

Implicit Measures of Work-Family Linkages?

Findings of a Validation Study on Working Students at a Local Community College

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Last fall, 33 employed students at a local community college participated in our study of work-family boundaries. We would like to offer our sincere thanks to those students for taking the time to complete our lengthy questionnaire booklet and the Implicit Association Test (IAT) on our laptop computer at their college's library. We would also like to thank their psychology instructor, who encouraged her students to participate in this study by offering them extra credit. We had mentioned to participants that those interested in the study could read a report on our findings, when they became available, by viewing our website. This is that report.

Using a generalized version of the recently developed Work-Family Integration-Blurring Scale (the WFIBS, by Desrochers, Hilton, & Larwood, in press), along with established measures of work-family conflict and balance, self-concept structure, and a work-family version of the IAT, we examined the relationships among variables derived from these and other measures. Specifically, our purpose was to: 1) do exploratory work toward the development of implicit measures of work-family blurring and work-family balance; and 2) explore the correlates of work-family conflict and balance among community college students. First, we should explain why we did a work-family study that focused on community college students and why we focused on these issues.

Why Community College Students?

We were interested in studying community college students because we have noticed that community colleges tend to have more nontraditional students than do liberal arts colleges and universities. In particular, we felt that community colleges would be more likely than other colleges to have a substantial proportion of older students who have part-time or full-time jobs as well as family responsibilities. Yet, compared to other populations, college students tend to be more readily available for participation in time-consuming research projects because they can be compensated for their time with extra credit. Because of their availability and their demographic characteristics, we felt that community college students would make a good "convenience sample" for this study.

Why These Particular Issues?

The second part of our study examines correlations if work-family conflict and balance with marital status, parental status, elder caregiving, work-family blurring and self-concept confusion. Why did we choose to address these particular issues? Why do they matter? We have observed that the first few years of college are a time when many students are “finding themselves,” both figuratively—in the sense that they are deciding on a major and eventually a career, and literally—in the sense that such decisions, as well as the experiences that of come with attending college, help some students to define who they are. Some students may have a clear self-definition, others may experience self-concept confusion. Those in the latter group may be at increased risk for experiencing stress in the form of work-family conflict and a lack of balance among their life roles, because they may have difficulty prioritizing their commitments to these roles. The issue of clarity is also important in the roles that students play outside of college, especially for nontraditional students. Students without clear work-family boundaries—students who work long hours, do some of their paid work at home, work in a family business, work with a spouse, take their children to work, or otherwise tend to integrate their work and family lives as much as possible—may be more at risk for experiencing work-family conflict and a lack of balance among their life roles. Nontraditional students may also experience conflict and difficulty balancing their life roles if they have more roles to play, such as the role of spouse, parent, and caregiver for an elder relative.

Characteristics of the Sample and Other Descriptive Statistics

Tables 1 and 2 show the characteristics of the participants and their average scores on some of the demographic variables and key variables of interest. There was an almost even split by gender, with a slight majority of study participants being female. The sample can be characterized as young, ethnically diverse, and mostly middle-class (in terms of household income), but there was a large proportion of students with low household incomes. The sample can also be characterized as tending not to have family responsibilities, since most were not married and most did not have children at home. Finally, participants tended to work a moderately high number of hours (an average of 30.55 hours) in their jobs, yet few worked full-time. Finally, we classified participants as either traditional or nontraditional students based on whether or not they met one or more

of the following criteria: full-time employment, having a spouse or live-in partner, having a child, caring for an aging relative, or age 30 or over. In all, despite making employment status (working at least 20 hours per week) a criterion for participation in the study, the slight majority of the sample consisted of traditional students. Still, nearly half of the participants in this study were nontraditional students.

Description and Validation of the Work-Family IAT

The Implicit Association Test, created by Greenwald, McGhee and Schwartz (1998), has been used to measure people's implicit or unconscious attitudes toward a variety of targets, such as racial groups, age groups, and family-career gender norms (Nosek, Banaji, & Greenwald, 2002). It does this by prompting people to respond as quickly as they can in computerized discrimination tasks, such as between "male" and "female" and "family" and "career" and then between paired association tasks, such as "male or career" (Condition 1) versus "female or family" or between "male or family" (Condition 2) versus "female or career." In the above example, an implicit sexism is said to exist when there is a large "IAT effect" or significantly larger response time for Condition 2 than for Condition 1. In the present study, we pursued a novel use of the IAT. First, we advanced a version of the IAT that we believe is an implicit measure of work-family balance, and we know of no other study that has done this. Second, unlike other studies that have used the IAT, we were not only interested in the IAT effect, but also in response times on the initial discrimination task, which we use as a measure of work-family blurring.

