

# FACTORS AFFECTING WOMEN'S CAREER ADVANCEMENT: OPEN AND DISTANCE LEARNERS' PRESPECTIVE

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## Abstract

According to World Bank Report, female population in Malaysia was reported at 49.3% in 2016. Women play prominent role in today world because they carry variety of roles in the family, community and society levels. In the 1st Malaysia Plan (1966-1970), Malaysia government has incorporated women in the development of the country. Following the 5th Malaysia Plan (1986-1990) and the adaptation of National Policy Women in 1989, the role of women in development have been increasingly reflected. It is undeniable that women made significant contribution in the business industry; however gender inequality still exists in the labour force around the world. Nevertheless, the women's position in the labour market is much more disadvantageous than that of men. Women have smaller chances to be employed, starts a business or advancing in the career ladder. A total sample of 213 open and distance learning (ODL) learners in several private and public education institutions in Malaysia were collected in this study. This study aims to investigate the learners' perception on the factors affecting women's career advancement using confirmatory factor analysis (CFA). The results of this study would be able to assist educators to fulfill their responsibilities to help all learners to develop their abilities and skills to create supportive industry environment for women. The results showed all the factors; character, lack of support, treatment and family issues in this study has significant impact on the respondents' perception. Meanwhile, educators will be able to review the course curriculum to better prepare graduates for the realities of gender empowerment in the workplace.

Keywords: Confirmatory Factor Analysis (CFA), open and distance learners, career advancement

## Introduction

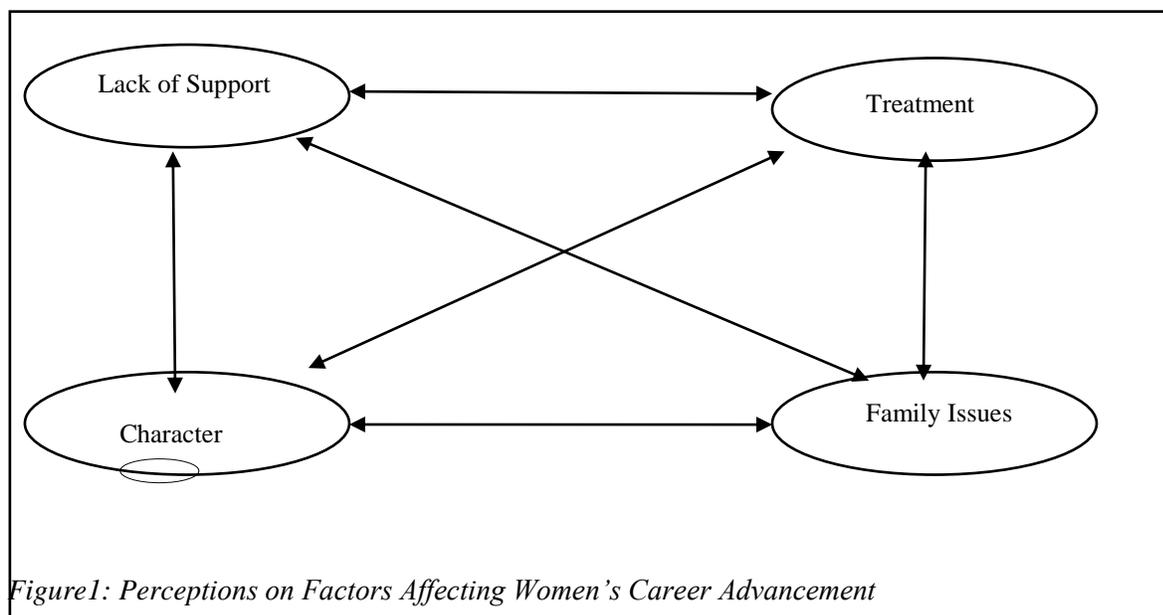
Malaysia realises the need to formulate policies to encourage reforms under the Economic Transformation Programme (ETP) to rise, attract, and retain women employees in the workforce. Several ETP plans are to raise female labour participation rate to 55%, and increase the number of women working on public-listed company boards to 30%. Brownell (1994); Ng and Pine (2003) found that both educators and industry leaders take the responsibility for preparing women for success. The purpose of this research is to examine learners' perceptions on the factors that constrains or facilitate women's career advancement. The results of these findings will be able to assist educators to fulfill their responsibilities to help all learners to develop their abilities and skills to create supportive industry environment for women as well. According to Besen and Kimmel (2006), some researchers argued that women are under-represented in managerial positions due to glass ceiling: blocked opportunities for women while others argued it may be due to the sticky floor: keeping women in lower paying jobs.

