ABSTRACT. The author tested for the 3 possible pathways (i.e., direct, moderator, and mediator effects) in which locus of control can influence the relationship between work–family conflict and well-being. The author predicted that work–family conflict would be negatively correlated with well-being. In a sample of 310 Malaysian employed women with families, work–family conflict was a significant predictor of both job satisfaction and distress—negatively related to job satisfaction and positively related to symptoms of distress. More important, the results provided support for the effects of all 3 pathways of control on the relationship between work–family conflict and well-being, depending on the outcome measure: For job satisfaction, locus of control had direct effects, acted as a partial mediator, and played a significant moderating role. In contrast, only the direct effect of locus of control predicted distress. The author discusses those findings with reference to the literature on work–family conflict, locus of control, and the issue of stress–distress specificity.

Key words: distress, job satisfaction, locus of control, Malaysia, well-being, women, work–family conflict

IN THE LAST THREE DECADES, there has been a large increase in the number of women entering the paid labor force. For example, in the United Kingdom in 1997, women accounted for just over 49.5% of the total work force (Employment Service, 1998), and, according to government projections, that percentage is expected to rise until the year 2006. Despite this increase in women’s employment, however, there appears to be little erosion in the strength of the gender role expectations concerning men’s and women’s roles in society. The work role is seen as men’s primary domain, whereas women are still primarily responsible for the home and children. Therefore, the links between work and family should be examined with respect to the similarities and differences in the experiences of men and women in society.

Work and family, then, represent two central domains in the lives of most
employed men and women. The recognition of the interdependence between those two domains has led researchers to examine the conflicts that occur in trying to meet the demands and responsibilities of work and family simultaneously (Barling & Sorensen, 1997; Greenhaus & Parasuraman, 1994; Hochschild, 1997). People experience work–family conflict when the demands of one role interfere with participation in or performance of the other role (Greenhaus & Beutell, 1985). Thus, when one devotes extra time and energy to the work role (or the family role), the family role (or the work role) is assumed to suffer.

Research in work–family conflict has increased dramatically over the past two decades because of the changing nature of the balance between work and family responsibilities—most notably, the growing numbers of dual-earner families and single parents. Work–family conflict has been associated with various negative health outcomes including burnout (Bacharach, Bamberger, & Conley, 1991), unpleasant moods (Williams & Alliger, 1994), job and life dissatisfaction (Perrewé, Hochwarter, & Kiewitz, 1999), decreased family and occupational well-being (Kinnunen & Mauno, 1998), as well as increased psychological costs and physical complaints (Frone, Russell, & Cooper, 1992). Excessive work–family conflict also can produce dysfunctional social behaviors such as destructive parenting (Stewart & Barling, 1996) and alcohol consumption (Frone, Russell, & Cooper, 1993). Furthermore, the results of a recent meta-analysis (Kossek & Ozeki, 1999) showed all types of work–family conflict to be negatively related to job and life satisfaction.

Although both men and women may experience work–family conflict, women report more conflict than men do (Hammer, Allen, & Grigsby, 1997; Lundberg, Mardberg, & Frankenhäuser, 1994; Williams & Alliger, 1994). In a comparison of total workload (sum of paid and unpaid work), conflict between the demands of work and family, and control over housework between men and women in white-collar occupations, the number of children at home was crucial with regard to those variables (Lundberg et al.). In families with no children at home, the total workloads of both men and women employed full-time were about 60 hr per week. For women, the number of hours per week increased rapidly with children at home, but that increase was much smaller for men. For example, in families with three or more children, women’s total workload was almost 90 hr.

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and men’s approximately 70 hr, per week—a mean gender difference of about 2.5 hr per day. In addition, only for women did conflict between the demands of work and family roles increase, and control over home and household work decrease, with more children at home. Because women spend more combined time on work and family activities than men, those results are not surprising.

Simply knowing that work–family conflict has a negative relationship with well-being does not enlighten one much. Because the links among work, family, and well-being are complex, researchers should specify multiple underlying pathways, or processes, by which work–family conflict may lead to health impairment. They should also incorporate personality variables within the context of models representing the links between work–family conflict and health outcomes, because stress processes are not invariant. Both personality and environmental variables may influence the relationships between stress and outcomes.

