

Teachers' Work-Family Conflict Efficacy in Malaysia: Scale Validation

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Abstract

The current research study aims to construct-validate the measurement scale of work-family conflict Self-efficacy of Malaysian married female teachers'. The study attempted to see if the same one-factor structure, which characterized teacher work-family conflict efficacy (WFCE), existed among Malaysian teachers. The sample was selected among 245 married female teachers from secondary schools in Hulu Langat district. Data was collected using self-report questionnaires measuring WFCE. The data was analyzed using the Confirmatory factor Analysis (CFA) procedures and the results confirmed that the one-factor measurement model of WFC efficacy and the six observed variables or items were found to represents teachers' WFC efficacy construct. Further discussion on the theoretical, methodological and implications were also explained.

Keywords: work-family conflict efficacy, confirmatory factor analysis

1. Introduction

In Malaysia, the number of mothers in workforce has also increased dramatically. Thus, gender role system has become more complex, potentially increasing the likelihood and relevance of conflict in the future. To further clarify, Work-family conflict efficacy is defined as "an individual's beliefs in her or his ability to manage work-family and family-work conflict" (Cinamon, 2003). It is important to note that most early research on multiple roles focuses on women, particularly on those who occupy the roles of wives, mothers, and employees. The multiple roles of women may affect the well-being of the family such as the husband, children and the wife herself. Conflict occurs when a family is unable to cope with these multiple roles effectively and the result has been found to affect work satisfaction and psychological well-being (Greenhaus and Beutell, 1985; Loscocco & Roschelle, 1991; Phelan et al., 1991).

Ewing and Smith (2003) reported that between 25% and 40% of beginning teachers in the western countries are leaving teaching or facing burnout syndrome. In Malaysia, teaching is one of the most stressful jobs. The talk on "Stress Management for Teachers" (Kolej Disted-Stamford news, 23 February 2008) declared that teaching is a challenging profession and hence, teachers could do with learning how to de-stress to maintain good health and high spirits. The talk also informed that there are two main sources of stress which affect teachers: heavy workload and students' problems. Nowadays, a teacher's duty is multifaceted as they undertake not only teaching but also matters associated with curriculum, students, parents, the school community as well as departmental initiatives. Another key point to note, the success of the newly launched National Education Blueprint poses a big impact on the development of schools and teachers themselves. This plan is expected to produce intellectual students who are able to collect information and acquire knowledge and skills, instead of purely memorizing knowledge. Education system should cater to the needs of all students: smart, mediocre, weak or disabled.

The success of the National Education Blueprint depends on the teacher's ability, quality, skills and effectiveness in educating students. Teachers are required to have proficient skills in teaching and educating students to fulfill the government's aspiration in providing a world class education. As a result of this new system, married female teachers may face an increase in workload which will in turn, to a certain degree, affect their work performance as well as their psychological well-being. Besides that, The National Union of Teaching Profession (NUTP) Secretary General Lok Yim Pheng, in the New Sunday Times, May 18, 2008, informed that teachers are overloaded with paper work and they are pressured to train students on how to answer examination questions. Teachers must always maintain the quality of their work, try to improve their productivity and acquire knowledge and skills to develop human capital in the globalized world. Moreover, teachers play an essential role in shaping a community as their products of educating efforts contribute to its functionality. These are the demands of teaching profession nowadays. Self-efficacy is one of the most significant predictors of WFC in the majority of the studies cited by Pender, Murdaugh & Parsons (2002).

Research suggests that an individual's self-efficacy in a specific domain provides information regarding how the individual perceives and copes with challenges. In the case of managing conflict that inevitably arises between personal and professional responsibilities, assessing work-family conflict efficacy may provide a unique perspective on what might ultimately help to reduce the negative outcomes, namely, decrease in life and job satisfaction that is usually associated with work-family conflict. Understanding how self-efficacy functions in the relationships between work-family conflict and these outcomes may bring about meaningful therapeutic measures for women experiencing work-family conflict. Bandura (1977) defined self-efficacy as "people's judgments in their capabilities to organize and execute courses of action required to attain designated types of performance" (p. 391). Bandura also described self-efficacy as a key determinant of psychological change, choice of settings and activities, quality of performance in a specific domain, and level of persistence when one meets adverse or negative experiences. With regard to personal resources, why do some teachers succeed in being good teachers - continuously enhancing students' achievements, setting high goals for themselves and pursuing them persistently, while others fail to meet the expectations imposed on them and tend to collapse under the burden of everyday stress?