## Literature Review

It is undeniable that women made significant contribution in the business industry, however gender inequality still exist in the labour force around the world and there is a significant wage gap between men and women in occupation groups. Muhammad (2010) argued that males have more advantage over the females in some attributes while Bible & Hill (2007); Wentling (2003) showed that there are significantly more men than women in management positions. There are also empirical studies showed some extraordinary women holding top managerial position but at the same time these studies also showed that only few will decide to stay. According to Noble and Moore (2006), women who seek to hold managerial positions find it is difficult to get these positions, however for those who get the positions eventually will leave. This may be due to the lack of tertiary education by women, especially those who are married with family obligations. There are five major barriers affecting women's ability to excel in their careers and getting past the glass ceiling. These barriers include stereotypes and perceptions, mentoring and networking availability, family issues, discrimination in the workplace, and funding availability (Bible & Hill, 2007; Cai & Kleiner, 1999).

## Conceptual Framework

Figure 1 shows the framework investigating the factors (character, lack of support, treatment, family issues) affecting career women's career advancement.



## Research Questions

The research questions for this study are as follows:

- 1) Are there significant gender differences in perceptions of factors that facilitate and constrain women's career advancement and gender issues in the workplace?
- 2) Are there significant programme differences in perceptions of factors that facilitate and constrain women's career advancement and gender issues in the workplace?
- 3) Are there significant gender differences by programme interaction effects in perceptions of factors that facilitate and constrain women's career advancement and gender issues in the workplace?

## **Hypotheses**

The following hypothesis is developed to answer research question 1.

H1: There is no significant difference due to gender on factors that facilitate and constrain women's career advancement and gender issues in the workplace.

The following hypothesis is developed to answer research question 2.

H2: There is no significant difference due to group on factors that facilitate and constrain women's career advancement and gender issues in the workplace.

The following hypothesis is developed to answer research question 3.

H3: There is no significant gender by group interaction effects in perception of factors that facilitate and constrain women's career advancement and gender issues in the workplace.

A total of 213 questionnaires were distributed to learners who are currently undertaking their tertiary education in private higher education in Malaysia to express their views on the factors affecting women's career advancement. The data were collected using questionnaires and it was based on an instrument used by Zhong (2006). The questionnaires were designed using a five-point Likert scale, which would provide an adequate response variance in order for the respondents to complete the survey easier (Steiber & Krowinski, 1990).

The questionnaire consists of three sections. Section A of the questionnaire gathered information pertaining to learners' profile such as gender, and current level of programme pursuing. In Section B, part 1 of the questionnaire consists fifteen items that facilitate women's career advancement based on a five-point Likert scale, with "1" being "not important" and "5" being "extremely important" to women's career advancement. As in part 2 of the questionnaire, it consists of 13 items that constrain women's career advancement based on five-point Likert scale, with "1" being "not a barrier" and "5" being "a major barrier" to women's career advancement. Section C measures the gender issues in the workplace with 7 items and the respondents' response on their preferences and attitude on working with female and male superior and subordinates, "1" being "strongly disagree" and "5" being strongly agree".

## **Data analysis**

The data obtained from the questionnaires were analysed using Statistical Product & Service Solutions (SPSS) and AMOS. Descriptive summaries were used to analyse survey results and answers the research questions. A confirmatory factor analysis (CFA) was conducted using AMOS to determine if the new data fit the model based on the factors identified through factor analysis.

## Demographic Analysis

Table 1: Demographic profile and descriptive statistics of surveyed students (n=213)

Item	Frequency	Percent (%)	Cumulative (%)
<i>Gender</i>			
Male	102	47.9	47.9
Female	111	52.1	100.0
<i>Currently Pursuing (Level)</i>			
Diploma	41	19.25	19.25
Degree	112	52.58	71.83
Masters	44	20.66	92.49
PhD	16	7.51	100.0

Table 1 summarises the demographic profile of the respondents. From the total sample of 213 respondents, 47.9% are male and 52.1% are female. Majority of the respondents are currently pursuing degree and diploma level, with 59.15% and 40.85% respectively. Meanwhile, 44% and 16% of the respondents are currently pursuing their studies at postgraduate levels; masters and PhD respectively.