Although Frese’s (1989) measure of control was related to work rather than to generalized locus-of-control beliefs, that author’s research on theoretical models of control and health offers a framework that includes both personality and environmental variables. However, individual differences in control beliefs and both objective and perceived control at work may be interdependent (Parkes, 1989). Therefore, according to Frese’s framework, there are three possible mechanisms, or pathways, by which control can influence the relationship between stress and well-being. First, in the direct-effect pathway, both stress and control directly influence well-being: Whereas stress is associated with reduced well-being, control is related to positive health outcomes, or increased well-being. Second, in the moderator-effect pathway, control alters the nature of the relationship between stress and well-being. Finally, in the mediation-effect pathway, the influence of control on well-being is mediated through perceptions of stress. In other words, control may decrease or increase the occurrence or intensity of stressors, thereby enhancing or reducing well-being (the three different pathways are shown in Figure 1).

I chose locus of control—the individual’s generalized belief concerning the extent to which outcomes are determined by internal (e.g., personal effort and ability) as opposed to external variables (e.g., fate, chance, or powerful others)—for several reasons. First, researchers in the areas of both work and general life stresses (e.g., Frese, 1989; Lefcourt, Miller, Ware, & Sherk, 1981; Ross & Mirowsky, 1989; Van der Doef & Maes, 1999) have indicated the beneficial effect of internal-control beliefs on well-being. Other researchers (Parkes, 1994; Wheaton, 1983) have shown that locus of control moderated the relationship between stress and mental health. Second, Cohen and Edwards (1989) concluded that locus of control is the personality characteristic that provides the most consistent and the strongest evidence of stress moderation; in that case, external control acted as a vulnerability variable. Third, women generally tend to believe that they have less control over interpersonal relationships and uncontrollable life events than men have (Sherman, Higgs, & Williams, 1997), and women are more
likely than men to be employed in jobs with less flexibility, less control, and greater stress (Hall, 1991). Women also tend to feel that they have less control than do their male counterparts over their achievements because of fewer opportunities for achievement or independence within the work place (Riipinen, 1994). As such, the effects of control on the relationship between conflict and well-being may well be different for women and men.

The present sample consisted of Malaysian women performing work and family roles simultaneously. As in other developing countries, the number of women going out to work has increased significantly since Malaysia’s independence in 1957, from 30.8% to 47.1% in 1995 ("Seventh Malaysia Plan"). By the
year 2000, the figure was expected to reach 52%, but the economic downturn in 1997 made this unachievable. In 2000, the female labor force stood at 44.5%, lower than the 1995 figure (“Eighth Malaysia Plan”). For women combining work and family, work–family conflict is inevitable because society places extreme importance on women’s family role, and many are likely to feel guilty if they do not attend properly to their home-related responsibilities. At the same time, however, women must also be committed to their work (Noor, 1999). Therefore, work–family conflict may be negatively associated with well-being for women working outside the home.

More important, however, I designed the present study to test for the three possible pathways in which control can influence the relationship between work–family conflict and well-being. More specifically, the purposes of the study were as follows:

1. To test for the direct-effect pathway of control on well-being;
2. To test for the moderator-effect pathway of control on the relationship between work–family conflict and well-being. In this case, I assumed that the participants with internal-control beliefs, compared with those with external-control beliefs, would report higher levels of well-being; and
3. To test for the mediation-effect pathway of control on the relationship between work–family conflict and well-being. Because control is a personality variable, I assumed that control would influence perceptions of conflict, which, in turn, would influence well-being.