Constructing the work-family IAT. In our study, the initial discrimination task involved matching words such as "boss," "desk," "spouse," and "family" to the categories of "work" and "home". We then asked participants to do an evaluative discrimination, assigning words such as "stress," "disaster," "joy," and "peace" to the categories of "bad" and "good". Following the IAT methodology, we then asked participants to assign these same individual words to one of two complex categories, in both of two Conditions. In Condition 1, participants were asked to assigned these words to either "work or bad" or "home or good" categories. In Condition 2, they were asked to assigned these words to either "work or good," or "home or bad" categories. The difference in response times between the two conditions served in this study as an

implicit measure work-life balance, on the reasoning that, compared to those who are overcommitted to either work or family life, those with balanced lives will be no more likely (and thus no more hesitant) to assign negative meanings to work than to home domains (Marks & MacDermid, 1996). Our implicit measure of work-family blurring, on the other hand, was the initial discrimination between “work” and “home” categories. Our reasoning here was that those with blurred work-family boundaries would be more hesitant to assign words such as “office” exclusively to the work domain or “family” exclusively to the home domain, because their work and family lives are so enmeshed.

Validation of the work-family IAT. To assess the validity of our work-family IAT as an implicit measure of work-family blurring and balance, we assessed their correlations with the WFIBS and a measure of multiple role balance (Marks & MacDermid, 1996) in a Multitrait-Multimethod matrix. The Multitrait-Multimethod matrix is a “matrix of correlations among two or more traits measured by two or more distinct methods” (Pedhazur & Schmelkin, 1991, p. 75) and is widely considered to be an important tool for validating measures. The matrix is presented in Table 3. Correlations in blue are between different traits (blurring or balance) using the same measurement technique (the IAT or psychometric scales); correlations in green, on the other hand, are between the same trait measured using different measures, and correlations in purple are between different traits using different measures. The correlations highlighted in blue are sufficiently low to ward off concerns of “shared method variance.” This eliminates one threat to the validity of our IAT-based measures. More important for validation purposes is the comparison of correlations in green to those in purple. So, if the multiple role balance scale and the IAT-based measure of work-family balance both measure the same concept (balance) and if the implicit work-family blurring scale and the WFIBS both measure the same concept (blurring), these should be the highest correlations in the matrix. Using these criteria, Table 3 suggests that the work-family IAT produced a valid measure of work-family balance, but not a valid measure of work-family blurring. However, this was a very small sample of college students, so there might be too few people, with too few work and family responsibilities, to warrant firm conclusions about the validity these measures. More research is needed to establish the validity of using the work-family IAT to derive implicit measures of work-family blurring and balance.

Correlates of work-family conflict and balance

Table 2 shows the means and standard deviations of participants' scores on key variables in the study. Participants on average tended to have moderate levels of multiple role balance and work-to-family conflict and low levels of family-to-work conflict, work-family blurring, and self-concept confusion. We measured work-to-family conflict (the extent to which work interferes with family life) and family-to-work conflict (the extent to which family life interferes with work) using Netemeyer, Boles and McMurrian's (1996) validated scales. Self-concept confusion, a lack of consistency and confidence in defining oneself, was assessed by reverse-coding Campbell et al.'s (1996) self-concept clarity scale. The sources of the work-family integration-blurring scale and the multiple role balance scale were mentioned earlier.

Table 4 shows that both work-to-family and family-to-work conflict were significantly and positively correlated with work-family blurring and self-concept confusion, suggesting that whether someone experiences balance or conflict in their roles may have much to do with maintain clear boundaries between them and knowing which roles are most important to them. We also found that conflict was negatively correlated with role balance and having children at home. The latter finding is perhaps the most surprising. Why would having children be associated with lower work-family conflict? Perhaps parents in this study maintained positive emotional commitments to both work and family roles, rather than allowing work to influence family life or vice versa, and the positive (although nonsignificant) correlation of parental status with role balance is consistent with this explanation. Another interesting finding is that role balance was negatively correlated with having a spouse or partner, suggesting that having a spouse or partner makes it more difficult to balance all of one's roles.