## Factor Analysis

Table 2: Factor Loadings for Factors Affecting Women's career Advancement

	Factor Loadings			
	Lack of Support	Treatment	Character	Family Issues
<b>Lack of Support</b>				
B24 lack of equity in pay	0.709			
B25 lack of equity in training	0.803			
B26 lack of equity in promotion decisions	0.753			
B28 lack of job knowledge	0.507			
B29 lack of mentoring	0.459			
<b>Treatment</b>				
C2 female managers treat female employees differently than they treat male employees		0.787		
C3 male managers treat female employees differently than they treat male employees		0.639		
C4 female employees respond differently to female managers than to male managers		0.735		
C5 male employees respond differently to female managers than to male managers		0.670		

## Character

B11 Hardworking	0.763
B12 Work attitude	0.928
B13 Communication Skills	0.677
B14 Problem solving skills	0.542
<b>Family Issues</b>	
B210 being married	0.618
B211 single parent	0.791
B212 childcare responsibilities	0.554

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In order to investigate the underlying structure of a thirty four items questionnaire assessing the factors affecting women's career advancement, the total sample were subjected to maximum likelihood with promax rotation. Kaiser-Meyer-Olkin (KMO) allows the estimation of the feasibility of conducting factor analysis to compare the values of correlation coefficients observed with partial correlation coefficients value was equal to 0.755, greater than the criteria of 0.60 (Tabachnick & Fidell, 2001); indicated that a factor analysis was appropriate. Four factors (with Eigenvalues exceeding 1) were identified as underlying the thirty four questionnaire items.. According to Russell (2002), it is recommended that four or more items be included in the factor analysis to ensure an adequate identification of the factors. Whereas, Comrey and Lee (1992) suggested that loadings in excess of 0.71 are considered excellent, 0.63 very good, 0.55 good, 0.45 fair. The factor loadings in Table 2 shows all variable loadings reached an acceptable standard.

### Reliability Analysis

*Table 3: Factor Reliability*

Factor	No of Items	Cronbach's alpha
Lack of Support	5	0.785
Treatment	4	0.800
Character	4	0.818
Family Issues	3	0.699

A reliability analysis using the measure of Cronbach's alpha was used to estimate the reliability of the factors. Refer to Table 3, the reliability result generated in this study ranged from 0.699 to 0.818. According to Hair et al (1998), an academic research with alpha value above 0.7 is generally accepted and this study showed the reliability of the factors are above the accepted threshold with family issues factor falls on marginal at alpha value of 0.699.

### Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was performed through AMOS to determine the goodness of fit of the hypothesised model in Figure 2. Structural equation modeling (SEM) analysis was performed to test the extent to which a pattern of factor loading.

