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Work-family Conflict and Alcohol Use: Examination of a Moderated Mediation Model

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Abstract

Research consistently documents the negative effects of work-family conflict; however, little focuses on alcohol use. This study embraces a tension-reduction theory of drinking, wherein alcohol use is thought to reduce the negative effects of stress. The purpose of the present study was to test a moderated mediation model of the relationship between work-family conflict and alcohol use in a Chicagoland community sample of 998 caregivers. Structural equation models showed that distress mediated the relationship between work-family conflict and alcohol use. Furthermore, tension reduction expectancies of alcohol exacerbated the relationship between distress and alcohol use. The results advance the study of work-family conflict and alcohol use, helping explain this complicated relationship using sophisticated statistical techniques. Implications for theory and practice are discussed.

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Alcohol use among employees is an important social policy issue because it can detrimentally affect employees' health and their productivity.[1,2,3] Specifically, alcohol use has been related to absenteeism, work performance decrements, workplace safety issues, employee turnover, and increased healthcare costs.[2,3,4,5] Increasing attention has been given to the role that workplace stress has on alcohol use.[4] The work-stress paradigm suggests that employee mental health problems and negative health-related behaviors (i.e., alcohol use) may be partially due to aversive work conditions.[1,2,6] The interference of work with family life and vice versa, also known as work-family conflict (WFC)[7,8,9] is a particularly important stress-related construct to consider as a potential influence on drinking behavior because of its possible impact on both workplace and health outcomes for employees.[5,10]

To date, observed associations between WFC and alcohol tend to be small, leading scholars to call for more complex models (e.g., mediational models) to better explain the relationship between WFC and alcohol use.[1,7,10,11] For example, following affect regulation-based models of alcohol use, employees may turn to alcohol to relax and ease the tensions resulting from WFC. In other words, they self-medicate through alcohol use.[12,13] Another possibility is that chronic stress related to WFC leads to feelings of distress[14] such as depression and anxiety, both of which are associated with alcohol use.[15,16] In the present study, we test a moderated-mediation model using structural equation modeling to examine whether psychological distress mediates the relationship between WFC and alcohol use, and whether the mediator effect differs for those who have different expectations about the tension-reduction properties of alcohol.

Work-family Conflict

Greenhaus and Beutell[8] defined WFC as incompatible pressures arising simultaneously from the work and family roles. Theoretical models and past literature have identified subtypes of WFC, including time-based WFC, where time pressures associated with membership in one role may make it physically impossible to comply with expectations from another role; strain-based WFC, where strain symptoms (e.g., fatigue and irritability) experienced within one role intrude into the other role and interfere with participation in that role; and behavior-based WFC, where specific behaviors required in one role are incompatible with behavioral expectations in the other role (although behavior-based WFC has proven difficult to operationalize).[8,17] Furthermore, more contemporary models of the work-family interface take a more comprehensive, bidirectional approach that gives equal emphasis to the impact of work on family and family on work, as both are likely to be involved in overall feelings of WFC and have been shown to be related to alcohol use.[18,19] Work-family researchers recommend that both work and family domain stress be included in research on the work-family interface.[7,10,20] One way to accomplish this is through incorporating both work-family and family-work sources of conflict using structural equation modeling, which allows examination of latent variables, or hypothetical constructs, which are indicated by multiple observed variables.[21] In the present study, the latent WFC variable incorporates both work-to-family and family-to-work conflict, which better represents how individuals experience conflict between work and family roles. That is, work-to-family conflict and family-to-work conflict are not separate, unrelated experiences in people's lives, but are experienced simultaneously. Thus, we feel that the latent construct approach, which allows several indicator variables to be incorporated into a unified construct, is a more generalizable way of examining this phenomenon.[22]

It is generally agreed that a good work/non-work balance is of growing importance for the economic viability of organizations and for the welfare of families.[23] However, WFC is an extremely common phenomenon. A national representative sample of the U.S. workforce showed that 90% of men and 95% of women reported wanting more time with family,[24] suggesting that a vast majority of the American workforce experiences some degree of WFC. WFC is not only a prevalent problem, but a serious one in terms of the negative impact it can have on mental and physical health. Research shows that WFC is associated with hypertension, coronary heart disease, peptic ulcers, and cancer[14] as well as job and life dissatisfaction, chronic depression, and anxiety.[1,25,26] Highlighting the problematic and socially costly effects associated with WFC may help convince policymakers of the need to provide interventions that can help mitigate WFC,[1] potentially reducing the occurrence of significant health problems, including alcohol use and abuse.