I measured work–family conflict by the Interaction Strain Scale (Parry & Warr, 1980) and well-being by job satisfaction and psychological symptoms of distress. I assessed well-being by those two outcome measures because the influence of control on stress–outcome relations has varied with different outcomes (Ganster, 1989). Furthermore, although distress may be a context-free general measure of well-being, job satisfaction is more specific and domain related. Numerous researchers (e.g., Adams, King, & King, 1996; Aryee, Fields, & Luk, 1999) on work–family conflict have used job satisfaction as an outcome, but scarcely any have considered a general measure of well-being. Moreover, because the work role has always been associated with men, it would be interesting to examine the extent to which work–family conflict impinges on women’s perceptions of their job satisfaction rather than on their distress symptoms.

Method

Participants and Procedure

The participants were 310 married women with children who were employed full-time; they were recruited from several universities (n = 170), organizations (n = 58), schools (n = 56), and businesses (n = 26) in Malaysia. The response
rates from each category of work places were 52%, 39%, 48%, and 42%, respectively, not unusual for a voluntary survey of this sort (e.g., Wiersma & Van der Berg, 1991). I loosely categorized the participants into two broad occupational groups: academic–professional and secretarial–clerical.

The age range of the women was 19 to 59 years ($M = 34.95$, $SD = 7.45$). The participants consisted of Malays ($n = 230$) and Chinese ($n = 80$). The two groups were similar in socioeconomic status as measured by education levels (means = 13.2 years for the Malays and 12.6 years for the Chinese), occupational groups (coded 1 for secretarial–clerical and 0 for academic–professional; means = .53 for the Malays and .51 for the Chinese), and annual income in Malaysian ringgits, or RM (means = RM28,667 for the Malays and RM27,654 for the Chinese). All the women had children, with 76.2% having at least one child living at home. The number of children within a family ranged from one to six.

**Measures**

Participants could answer the questionnaire either in English or in Bahasa Malaysia (Malay language). As such, these measures were adapted to Malay by the back-translation method involving two steps. First, the original items of all the measures were translated into Malay. Second, the Malay version of the measures was translated back into English.

The translation and back translation were carried out by a psychologist and a linguist, both fluent in English and Bahasa Malaysia. After the original measures were translated into Bahasa Malaysia, I administered them to a group of 15 employed women to check for clarity, understanding, and suitability of the items within the Malaysian context. On the basis of the feedback provided by those women, I made modifications to the original items. In the second stage, the measures were translated back into English. At this stage, any items that appeared discrepant with the original items were translated again, and appropriate revisions were made. The revisions were minor, and I dropped none of the original items. The majority of the participants chose to answer in Malay.

Although the lower reliabilities of the measures reported subsequently may have lowered their potential validity, I did not deem this a major problem because the reliabilities were still relatively high and comparable to those reported by other researchers (as subsequently noted).

**Work–family conflict.** I used the Interaction Strain Scale (Parry & Warr, 1980) to measure work–family conflict. The scale measures the strain experienced by employed mothers in coping with both domestic and paid work. It consists of 12 items (e.g., “The hours I work make it very difficult to look after the children”), with 5 items reverse scored. I used a 3-point Likert-type response dimension (1 = untrue, 3 = true) and summed the scores across items (higher scores = higher
interaction strain). Internal consistency for the present sample was .69, slightly lower than the .75 reported by Parry and Warr.

*Locus of control.* I assessed locus of control by Paulhus’s (1983) 30-item Spheres of Control Scale, which is divided into three separate spheres of behavior: personal efficacy, interpersonal control, and sociopolitical control (10 items per sphere). The respondents rated items on a 7-point Likert-type scale (1 = *strongly disagree*, 7 = *strongly agree*). I reverse scored externally worded items; thus, higher scores represented more internal, and lower scores more external, locus of control.

Because the present study was concerned with the individual woman and her interpersonal behavior, I used only the 20 items from the first two spheres. I later omitted the Personal Efficacy subscale, however, because of its low alpha value (.46) coupled with the finding that a factor analysis on those 20 items indicated the presence of only one factor—Interpersonal Control (e.g., “I have no trouble making and keeping friends”). Furthermore, the personal-efficacy items did not significantly improve the reliability coefficient of the Interpersonal Control subscale. Thus, I used only the 10 items from the Interpersonal Control subscale as the measure of locus of control. The internal consistency (α) for the sample was .72.