The inclusion of work-family conflict efficacy construct may provide deeper and richer understanding of WFC and WB research. As stated by Bandura (2003), an efficacious teacher believes that she or he is capable of dealing with WFC, which in turn may increase his or her well-being. More importantly, this type of personality may improve or increase one's well-being because it strongly affects the person's ability to perform a task. Teachers with high WFC efficacy should aim at reducing their experiences with WFC aside from functioning as a personality booster. Thus, an individual's personality plays a role in the amount of work-family conflict that he or she experiences.

1.2 Work-Family Conflict Efficacy

Work-family conflict efficacy is defined as "an individual's beliefs in her or his ability to manage work-family and family-work conflict" (Cinamon, 2003). In this study, work-family conflict efficacy refers to the perceptions of self-efficacy to manage work-family conflict and family-work conflict. Self-efficacy is theoretically defined in this study as self-regulatory efficacy, which is a specific type of perceived self-efficacy viewed by Bandura (1997) as the ability to "guide and motivate oneself to get things done that one knows how to do. The issue is not whether one can do them occasionally but whether one has the efficacy to get oneself doing them regularly in the face of varied dissuading" (p.43).

2. Method

2.1 Participants

13 schools were selected in the Hulu Langat district and from the total of 2000 population of the teachers in the schools only 300 teachers were chosen to participate in the study. Samples were selected based on the characteristics needed by the study, namely, married female teachers with at least one child, and below 15 years of teaching experience. From the selected 300 teachers, only 245 responses were taken for the analysis and five sample responses were incomplete, indicating that the missing rate was small.

2.2 Instrument

Data were gathered through a demographic background of the sample. Then, the researcher adapted Work-Family Conflict Self-efficacy Scale (WFC efficacy) by Cinamon (2003). Next, the questionnaires were translated from English language to Malay language by an English expert. To establish translation validity, a proficient linguist in both languages translated the English version into Malay version. This translation portrayed the degree of accuracy of the Malay version in capturing the meanings attached to the contents of the original instrument in order to facilitate respondents' understanding. Section A The demographic characteristics assessed include age, years in teaching and number of children. The researcher adapted Work-family Conflict Self-Efficacy Scale by Cinamon, (2003) to measure teachers' work-family conflict efficacy. This scale measures one's perceptions of her self-efficacy to manage work-family conflict and family-work conflict. The original measure was developed in Hebrew and later translated into English by two American-born psychologists working at Israeli Universities. The items were adapted to teachers' work situations. The 10-item scale consisted of two subscales: work-family conflict self-efficacy and family-work conflict self-efficacy, each of which was indicated by five items. In the original measure, items 1, 3, 6, 9, and 10 assessed work-family conflict self-efficacy (WFC- efficacy), while items 2, 4, 5, 7, and 8 assessed family-work conflict self-efficacy (FWC- efficacy). Using a 5-point scale, participants were asked to rate how confident they were in handling a given situation. The responses ranged from "1" as "no confidence" to "5" as "complete confidence". High scores on each subscale were indicative of high levels of work/family conflict self-efficacy expectations, while low scores indicated low levels of work-family conflict self-efficacy expectations. One of the sample items from the work-family conflict self-efficacy subscale is: "How confident are you that you could fulfill your job responsibilities without letting them interfere with your family responsibilities?" One of the sample items from the family-work conflict self-efficacy scale is: "How confident are you that you could focus and invest in work tasks even though family issues are disruptive?"

2.3 Procedure

Prior to data collection, the researcher formally obtained permission from the Education Planning and Research Division (EPRD) and the Selangor State Education to distribute the questionnaires to the selected schools. The researcher visited the identified schools, introduced herself and explained the aims of the study and the ethical aspects involved. The researcher then briefly explained the purpose of the survey to the principal or to the person in charge and secured a teachers' name list based on the characteristics mentioned above. After the selection of the sample, questionnaires were given to the respondents through their principal. The questionnaires which contained demographic information and WFCE scale, could be self-administered, thus the respondents were informed by their principal verbally and in written form that they must complete the questionnaires. Three hundred sets of questionnaires were administered on married female teachers in thirteen schools. After the respondents completed the questionnaires they returned the questionnaires to the principal. 250 questionnaires were completed and returned out of 300 sets distributed. The completion of the questionnaires took about one month.

The procedures to test the hypothesized linkages between the observed variables and their underlying latent variables are referred to as confirmatory factor analysis (CFA) and within the context of SEM, CFA is considered to represent the measurement models of WFC. The research question represented a measurement model of Work-family Conflict Efficacy (WFC efficacy), as depicted in Figure 1. The model, labeled as WFC Efficacy, accounted for the variability in Work-family Conflict Efficacy (WFCE) and Family-work Conflict Efficacy (FWCE). Work-family Conflict Efficacy (WFC efficacy) variable comprised Work-family Conflict Efficacy (WFC efficacy) and Family-work Conflict Efficacy (FWC efficacy). This type of personality may improve or increase one's well-being because it strongly affects a person's ability to do a task. Thus, an individual's personality plays a role in the amount of work-family conflict that he or she experiences. CFA enables us to test how well the measured variables represent the constructs. CFA is also used to provide a confirmatory test of our measurement theory. The WFC efficacy model was developed based on the proposed hypotheses and was intended to examine the psychometric properties of WFC efficacy. The measurement theory or CFA could be represented as a model that showed how measured variables came together to represent the constructs.