Work-Family Conflict and Alcohol Use

In addition to the aforementioned effects on job and health, research has found evidence linking overall WFC, as well as work-to-family and family-to-work conflict, with alcohol consumption and problematic use.[18,19,27,28] The likely earliest study relating WFC and alcohol use found that perceived spillover of work problems to family was marginally positively related to alcohol consumption among blue collar women.[29] More recent work using more representative samples corroborated those initial findings. One study using a four-item scale of WFC, which included dimensions of work-family and family-work conflict, found that WFC predicted drinking to cope and frequency of intoxication.[27] A study that separated work-family and family-work conflict using two-item measures of each found that each scale predicted heavy alcohol use and depression.[19] Another found that work interfering with family life predicted problem

drinking, but the relationship was no longer significant once social support and job stressors were added to the model.[30] There is evidence that WFC may have both immediate and long-term effects on alcohol use. Frone and colleagues found support for a longitudinal relationship, wherein WFC was positively related to heavy alcohol use four years later.[10] Another study found that daily work interference with family predicted daily alcohol use in a sample of Chinese workers.[31]

Thus, evidence has been found that both forms of WFC (i.e., work interfering with family or family interfering with work) are associated with negative outcomes, but neither exhibits a consistent and reliable association. We argue that a latent variable approach, by more naturalistically incorporating both directions of WFC and by modeling the measurement error, is better able to model the "true" relationship between WFC and alcohol use. These somewhat inconsistent findings also lend support to the argument that the relationship between stressors such as WFC and alcohol use cannot be defined by "simple theories."[32] Indeed the specific mechanisms through which WFC may impact drinking behavior remain unclear.

Distress as a mediator. One possibility for explaining the relationship between WFC and alcohol use is that WFC affects drinking behavior through its effects on psychological distress. Affect regulation-based models of drinking propose that alcohol may be used as a coping mechanism to either increase positive affect or decrease negative affect.[33] In other words, the relationship between stress and alcohol use may be mediated by negative affect.[34] Thus, individuals drink to escape, avoid, or otherwise regulate unpleasant emotions, such as those resulting from WFC.[35]

Research consistently demonstrates a link between WFC and emotional and physical distress.[36] For instance, strain-based work-to-family conflict interference led to increased

complaints of fatigue and depressive symptoms one year later in a Dutch sample.[37] Furthermore, in a sample of nearly 2,000 individuals aged 24-62, work-to-family conflict and family-to-work conflict each predicted depression and anxiety disorder, in addition to problem drinking,[18] which tend to be comorbid health issues.[16] Previous studies have shown that not only do psychiatric problems, namely mood and anxiety disorders, and substance use disorders co-occur, but that this comorbidity often results in increased psychiatric problems, risk for negative outcomes, and cost of health care.[38,39,40,41] Specifically, depression and anxiety have been linked to increased levels of alcohol consumption.[42,43]

According to affect regulation models of drinking, individuals with higher levels of WFC would be more likely to experience distress, which could lead to increased alcohol use. Distress variables have been tested as mediators between stressors and various outcomes in previous research, although less commonly in the research on job stress and alcohol use. Depression and anxiety have been shown to mediate relationships between daily role overload and marital behaviors, such as withdrawal and anger in marital interactions.[44] Additionally, distress was found to mediate the relationship between involvement in traumatic incidents and drinking to cope among firefighters[45]and the relationship between work-strain and problematic alcohol use among police officers.[46] Research on WFC has shown that family-work conflict was related to distress whereas work-family conflict was not. Psychological distress was then related to cigarette use and heavy drinking.[47] In another study, distress partially mediated the relationship between workplace harassment/abuse and drinking outcomes.[48] Building on this research, we hypothesize that psychological distress in the form of depression and anxiety will mediate the relationships between WFC and alcohol use outcomes in a broader working population (H1).

Tension reduction expectancies as a moderator. Scholars have suggested that moderating effects may further explain the context in which stressors lead to drinking behavior.[2,34,49,50,51,52,53] One such potential moderator is tension reduction expectancies. Tension reduction expectancies refer to the belief that consuming alcohol will reduce tension, provide relaxation, and divert a person from worrying about problems.[33] Given that enduring stressors (e.g., issues with work) may be more likely to lead to a build-up of tension (as opposed life stressors that are sudden and not enduring),[33] WFC may be especially likely to increase risk for habitual alcohol use, if such use was expected to regulate negative affect associated with WFC experiences. There is substantial evidence that those who report drinking to cope with, or escape from, unpleasant or stressful situations/emotions are most likely to be problem drinkers.[51] More specifically relevant to the current study, using alcohol for the purposes of coping with work stress is an important component in the relationship between work stressors and alcohol use.[53,54,55] Thus, we hypothesize that the relationship between distress and alcohol use will be moderated by endorsement of tension reduction expectancies; specifically, that tension reduction expectancies will exacerbate the positive relationship between distress and alcohol use (H2).