Although Paulhus (1983) reported alpha reliabilities for the subscales ranging from .75 to .80, Parkes (1988) found much lower reliability values (.50, .71, and .67 for the subscales Personal Efficacy, Interpersonal Control, and Sociopolitical Control, respectively). Parkes offered a number of explanations to explain those findings—notably, the wording of the items, the use of student samples in the original study, difficulty in understanding the more complex items, the misreading of negatively worded items, the length of the scale, and so forth (Parkes, 1988). Those possibilities may also have influenced the alpha values in the present sample.

*Well-being.* I used the 12-item scale of the General Health Questionnaire (GHQ-12; Goldberg, 1978) and the 5-item scale of general job satisfaction (Hackman & Oldham, 1975) to measure well-being.

The GHQ-12 includes items that pertain to both somatic (e.g., “In the past 6 weeks, have you been able to enjoy your normal day-to-day activities?”) and affective (e.g., “In the past 6 weeks, have you been thinking of yourself as a worthless person?”) symptoms of distress. The participants indicated on a 4-point scale the extent to which the items best described how they had felt over the previous 6 weeks (higher scores = greater distress). The scale has been validated against clinical ratings and has demonstrated good psychometric properties (Banks, 1983; Banks et al., 1980). Cronbach’s alpha for the present sample was .84, within the reported range of .83 to .95 (McDowell & Newell, 1987).

The General Job Satisfaction Scale is “an overall measure of the degree to which the employee is satisfied and happy with the job” (Hackman & Oldham,
<table>
<thead>
<tr>
<th>Measure</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>34.95</td>
<td>7.45</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Occupational group</td>
<td>.52</td>
<td>.50</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>3. Annual income</td>
<td>2.80</td>
<td>1.79</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>4. No. of children</td>
<td>2.36</td>
<td>1.28</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>5. Locus of control</td>
<td>48.12</td>
<td>7.77</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>6. Work–family conflict</td>
<td>20.03</td>
<td>4.86</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>7. Job satisfaction</td>
<td>25.05</td>
<td>5.74</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>8. Distress</td>
<td>8.89</td>
<td>4.46</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Note. I coded occupational group as 0 (academic–professional) and 1 (secretarial–clerical). I coded annual income (Malaysian ringgits) as 1 (< RM10,000), 2 (RM10,001–RM20,000), 3 (RM20,001–RM30,000), 4 (RM30,001–RM40,000), 5 (RM40,001–RM50,000), 6 (RM50,001–RM60,000), 7 (RM60,001–RM70,000), and 8 (> RM70,000).

*p < .05. **p < .01.
The participants responded on a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree). I reverse scored 2 items and obtained a total score by summing all 5 items (higher scores = greater job satisfaction). In the present sample, the internal consistency of the scale was .77, comparable to those reported earlier (.74–.77; Cook, Hepworth, Wall, & Warr, 1981).

Control variables. As controls, I entered participant’s age, occupational group (0 = academic–professional, 1 = secretarial–clerical), number of children at home, and annual income (1 = < RM10,000; 2 = RM10,001–RM20,000; 3 = RM20,001–RM30,000; 4 = RM30,001–RM40,000; 5 = RM40,001–RM50,000; 6 = RM50,001–RM60,000; 7 = RM60,001–RM70,000; and 8 > RM70,000) before the study variables. I controlled for those variables because previous researchers have indicated that they may confound the relationship between the study variables and well-being—for example, age has been correlated with job satisfaction (e.g., Hassell & Perrewe, 1993) and distress (e.g., Noor, 1995). Occupational group, income, and number of children have also been reported to influence job satisfaction and distress (e.g., Lundberg et al., 1994; Noor, 1995; Perrewe et al., 1999).