2.4 The Model's Goodness-of-Fit

The consistency of the model with the data was determined via five measures of model fit.

The first measure is the chi-square statistics which determines if the nonzero in the residual matrix may have occurred simply due to chance. A “reject of null-hypothesis” decision indicates that the hypothesized model lacks fit and that the model is somewhat inconsistent with the data. On the other hand, the “fail to reject decision” suggests that the model fits the data. Besides the chi-square (χ^2) index, normed chi-square (CMIN/DF) was used to evaluate the model fit. It shows that the value of χ^2 divided by the degree of freedom, and this index should be as small as possible. Arbuckle and Wothke (1999) pointed out that the CMIN/df with a value between 2 and 5 is considered acceptable. The second index is the root mean square error of approximation (RMSEA). RMSEA approximates the discrepancy that may be expected in a population and a value of less than .08 is judged reasonable for a fit model. Third, the study examined the Tucker-Lewis index (TLI) which compared the estimated model with the null-model. Each index ranges from approximately zero to 1, with values of .90 or more reflecting good fit of the model to the the target model with the baseline model with data. Next, the comparative fit index (CFI) defined as a measure used to compare the fit of the target model with the baseline model with values close to 1.0 indicate fit (Hoyle & Panter, 1995).

2.5 Parameter Estimate

The study examined the magnitude and direction of individual parameter estimates to determine their reasonableness. This examination sought for offending estimates, such as negative error variances and theoretically inconsistent coefficients, which could undermine the validity of the model. Finally the study examined the estimated R2 of the learning outcomes; the higher the value of the R2, the better the explanation of the endogenous variable by the model.

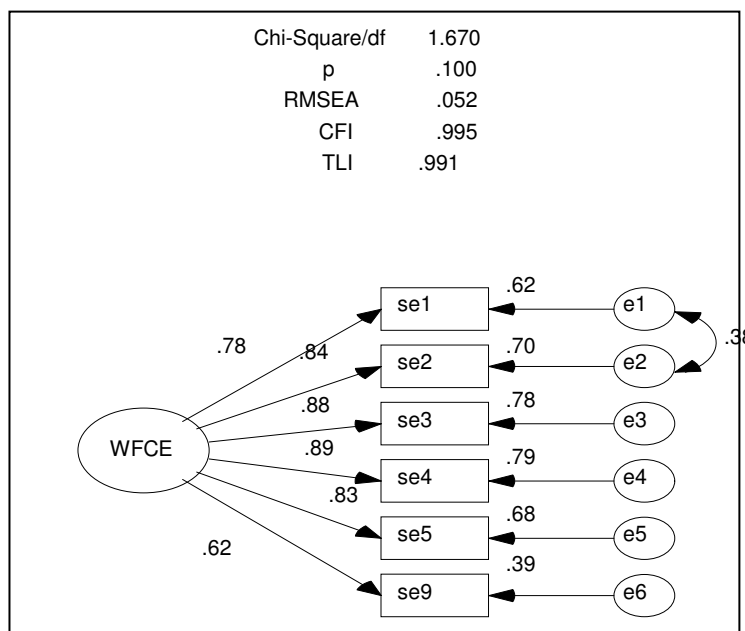


Figure 1: The Measurement Model of WFC Efficacy

Note: Common metric completely standardized. WFCE (work-family conflict efficacy), se1 (teachers confident carry out their job without interfering family responsibilities), se2 (teacher can handle family obligation without interfering teacher task at school), se3 (I can manage situations when my task as a teacher interferes with family life), se4 (I can fulfill my family responsibilities and my workload at the same time), se5 (I can manage situations when my family life interferes with work life), se9 (I spend extra time for my family even when under heavy pressure due to school).

2. Results

This section presents the results of the construct validity of Work-family Conflict Efficacy (WFC efficacy) as estimated through CFA to answer the research question. Responses to the WFC efficacy scale could be explained by first-order factor of work-family conflict efficacy and family-work conflict efficacy.

The model depicted in Figure 1, represents a one factor model of work-family Conflict Efficacy (WFC efficacy) with 10 observed variables. The measurement model of Work-family Conflict Efficacy that comprised first-order factor was measured by ten items; each item was assumed to load only on WFC efficacy dimension. Using the maximum likelihood estimation procedure, the validity of this measurement model was tested whereby a CFA was performed on the data collected from 245 teachers through AMOS (Version 16.0, Arbuckle & Wothke, 1995).