The Present Study

In sum, previous research has demonstrated a potential relationship between WFC and alcohol use, but evidence suggests that more complex moderated mediation models incorporating indirect effects may best clarify the conditions under which they are related. The purpose of the present study was to determine whether psychological distress mediates the relationship between WFC and alcohol use (H1), and whether the relationship between the distress and alcohol use is moderated by tension reduction expectancies (H2). Specifically, the current study builds and improves upon existing literature by using more sophisticated methods in analyzing a complex

latent variable model more likely to explain the mechanisms through which WFC affects alcohol use, and modeling WFC as a multidimensional trait using structural equation modeling.

Method

Participants

Data for this study derive from a survey conducted to examine the prevalence of WFC, drinking outcomes, and intervening variables in a community sample of employed adults (aged 18 and older). The sample was identified by purchasing randomly selected phone numbers for block groups within the greater Chicagoland area and screening for eligible participants from 2006-2008. In the case of multiple eligible respondents in the same household, the Troldahl-Carter-Bryant method of respondent selection was used to select the respondent.[56,57] Eligibility criteria included being at least 18 years of age, having been employed at least 20 hours per week at some time in the past 12 months, fluency in English or Spanish, and having unpaid caregiving responsibilities.

Of the 2,114 eligible people who agreed to be mailed a questionnaire, 998 questionnaires (54.1% women) were completed and returned, resulting in a 47.2% response rate. A $30 American Express gift card incentive was sent with the mail questionnaire to those who agreed to complete the survey. Phone screens and mail surveys were administered in English or Spanish. Special care was taken to include men and Hispanic participants in order to have a representative sample. The average age was 42.0 (*SD* = 10.1) and the ethnic breakdown was 16.0% Latino/a, 37.0% African American, 42.7% White, 4.3% "other" race/ethnicity. A majority of participants (71.4%) indicated holding a full-time work position at some time in the past 12 months, 56.0% reported a household income of $50,000 or more, 58.6% had at least some college education, and

70.2% were married or in a committed relationship. The majority of participants were caring for children under age 18 (75.7%) while a significant percentage cared for children over age 18 (15.8%), a spouse/partner (24.8%), or parents (22.2%). A few participants also cared for siblings, aunts or uncles, and grandparents (less than 6% each). Non-responders (those who agreed to participate in the study, but did not return a questionnaire) were more likely to be male, (χ^2 (1, N = 2,114) = 19.11, p < .001), and to be Latino or Black, (χ^2 (3, N = 2,114) = 154.08, p < .001) compared to those who returned a completed questionnaire. For the purposes of the current study, only participants who indicated having ever used alcohol were included in the analyses (n = 936).

Measures

Work family conflict. Participants completed the *Work-Family Conflict Scale*.[58] This scale is a 22-item measure which assesses four dimensions of WFC, including both strain-based and time-based work to family interference (W→F) and family to work interference (F→W). Thus the four subscales, which were each averaged, were strain-based W→F (α = .84, e.g., "After work, I have little energy left for things I need to do at home"), time-based W→F (α = .89, e.g., "Job demands keep me from spending the amount of time I would like with my family"), strain-based F→W (α = .89, e.g., "Things going on in my family life make it hard for me to concentrate at work"), and time-based F→W (α = .82, e.g., "I would put in a longer workday if I had fewer family demands"). All items were rated on a 4-point Likert scale ranging from 1(*Never)* to 4(*Always)*.

Distress. Two constructs, depression and anxiety, were used to assess participants' level of distress. Participants responded to 5 items of the *Center for Epidemiological Studies*

Depression Scale (*CES-D*) short-form[59] to assess major symptoms of depression (α = .87). Items were rated using a 4-point Likert scale with response options ranging from 1(*Rarely or none of the time [less than 1 day per week])* to 4(*Most or all of the time [5-7 days per week])*. Items included statements such as: "I felt that everything I did was an effort" and "I felt that I could not shake off the blues even with help from my friends or family."

Level of anxiety was measured by the 9-item tension-anxiety factor (α = .86) of the *Profile of Mood States*.[60] All items were measured on a 5-point Likert scale ranging from 1(*Not at all*) to 5 (*Extremely)*, e.g., "In the last 7 days, have you felt tense?"