### TABLE 2
Regression Estimates (βs) Predicting Job Satisfaction (N = 310)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.040</td>
<td>.040</td>
<td>.040</td>
<td>.040</td>
</tr>
<tr>
<td>Occupational group</td>
<td>-.043</td>
<td>-.043</td>
<td>-.043</td>
<td>-.043</td>
</tr>
<tr>
<td>Annual income</td>
<td>.105</td>
<td>.105</td>
<td>.105</td>
<td>.105</td>
</tr>
<tr>
<td>No. of children</td>
<td>.121*</td>
<td>.121*</td>
<td>.121*</td>
<td>.121*</td>
</tr>
<tr>
<td>$R^2$ increment</td>
<td>.028</td>
<td>.028</td>
<td>.028</td>
<td>.028</td>
</tr>
<tr>
<td>Locus of control</td>
<td>.116*</td>
<td></td>
<td>.083</td>
<td>.083</td>
</tr>
<tr>
<td>$R^2$ increment</td>
<td>.013*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work-family conflict</td>
<td></td>
<td>-.200**</td>
<td>-.187**</td>
<td>-.189**</td>
</tr>
<tr>
<td>$R^2$ increment</td>
<td></td>
<td>.036**</td>
<td>.045**</td>
<td>.045**</td>
</tr>
<tr>
<td>Locus of Control × work–family conflict</td>
<td>-194***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$ increment</td>
<td></td>
<td></td>
<td></td>
<td>.037***</td>
</tr>
</tbody>
</table>


*p < .05. **p < .01. ***p < .001.
Statistical Treatment

I used multiple regression analysis to examine the role of locus of control separately for the two outcome measures. Because locus of control is a personality measure, it preceded the measures for both work–family conflict and well-being in these analyses.

FIGURE 2. The effect of control on job satisfaction mediated by perceptions of work–family conflict. In Step 1, control predicts both work–family conflict and job satisfaction in separate analyses. In Step 2, work–family conflict significantly predicts job satisfaction. In Step 3, the relationship between control and job satisfaction is now reduced to an insignificant level (broken line) in the simultaneous analysis. Values shown are the standardized regression coefficients ($\beta$s). *$p < .05$, **$p < .01$. 
A significant additive term for locus of control would indicate a direct effect. To test for locus of control as a mediator, I used the following three steps for regression analysis, as recommended by Baron and Kenny (1986): First, locus of control must be correlated with measures of both work–family conflict and well-being. Second, when the well-being measure is regressed on the work–family conflict measure, work–family conflict must significantly predict the well-being. In the final analysis, the well-being measure is simultaneously regressed on both locus of control and work–family conflict. If locus of control is reduced to an insignificant level, then work–family conflict is the mediator.

To test for locus of control as a moderator, I entered the Locus of Control × Work–Family Conflict interaction into the regression analysis after entering both locus of control and work–family conflict as main effects (Cohen, 1978). To facilitate interpretation of the interaction term, I standardized the continuous independent variables before analysis.

I carried out the regression analysis as follows for each of the two well-being

![FIGURE 3. The relationship between work–family conflict and job satisfaction for high and low levels of control beliefs.](image-url)
measures. In all the models, I entered demographic variables before the study variables. In Model 1, I entered locus of control alone, and it tested the direct effect of locus of control on the well-being measure. In Model 2, I entered work–family conflict alone, and it tested the direct effect of conflict on the well-being measure. In Model 3, I entered locus of control and work–family conflict simultaneously into the regression analysis. Comparison of Model 3 with Model 1 tested the mediator role of control. Model 4, the interaction model, tested the moderator role of locus of control, and it consisted of the Locus of Control × Work–Family Conflict interaction.

Results

Means, Standard Deviations, and Intercorrelations of Measures

Locus of control was correlated negatively with both work–family conflict and distress and positively with job satisfaction. The two outcome measures were negatively correlated with one another (see Table 1).

