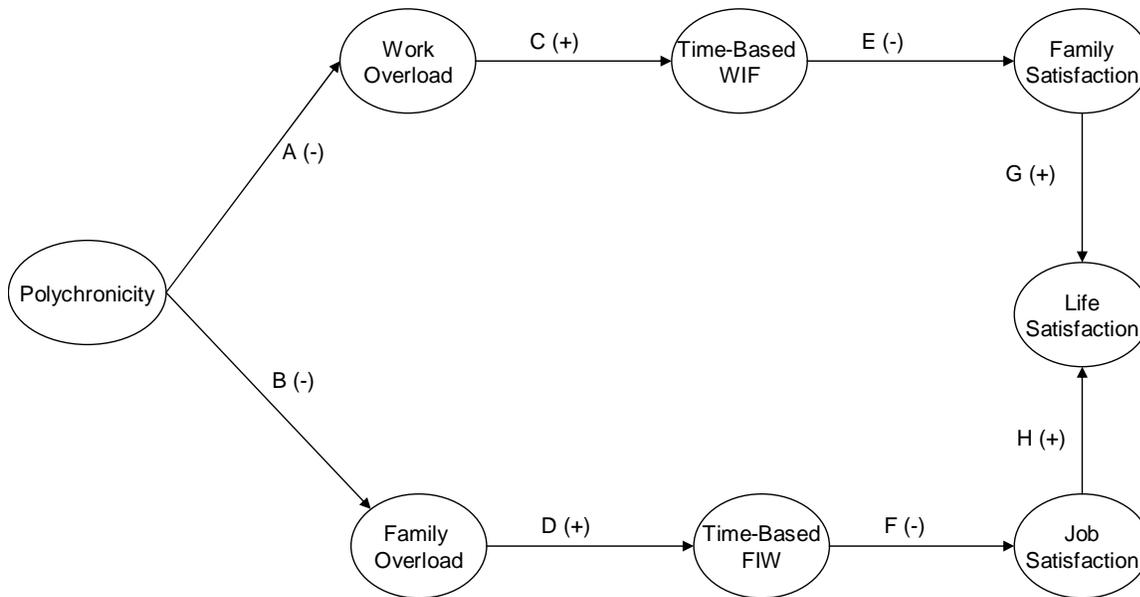


Figure 1. Paths in our hypothesized antecedent model of polychronicity and the work-family interface. + = expected positive relation; - = expected negative relation.

Figure 2.

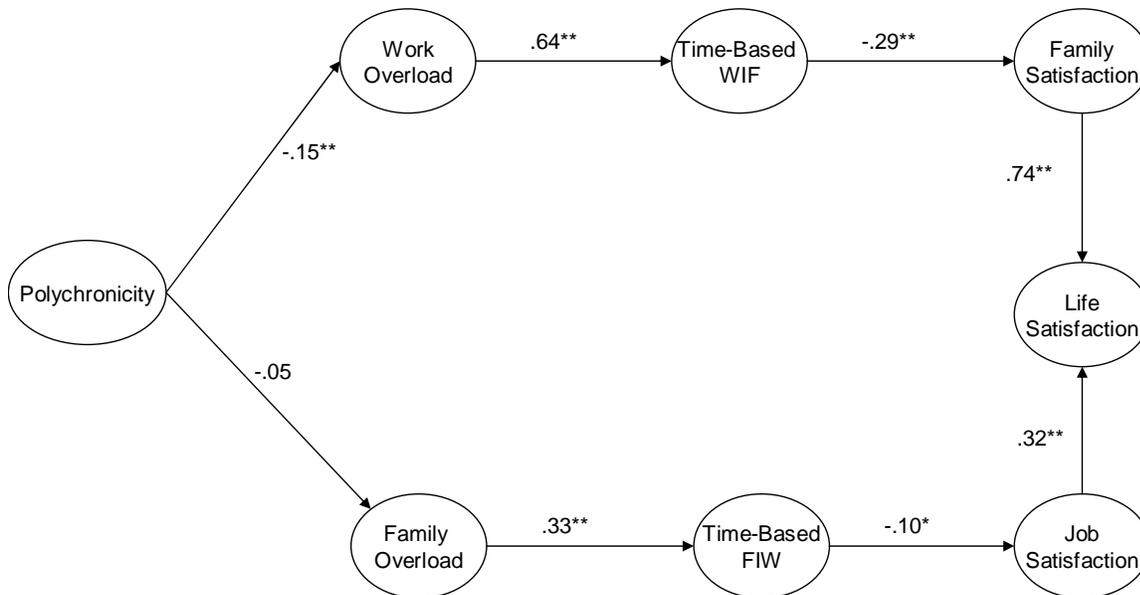


Figure 2. Standardized path estimates. $N = 623$; * $p < .05$; ** $p < .01$. Note that the latent variable indicators, error terms, and residual (i.e., disturbance) terms are not included in the figure for purposes of clarity and parsimony.

Figure 3.

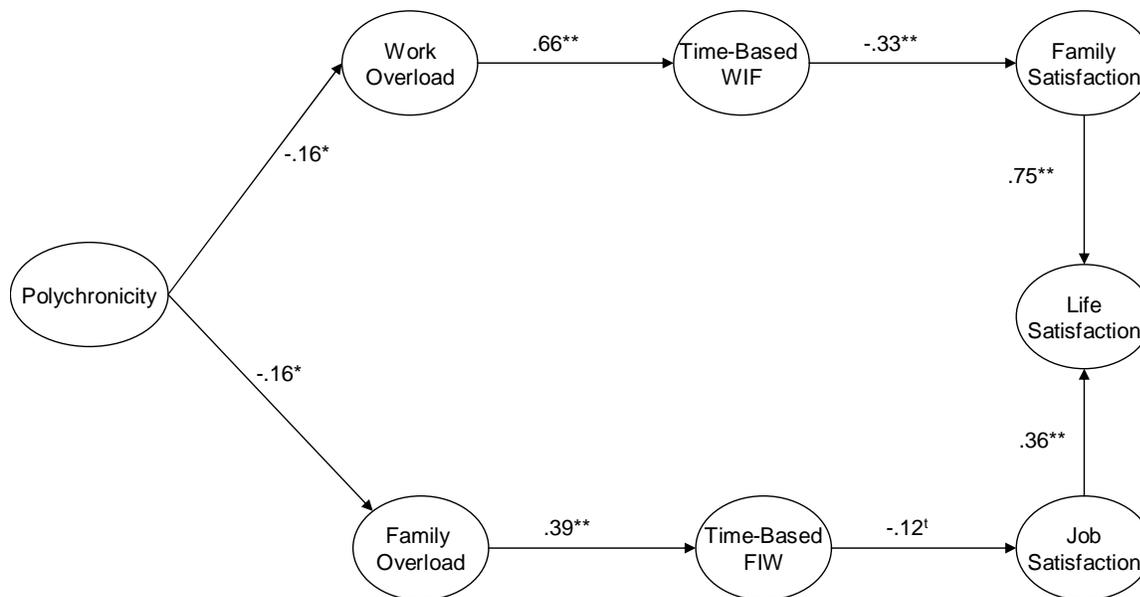


Figure 3. Standardized path estimates. $N = 287$; $^t p < .10$; $* p < .05$; $** p < .01$. Note that the latent variable indicators, error terms, and residual (i.e., disturbance) terms are not included in the figure for purposes of clarity and parsimony.