Tension reduction expectancies. Tension reduction expectancies for alcohol use were measured by the 5-item tension-reduction subscale of the *Alcohol Effects Questionnaire*[61](α = .85). The AEFQ is drawn from a revision of the widely *used Alcohol Expectancy Questionnaire*[62], and measures personal beliefs about alcohol's effects on the self. Response options ranged from 1(*Strongly Disagree*) to 5 (*Strongly Agree*). An example item is, "Alcohol makes me worry less."

Alcohol use. Four indicators were used to assess potentially problematic alcohol use. Two items (the average number of drinks per day in the last 30 days and the greatest amount of alcohol consumed in a day in the last 30 days) had response options ranging from 0 (*none*) to 7 (*more than 6*).[63] The other two items (frequency of binge drinking and drinking to the point of intoxication in the past 12 months) had responses ranging from 0 (*never*) to 7 (*5 or more times a week*).[64]

Demographics. Gender was scored as 1 = women and 0 = men. Race/ ethnicity (White, Black, Hispanic, and Asian/Pacific Islander) was dummy coded with Whites as the reference

group. Income was an ordinal scale ranging from 0 (*less than $10,000*) to 7 (*greater than $90,000*). Education level was also an ordinal scale ranging from 1 (*8th grade or less*) to 9 (*doctoral degree*). Age was measured continuously in years.

Data Analytic Plan

The primary analyses involved a sequence of structural equation models (SEMs). SEM allows modeling of latent variables with multiple indicators and also estimates random measurement error, which may cause underestimation of effects.[65,21] The use of latent variables allows for examination of abstract, socially or psychologically created constructs that cannot be directly measured.[22] All SEM analyses were conducted with Mplus version 5.1.[66] First, confirmatory factor analyses were conducted on each measure to determine the appropriate factor structures, which were then used as the measurement portion of the model. Second, mediation was examined. Baron and Kenny[67] describe mediation existing when (1) the independent variable predicts the dependent variable (X→Y), (2) the independent variable predicts the mediator (X→M), and (3) the mediator significantly predicts dependent variable (M→Y), controlling for the independent variable. Effects were modeled with the MODEL INDIRECT statement in Mplus, which provides the estimate of the indirect effect, defined as the product of the path coefficients for X→M and M→Y.[68] Bias-corrected bootstrapping was employed to create confidence intervals to determine significance of the indirect effect. Bootstrapping involves resampling the data with replacement a given number of times in order to generate a nonparametric estimation of the entire sampling distribution of the indirect effect.[65,69]

This method of testing for significance is recommended over other tests, such as the Sobel test*, because it has higher power while keeping the Type I error rate in check.[69,70] Model fit was assessed with the χ^2 likelihood ratio test, the comparative fit index (CFI), root mean squared error of approximation (RMSEA), and standardized root mean squared residual (SRMR). Because the χ^2 likelihood ratio test is sensitive to sample size, we primarily used the CFI, RMSEA, and SRMR to determine model fit. Values above .95 for the CFI, below .06 for the RMSEA, and below .08 for the SRMR were considered indicators of good model fit.[71] Finally, a latent variable interaction was added to the model. In order to specify the random effects involved, the analysis type in Mplus was changed to RANDOM, which is required to estimate a latent variable interaction. Since the MODEL INDIRECT statement cannot be used with this analysis type (required by the software), the mediated effect was specified by defining the indirect effect as the product of the path coefficients for the effect of alcohol use on distress and the effect of distress on WFC. Then the defined indirect effect was included in the overall model.

Results

Descriptive statistics and zero-order correlations are shown in Table 1. Bivariate correlations showed that WFC was positively related to depression, anxiety, tension reduction expectancies, and the alcohol indicators, except binge drinking. The distress variables were each positively related to tension reduction expectancies and all of the alcohol indicators. Tension

*In the present study, the Sobel test (often used to test the significance of an indirect effect) is also significant (2.60, *SE* = .07, *p* = .009). However, this test may not be reliable because it requires normality of the sample distribution of the indirect effect (see 67).

reduction expectancies were positively related to each alcohol indicator. Age was negatively related to depression, anxiety and the alcohol variables. Additionally, each of the alcohol use variables were strongly correlated with each other (r's $\geq .53$, $p < .001$).