Locus of Control and Work–Family Conflict as Predictors

Job satisfaction. In Model 1, locus of control was a significant and positive predictor of job satisfaction, \( \beta = .116, p < .05 \). In Model 2, work–family conflict was

<table>
<thead>
<tr>
<th>Measure</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.141*</td>
<td>-.141*</td>
<td>-.141*</td>
</tr>
<tr>
<td>Occupational group</td>
<td>.024</td>
<td>.024</td>
<td>.024</td>
</tr>
<tr>
<td>Annual income</td>
<td>.012</td>
<td>.012</td>
<td>.012</td>
</tr>
<tr>
<td>No. of children</td>
<td>.057</td>
<td>.057</td>
<td>.057</td>
</tr>
<tr>
<td>( R^2 ) increment</td>
<td>.019</td>
<td>.019</td>
<td>.019</td>
</tr>
<tr>
<td>Locus of control</td>
<td>-.311***</td>
<td></td>
<td>-.289***</td>
</tr>
<tr>
<td>( R^2 ) increment</td>
<td>.094***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work–family conflict</td>
<td></td>
<td>.172**</td>
<td>.118*</td>
</tr>
<tr>
<td>( R^2 ) increment</td>
<td></td>
<td>.029**</td>
<td></td>
</tr>
<tr>
<td>Locus of Control × Work–Family Conflict</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( R^2 ) increment</td>
<td></td>
<td></td>
<td>.125</td>
</tr>
</tbody>
</table>

* \( p < .05 \). ** \( p < .01 \). *** \( p < .001 \).
negatively related to job satisfaction, $\beta = .200, p < .001$. In Model 3, job satisfaction was predicted by the simultaneous regression of control and conflict. Overall, this model was significant, $F(6, 303) = 3.94, p < .001$ (see Table 2). A comparison of Models 1 and 3 revealed a mediation effect: When job satisfaction was regressed simultaneously on locus of control and work–family conflict, the relationship between control and job satisfaction was no longer significant, whereas the relationship between work–family conflict and job satisfaction remained significant (see Figure 2 for a representation of this mediation effect).

In Model 4, the Locus of Control $\times$ Work–Family Conflict interaction, entered after their main-effect terms, contributed significantly to the total explained variance. Locus of control acted as a moderator in the relationship between work–family conflict and job satisfaction. The final model was signifi-

| FIGURE 4. A summary of the results depicting the relationship between work–family conflict, control, and well-being. For the effects of control on job satisfaction, $a =$ the direct effect of control on work–family conflict; $b =$ the direct effect of control on job satisfaction; $c =$ the moderator effect of control on the relationship between work–family conflict and job satisfaction; and $d =$ the effect of control on job satisfaction as mediated by perceptions of work–family conflict. Control had only a direct effect on distress. |
cant, $F(7, 302) = 5.29, p < .0001$ (for a graphical representation of this interaction term, see Figure 3). Contrary to expectation, an internal orientation for locus of control did not prevent the women with high work–family conflict from experiencing low job satisfaction.

**Distress.** In Model 1, locus of control was negatively related to distress scores, $\beta = -0.311, p < .0001$ (i.e., those with internal-control beliefs reported lower distress scores). In Model 2, work–family conflict was also significantly associated with distress, $\beta = 0.17, p < .003$. In Model 3, locus of control remained highly significant, although the effect of work–family conflict was reduced. The overall model was significant, $F(6, 303) = 7.26, p < .0001$, and it accounted for 12.5% of the variance in distress scores (see Table 3).

I observed no mediator effect, as evidenced by the strong direct effect of control on the prediction of distress. The interaction model was not significant; therefore, I did not include it in Table 3. Thus, only the direct effect of locus of control emerged in the relationship between work–family conflict and distress (for a summary of these findings, see Figure 4).

**Discussion**

In the present study, I tested for the three possible pathways through which locus of control may influence the relationship between work–family conflict and well-being (as measured by job satisfaction and distress). According to the results, (a) work–family conflict was a significant predictor of both job satisfaction and distress symptoms, related negatively to job satisfaction and positively to symptoms of distress; and (b) there was evidence for all three effects of control (i.e., direct, moderator, and mediator) on the relationship between work–family conflict and well-being, but the effect varied according to the outcome measure. I observed simultaneous direct and moderator effects of control in the relationship between work–family conflict and job satisfaction. The effect of control on job satisfaction was mediated by perceptions of conflict. In contrast, only the direct effect of control emerged in the prediction of distress symptoms.