Via a series of CFA, the post hoc model modifications were checked examine the existence of covariance between errors. The highest value (MI = 51.474) and (MI = 34.335) suggested the existence of covariance between the errors of e7 ↔ e8 and covariance between the errors of e1 ↔ e2 respectively. The correlations were established in pair of error terms in order to produce a better fit. For instance, the interrelated errors of e1 (se1) and e2 (se2) were positive (.38), implying that “*I am confident that I can carry out my job as a teacher without interfering with my family responsibilities*” was related to “*I can handle my family obligation without interfering my task at school*”. Decision was then made to drop variables se6 (e6), se7 (e7), and se8 (e8) to get the better fit indices and the model was re-estimated. The results of the revised model (Figure 1) indicated that the hypothesized six-item WFC efficacy measurement model was consistent with the data. The overall fit of the model was adequate with the chi-square test ($\chi^2 = 13.357$, $df = 8$) with p value $p > .001$ ($p = .100$) and CMIN = 1.670. The CFI = .995 and TLI = .991 exceeded the threshold of .90, the standard deemed important for model fit.

Furthermore, RMSEA = .052 showed a reasonable error of estimation. The internal consistency for WFCE was .93. The data also supported the measurement adequacy in terms of their convergent and divergent validity; these are supporting evidence for the construct validity of the model. The factor loadings were all statistically significant ($CR > 1.96$) with no violation of error variances. The range of factor loadings were from .623 (se9) to .889 (se4). Based on the squared multiple correlation results, the factor of WFCE explained 61.6% of the variance associated with se1, followed by se2 (69.9%), se3 (77.6%), se4 (79%), se5 (68.4%) and se9 (38.9%).

Table 1: Maximum Likelihood Parameter Estimates of the standardized factor loadings, standard error, critical ratio and squared multiple correlations for a One-factor Model of the WFC efficacy

Parameter	Standard Error (S.E)	Critical Ratio (C.R)	SMC
Factor Loadings			
se1	.785	-	.616
se2	.836	.061	.699
se3	.881	.075	.776
se4	.889	.081	.790
se5	.827	.079	.684
se9	.623	.090	.389
Measurement error variances			
e1	.251	.026	9.478
e2	.214	.024	8.888
e3	.155	.019	7.944
e4	.171	.022	7.670
e5	.235	.026	9.135
e9	.515	.049	10.496
Factor variances and correlations			
wfce	.402	.056	7.149

Note: se=work-family conflict efficacy, SMC=squared multiple correlations. All the underlined items were constrained to 1.00 and not tested for statistical significance $p < 0.01$ for all un-standardized estimates.

The results demonstrated that all the loadings were statistically significant and could be considered as good predictors (38.9% and above). The variances of the error terms were found to be statistically significant and in the range of 0.155 to 0.515(see Table 1.1). Decision was then made to drop variables se6 (e6), se7 (e7), and se8 (e8) to get the better fit indices and the model were re-estimated. A series of confirmatory factor analyses had been executed separately to examine the nature of the work-family conflict efficacy construct. The results confirmed that the one-factor measurement model of WFC efficacy and the six observed variables or items were found to represent teachers' WFC efficacy construct. The construct was represented by the items measuring perceptions of self-efficacy to manage work-family conflict and family-work conflict. regarding the latent factors of WFC efficacy construct by examining the role of each variable. Apart from focusing on the relationships between individual manifest variable, the findings of the study also have implication for applying and developing new theoretical models that involve WFC as a mediator.

3. Discussion

Work-family conflict efficacy scale is a reliable and valid scale. After a series of confirmatory factor analyses had been executed separately to examine the nature of the work-family conflict efficacy construct. The results confirmed that the one-factor measurement model of WFC efficacy and the six observed variables or items were found to represent teachers' WFC efficacy construct. The construct was represented by the items measuring perceptions of self-efficacy to manage work-family conflict and family-work conflict. The instrument can be utilized in educational setting, especially in assessing teachers' ability in dealing with WFC. Teachers may use the findings of the present research study as a means to assess their self-efficacy beliefs with regard to managing work/family conflict. Teachers may, for example, identify particular areas in their work and family life that increase their work/family conflict experiences. The work-family conflict-efficacy (WFC efficacy) could be used as an initial assessment of their self-efficacy beliefs and could provide valuable information for future teachers' teaching training. It could be helpful for teachers to explore how realistic or unrealistic their beliefs and expectations are and how these perceptions are influencing their goals and behaviors. Self-efficacy is a powerful belief, and teachers may make a difference for their students and themselves through this belief.

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