We conducted confirmatory factor analyses (CFAs) on each latent variable (WFC, distress, tension reduction expectancies, and alcohol use) to determine the most appropriate factor structure. WFC (with the four subscales as indicators) showed good fit as a 1-factor model when a correlated error between work-family strain and work-family time, as suggested by modification indices, was added ($\chi^2(1) = 10.42$, $p = .001$, CFI = .99, RMSEA = .10, SRMR = .01). Alcohol use modeled as the average number of alcohol drinks per day, the greatest number consumed per day when drinking, the number of occasions on which the respondent became intoxicated, and how often the respondent binge drank (had 5 or more drinks) also showed good fit on two of the approximate fit indices as a 1-factor model when a correlated error between binge drinking and frequency of intoxication was added ($\chi^2(1) = 24.30$, $p < .001$, CFI = .99, RMSEA = .16, SRMR = .01). For distress, which was modeled as the combination of depression and anxiety, we had good model fit when the depression variable was divided into separate factors: loss of interest and depressed mood, thus the distress factor was made up of three components: anxiety, loss of interest (four CES-D items, e.g., "I felt everything I did was an effort"), and depressed mood (three CES-D items, e.g., "I felt sad") ($\chi^2(96) = 274.21$, $p < .001$, CFI = .98, RMSEA = .05, SRMR = .03). Tension reduction showed good fit as a 1-factor model ($\chi^2(3) = 9.73$, $p = .02$, CFI = 1.00, RMSEA = .05, SRMR = .01).

In the full model (Figure 1), each indicator loaded onto its corresponding latent variable (all p's $< .001$). Thus, all constructs were modeled as latent variables. For each structural

model, the measurement of the latent variables remained the same. Preliminary linear regression analyses showed that sex, ethnicity, income level, and education level were each related to at least one of the alcohol use indicators and WFC scale and thus were included in the models as controls. Marital status and the number of children and adults living in household were unrelated to WFC or alcohol use and were excluded from the final models.

To test H1, that distress would mediate the relationship between WFC and alcohol use, the indirect effect of WFC predicting alcohol use via distress was estimated. The indirect effect, defined as the product of the path coefficient for the effect of WFC on distress (a) and the path coefficient for the effect of distress on alcohol use (b; see Figure 2) was significant (b = .18, p < .01, 95% CI [.03, .39]). Each of the simple effects were significant (WFC predicting distress; b = .55, p < .001, 95% CI [.41, .74] and distress predicting alcohol use; b = .33, p < .01, 95% CI [.05, .68]). The total effect of WFC predicting alcohol use was significant (b = .16, p = .04), but the direct effect of WFC predicting alcohol use was not significant when the indirect effect was also in the model (b = .10, p = .85), suggesting that the effects of WFC on alcohol use were fully mediated by distress, in support of H1.

To test H2, that tension reduction expectancies would moderate the relation between distress and alcohol use, a latent variable interaction between tension reduction expectancies and distress predicting alcohol use was estimated. The interaction was significant (b = .27, p = .02). At higher levels of tension reduction expectancies, alcohol use increased with an increase in distress. At lower levels of tension reduction, alcohol use decreased with an increase in distress. In other words, distress positively related to alcohol use only for those who have higher tension

reduction expectancies, supporting H2. The main effects of tension reduction expectancies and distress on alcohol use were also significant (b = .18, p < .01 and b = .36, p < .01, respectively).

Discussion

This study contributes to the literature on WFC and health by using a moderated mediation model to clarify mechanisms through which WFC affects alcohol use. Over 10 years ago Frone[18] called for the use of moderated mediation models in testing the relationship between work-stress and alcohol use, but few studies have done so. Testing these types of models is crucial for the development of appropriately targeted intervention and prevention efforts to address issues of heavy alcohol use and alcohol abuse. Consistent with our hypotheses, the findings of the current study indicate that distress explained the relationship between WFC and alcohol use and that tension reduction expectancies moderated the relationship between distress and alcohol use. Specifically, distress was related to higher levels of alcohol use only for those with high tension reduction expectancies. These findings lend support to affect regulation models which posit that individuals self-medicate with alcohol in order to ease feelings of negative affect.

This study builds upon previous research which has found that experiencing negative emotions mediates the relation between WFC and weekly alcohol use.[3] By using a latent variable approach in SEM, we were able to model measurement error and thus better detect "true" relationships between WFC, distress, tension reduction expectancies, and alcohol use. Additionally, we tested our models in a diverse community sample of workers, focusing on those who had unpaid caregiving responsibilities, as caregivers are likely to experience some degree of conflict between their work life and their family life.

Previous research showed that job dissatisfaction was related to problem drinking among those who reported that they drank to reduce negative emotions.[52] Our study corroborated those findings, and expounded on them. Logically, individuals who feel distressed due to conflict between their families and their jobs are more likely to drink if they believe that drinking will make them feel better. These people may be most at risk for developing serious alcohol problems and addictions if they continue to use alcohol to cope with negative feelings created by WFC. Future research should augment the current study by examining alcohol addiction and include more recent models of alcohol dependence, including examining how alcohol dependence changes the structure and function of certain brain regions,[72] which may then place the individual at greater risk for experiencing problems in the work and family arenas.