In this sample of employed Malaysian women with families, the finding that work–family conflict was associated with lower job satisfaction is consistent with results of previous studies (e.g., Kossek & Ozeki, 1999). The present results also showed that work–family conflict was positively related to symptoms of psychological distress. This observation suggests that not only was conflict associated with a domain-specific measure of outcome, but it also influenced these women’s sense of general well-being.

More important, the present results provide support for all the three possible pathways by which locus of control can influence the relationship between work–family conflict and well-being. When I used job satisfaction as the outcome measure, I observed all three pathways of control. The finding of the direct effect of control on job satisfaction is consistent with findings of previous work (e.g. *The Journal of Social Psychology*).
The mediator effect of control was only partial as indicated by the nonsignificant association between control and job satisfaction, which was not totally reduced to zero. In this case, locus of control as a personality characteristic acted on women’s perceptions of work–family conflict, thereby enhancing or reducing their levels of job satisfaction. In other words, control was positively related to job satisfaction because it reduced the women’s perceptions of conflict.

The moderator effect of control on the conflict–job satisfaction relationship (Figure 2) shows that an internal-control orientation did not help the participants who were experiencing high work–family conflict. Although internal-control belief is usually associated with positive outcomes, it may also be counterproductive in certain situations (Krause & Stryker, 1984; Peterson & Seligman, 1987). Peterson and Seligman, for example, suggested that, all things being equal, people who offer external, unstable, and specific explanations for negative occurrences tend to experience fewer difficulties than those who offer internal, stable, and global explanations. Krause and Stryker, using data from the 1969 and 1971 panels of the national longitudinal survey of middle-aged men, found that extreme internals (i.e., those with high internal-control beliefs) fared no better than extreme or moderate externals (i.e., those with high external-control beliefs) when they were exposed to uncontrollable stressors (e.g., unemployment, age discrimination, inability to keep up the job pace, and increased job pressures). The present findings contribute to that literature (a) by suggesting that, when women with internal control beliefs (i.e., internals) face high work–family conflict, their level of job satisfaction is reduced to that of the externals and (b) by supporting the earlier finding among men (Krause & Stryker) that, when situations were outside their control, an internal-control orientation was sometimes not helpful.

In contrast, I found only the direct effect of locus of control in relation to distress symptoms. Therefore, the two outcome measures, job satisfaction and distress symptoms, although correlated, are distinct measures, each with its own predictors. An additive model provided the best prediction of distress symptoms: The only effect of locus of control in that case was direct. In contrast, job-satisfaction scores improved significantly with the addition of both the first-order term of control and the Locus of Control × Work–Family Conflict interaction. Therefore, the women with high control beliefs (internals) generally experienced higher levels of job satisfaction and were more vulnerable to work–family conflict than were those with low control beliefs (externals). In addition, the influence of locus of control on job satisfaction was partially mediated by perceptions of work–family conflict. The practical implication of these findings is that different outcome indices cannot be improved through the same mechanisms. Therefore, researchers should consider this specificity in stress–outcome relations when attempting to reduce stress or distress.

This study has several limitations. First, the measures were derived from self-reports, thus exposing the findings to interpretation of method variance. Second, because locus of control is a personality measure, I assumed that the direction of
causality was that control would influence perceptions of work–family conflict, which, in turn, would influence well-being. Researchers can answer the question of whether the preceding was, indeed, the direction of causality only by carrying out longitudinal studies.

Third, because the sample consisted of only women, I could not test gender differences. That limitation is important because issues relating to work–family conflict are a concern for men as well as women. Pleck (1985), for example, found that husbands, similar to wives, experienced their family roles as far more psychologically significant than their paid work roles. As such, men may also experience work–family conflict and its related consequences; men’s experiences, however, may be different from those of women because of different societal expectations for men and women.

Despite the foregoing limitations, the study provided support for the three possible pathways in which control can influence the relationship between work–family conflict and well-being. Because the study was based on a sample of Malaysian women, generalization to samples of women from the more developed countries may be a problem. However, because the nature of the study was to test for the possible pathways of control within the stress–strain relationship, I do not feel that the choice of sample was crucial.

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