Conclusions

The conclusion for the first part of our study is simple: we did not find strong evidence for the validity of using our work-family IAT to derive measures of work-family blurring and work-family balance. However, we must emphasize that the study sample was small and might not have been an appropriate one for validating these measures. Regarding the second part of our study, although we must again emphasize that this was a small convenience sample, our findings suggest that work-family conflict

and a lack of work-family balance were issues for many of the students in this study. To the extent that they are may be a source of stress and self-concept confusion, future research should examine the extent to which work-family conflict and a lack of role balance have negative implications for student well-being and academic performance in community colleges.

References

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Table 1. Frequencies of Responses to Categorical Demographic Questions.

	Frequency
Gender	
Male	16
Female	17
Race/Ethnicity	
White, not of Hispanic origin	2
Black, not of Hispanic origin	2
Hispanic	12
Asian or Pacific Islander	10
Mixed or Other	7
Household Annual Income	
\$25,000 or less	2
\$25,001-\$35,000	3
\$35,001-\$55,000	6
\$55,001-\$75,000	7
\$75,001-\$95,000	6
\$95,001 or more	9
Student Type	
Traditional	17
Nontraditional	16
Employment Status	
Part-time	27
Full-time	6
Marital Status	
Married	4
Divorced/separated/widowed	3
Never Married	26
Parental Status	
Parent	7
Not a parent	26
Currently caring for an Aging Family Member	
Yes	6
No	27

Table 2. Means and standard deviations for variables in the study.

	Mean	SD
Age	23.55	7.37
Number of People in Household	3.97	1.47
Weekly Work Hours		
Work-to-Family Conflict	2.70	0.96
Family-to-Work Conflict	2.02	0.87
Balanced Commitment to All Life Roles	3.01	0.79
Work-Family Blurring	2.19	0.63
Self-Concept Confusion	2.46	1.09

All variables other than age, age of youngest child, and work hours are on a scale of 1 to 5, so that higher values indicate higher levels of the variable.

Table 3. The Multitrait-Multimethod Matrix

	Implicit Measure of Work-Family Blurring	Implicit Measure of Work-Family Balance	The Work-Family Integration-Blurring Scale	Multiple Role Balance Scale
Implicit Measure of Work-Family Blurring	.94*			
Implicit Measure of Work-Family Balance	.08	.97/.98**		
The Work-Family Integration-Blurring Scale	.18	-.21	.67***	
Multiple Role Balance Scale	.22	.32	-.14	.70***

N= 33. Statistically significant correlations are in **bold**. Correlations at or above .30 are significant at $p < .10$; correlations at or above .35 are significant at $p < .05$; correlations at or above .45 are significant at $p < .10$.

* The scores used to calculate the alpha reliability coefficient for Implicit Work-Family Blurring was calculated from the response times of the 40 work-home discrimination tasks.

** Because the Implicit Measure of Work-Family Balance is a difference score, derived from the difference in response times between Condition 1 and Condition 2 paired associations (as described earlier), we report the reliabilities for these two conditions separately. For each, the scores used to calculate the reliability were the 60 response times in the paired associations.

*** These reliability coefficients were calculated from a large sample that included employees at local corporations (a report of this study can be found on the same site that this report was located).

Table 4. Correlations of Work-Family Boundary Variables.

	Work to Family Conflict	Family To Work Conflict	Multiple Role Balance	Has Children at Home	Marital/Partner Status	Work-Family Blurring
Work to Family Conflict	--					
Family to Work Conflict	.37	--				
Multiple Role Balance	-.42	-.34	--			
Has Children at Home	-.32	-.34	.19	--		
Marital/Partner Status	-.07	-.27	-.33	.19	--	
Work-Family Blurring	.33	.32	-.14	-.12	-.22	--
Self Concept Confusion	.42	.41	-.59	-.08	.22	.45

N= 33. Statistically significant correlations are in **bold**. Correlations at or above .30 are significant at $p < .10$; correlations at or above .35 are significant at $p < .05$; correlations at or above .45 are significant at $p < .10$. The following variables were not included in the table because they were not significantly correlated with work-family conflict or balance: caring for an aging relative, work hours, and student type (traditional/nontraditional).