This study improved upon existing research on WFC and alcohol use by using SEM to model relationships between latent variables. By modeling WFC, distress, tension reduction, and alcohol use as latent constructs, we were able to account for measurement error and increase confidence in the reliability and validity of the measures and the overall findings.[73] A crucial finding was that tension reduction moderated the relationship between distress and alcohol use such that higher tension reduction expectancies exacerbated the relationship between distress and alcohol use. This implies that changing an individual's beliefs about the effects of alcohol can influence the degree to which alcohol will be used as a coping strategy to ameliorate the negative effects of stressors such as WFC. Also, if individuals are guided to use healthier, more positive coping strategies (such as exercise, or soliciting social support), they may be less likely to turn to alcohol.

This study had several limitations. First, all data were self-report, increasing the likelihood of common method bias. Second, despite the fact we gathered data from a community sample, there is no specific national or regional data on the characteristics of employed caregivers. Thus, we were unable to compare the demographic characteristics of the sample to that of the population to assess the degree of potential response bias in the data. Third, the data were cross-sectional, precluding a stronger test of mediation that would assess the effects of WFC on subsequent distress, and distress on subsequent drinking behavior. Future research should test this model in data collected at multiple time points to rule out alternate explanations (e.g., that distress causes perceptions of WFC or may increase the likelihood that an individual would use alcohol, rather than the reverse).

Finally, the purchased sample included only land line phone numbers. Consequently, individuals who only have cell lines were not included in our sampling frame. Over the past decade, the proportion of cell phone-only households has increased substantially--from less than 2 percent in 2001 to almost 25 percent in 2009.[74] Another 14.9 percent of households receive all or most of their phone calls via cell phone, even though they have a landline phone.[75] Studies that rely on random digit dial (RDD) sample frames are thus reaching a smaller proportion of the population than they used to. Moreover, cell-only households, which are not included in RDD sample frames, are more likely to be made up of young adults, individuals who live in poverty and people who are of Hispanic origin,[75,76] resulting in biased RDD samples. Although possibly less problematic, given that we were interested in the population of individuals who perform caregiving while also working, and these individuals may be less likely to be young and living in poverty, future research in this area should consider employing updated sampling techniques,

such as address-based sampling, in order to ensure that results generalize to a wider demographic of caregivers.

Despite the limitations of the study, the results provide evidence of the complex relation between WFC and alcohol use, which contributes to the refinement of theoretical models and also has applied implications. The results provide useful information for the development of possible intervention and prevention efforts. Namely, employers could potentially reduce problematic alcohol use and distress among employees, thereby decreasing health problems and increasing productivity, by reducing WFC. This might be accomplished, for instance, by offering flex time, management support, or other options that would allow people to do their jobs while still managing needs of their families. For example, data from a large national survey indicated that employees who report more flexible workplace policies to help them balance work and family responsibilities also reported higher commitment to their organization, less stress, and fewer potential costly outcomes for their employer, such as missed deadlines, absenteeism, and tardiness.[77] Research demonstrates that those with flexible work options report less strain and burnout[78,79] even if such options are not codified into formal policies.[80] Alternatively, interventions to help workers cope positively with work and family stress may be helpful in reducing the likelihood that WFC will lead to distress, and, potentially, to problematic substance use over time. One such intervention with female clerical employees showed that, compared to a control group, workers who participated in such an intervention reported less role stress, psychological distress, somatic complaints, and tobacco use six months later.[81] If such interventions additionally emphasized the negative aspects of alcohol or other drug use, such interventions might be useful to decrease the likelihood that workers will see alcohol use as an

easy solution to manage their depression and anxiety, and replace unhealthy coping strategies with healthier ones.

In sum, our findings are significant for several reasons. First, this study helps explain the complicated relationship between WFC and alcohol use. Second, use of sophisticated analytical techniques, namely SEM, made modeling these complex interactions with theoretically important latent variables possible, and tested complex theoretical relationships between stressors, distress, and outcomes. Finally, these results can inform prevention and intervention efforts to make the workplace a healthier place for those who need to balance work and family responsibilities, most notably suggesting that reducing WFC, changing worker attitudes about unhealthy coping strategies such as drinking, and emphasizing more positive coping techniques can help decrease the likelihood that WFC will lead to problem drinking among employees.

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Table 1. *Correlations and Descriptive Statistics among Study Variables*

	2	3	4	5	6	7	8	9	Mean (SD)
1. WFC	.37**	.39**	.26**	.09*	.13**	.06	.16**	-.03	2.36 (.66)
2. Depression	-	.69**	.19**	.13**	.08*	.10*	.17**	-.08*	1.60 (.65)
3. Anxiety		-	.23**	.13**	.13**	.10*	.22**	-.08*	1.86 (.68)
4. Tension reduction			-	.19**	.22**	.17**	.26**	.02	2.71 (.97)
5. Ave. # drinks per day				-	.80**	.58**	.53**	-.14**	1.60 (1.58)
6. Most drinks in a day					-	.61**	.65**	-.14**	2.37 (2.24)
7. Binge drinking						-	.65**	-.16**	1.03 (1.51)
8. Freq. of intoxication							-	-.19**	.75 (1.18)
9. Age								-	42.10 (10.06)

Note: $^{**}p < .001$, $^{*}p < .05$; The controls sex, ethnicity, income, and education level were categorical and therefore not included in this table.

Figure Captions

Figure 1. Hypothesized Measurement and Structural Model

Figure 2. Unstandardized Results for the Structural Portion of the Model

Figure 1.

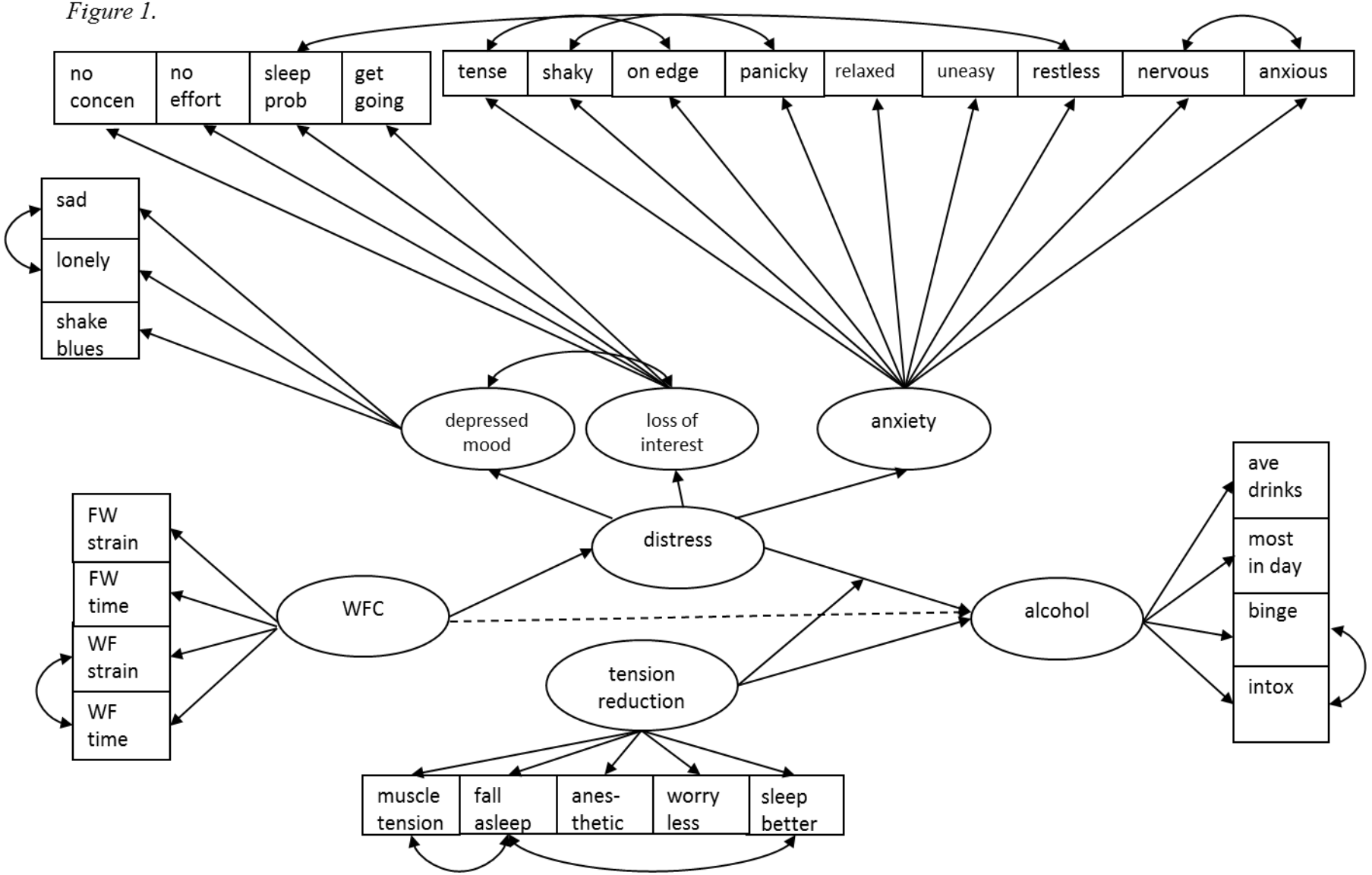
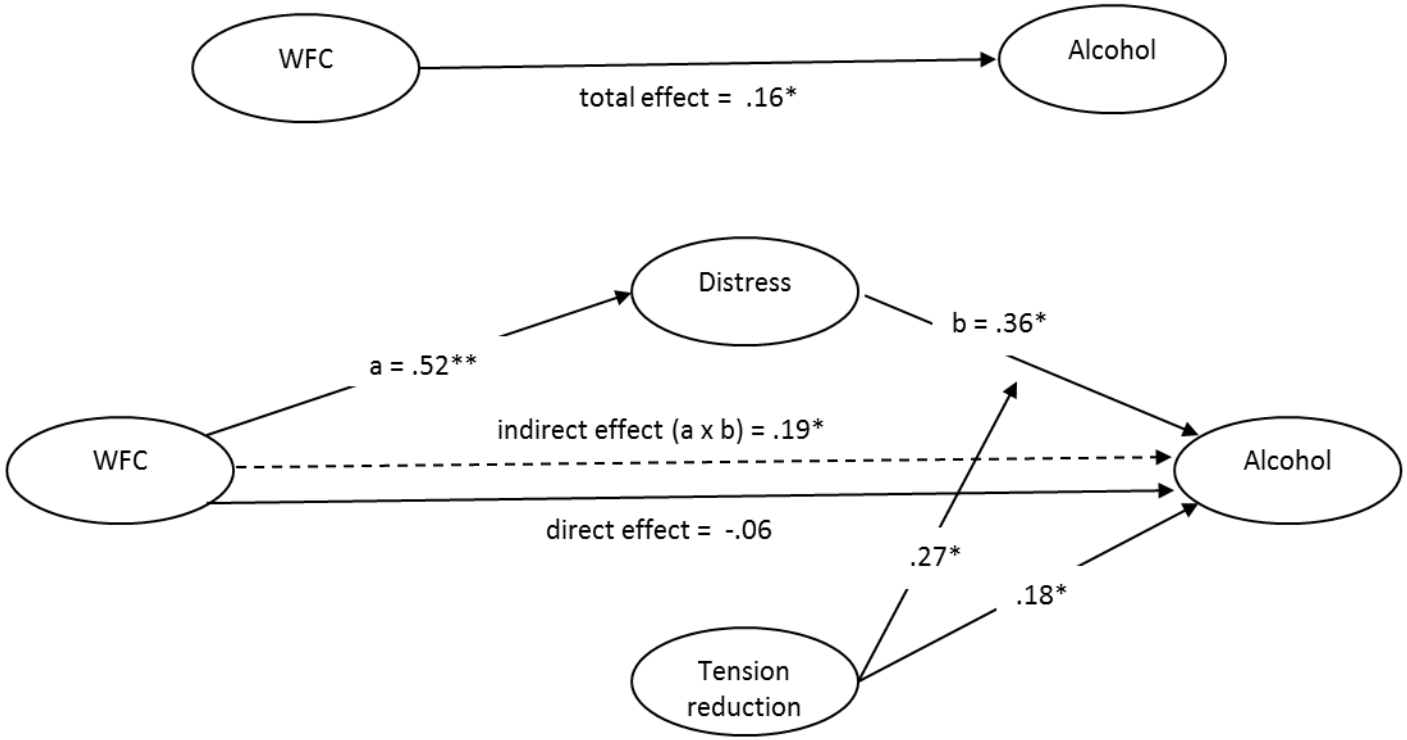

no concen
no effort
sleep prob
get going
tense
shaky
on edge
panicky
relaxed
uneasy
restless
nervous
anxious
sad
lonely
shake blues
depressed mood
loss of interest
anxiety
FW strain
FW time
WF strain
WF time
WFC
distress
alcohol
ave drinks
most in day
binge
intox
tension reduction
muscle tension
fall asleep
anes-thetic
worry less
sleep better

Figure 2.



Note: **$p < .001$, *$p < .05$.