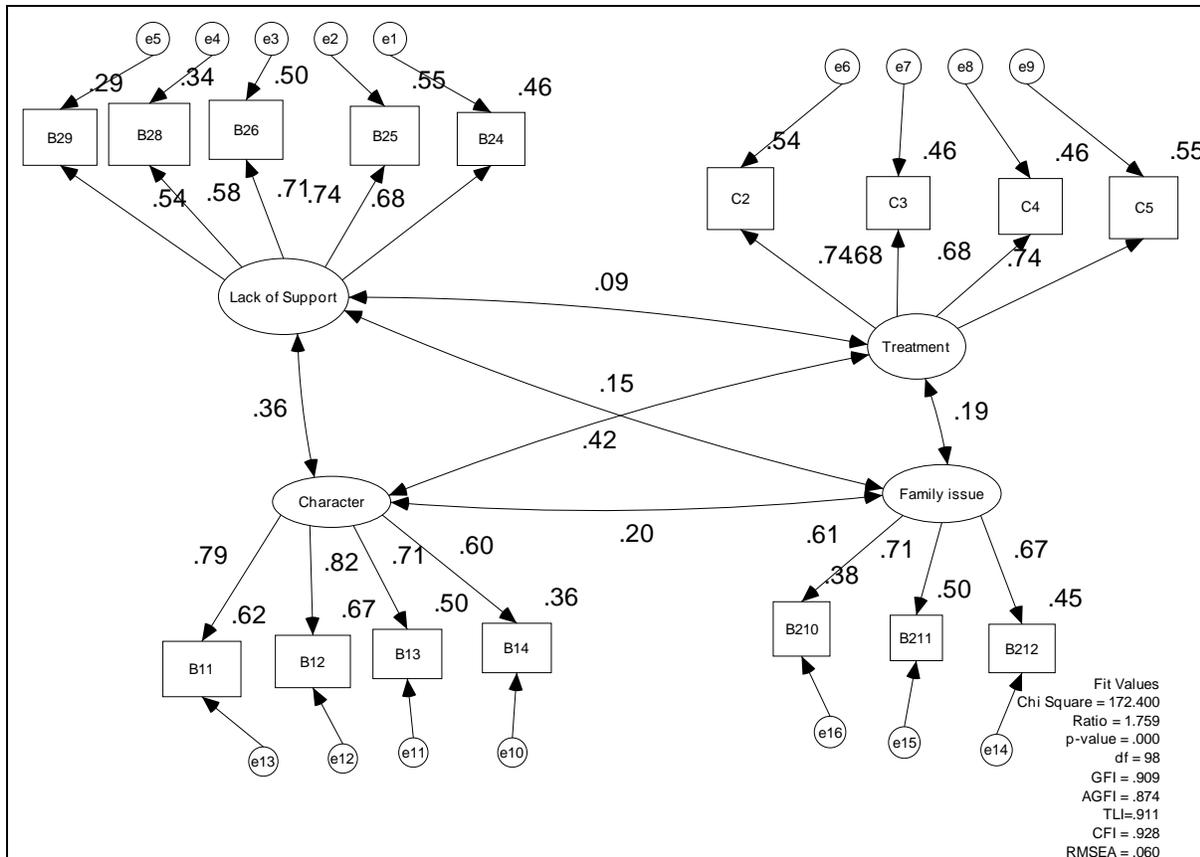


Figure 2 Structural Equation Model on the perceptions on women's career advancement

The indices assessed the overall model fit including Chi-square ( $\chi^2$ ), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), Tucker Louise Index (TLI), comparative fit index (CFI) and root mean square error of approximation (RMSEA). A summary of the fit indexes is presented in Table 4.

Table 4: Fit Indexes of the Structural Model

Fit Index	Value	Recommended Criteria
df	98	$\leq 3$
$\chi^2/df$	1.7592	$\geq 0.9$
GFI	0.909	$\geq 0.80$
AGFI	0.874	$> 0.95$
TLI	0.911	$\geq 0.90$
CFI	0.928	$\leq 0.10$
RMSEA	0.06	$\leq 3$

The observed normed  $\chi^2$  for measurement model was 1.7592 ( $\chi^2 = 172.4$ ,  $df = 98$ ) which is smaller than 3 recommended by Bagozzi and Yi (1988). Other fit indexes also show good fit for the measurement model. The adjusted goodness-of-fit index (AGFI) is 0.874, which exceeds the recommended cut-off level

of 0.8 by Chau and Hu (2001). The comparative fit index (CFI) is 0.928, greater than the 0.9 recommended by Bagozzi and Yi (1988). The root mean square error of approximation (RMSEA) is 0.06, lower than the recommended cut-off level of 0.10 recommended by Browne and Cudeck (1993). The combination of these results suggests that the demonstrated measurement model fits the data well.

*Table 5: Results of CFA for measurement model*

Construct	Item	Loadings	Cronbach Alpha	Composite reliability	Average Variance Extracted
Lack of Support	B24	0.709	0.785	0.787	0.436
	B25	0.803			
	B26	0.753			
	B28	0.507			
	B29	0.459			
Treatment	C2	0.787	0.800	0.802	0.504
	C3	0.639			
	C4	0.735			
	C5	0.670			
Character	B11	0.763	0.818	0.824	0.549
	B12	0.928			
	B13	0.677			
	B14	0.542			
Family Issues	B210	0.618	0.699	0.696	0.438
	B211	0.791			
	B212	0.554			

Convergent validity is the degree to which multiple attempts to measure the same concept in agreement. As suggested by Hair et al (1998), convergent validity was assessed based on factor loading, composite reliabilities, and variances extracted. The results of the convergent validity are shown in Table 5. Composite reliability values, which depict the degree to which the construct indicators indicate the latent construct, range from 0.70 to 0.86. The composite reliability of all latent constructs exceeded recommended level of 0.7 as suggested by Hair et al (1998). However, the average variances extracted, which reflect the overall amount of variance in the indicators accounted for by the latent construct, were in the range between 0.436 and 0.549. Note that not all latent construct average variances extracted exceeded recommended level of 0.5 by Hair et al (1998).

*Table 6: Discriminant validity of Constructs*

Construct	1	2	3	4
1. Family issue	0.662			
2. Character	0.198	0.741		
3. Treatment	0.188	0.149	0.710	
4. Lack of Support	0.416	0.363	0.094	0.660

Discriminant validity is the degree to which the measures of different concepts are distinct and it can be examined by comparing the squared correlations between constructs and variance extracted for a construct (Fornell & Larcker , 1981). The analysis results showed that the square correlations for each construct is less than the average variance extracted by the indicators measuring that construct, indicating the measure has adequately discriminant validity. In summary, the measurement model demonstrated adequate reliability, convergent validity, and discriminant validity.

### Response Bias

*Table 7: Respondent Response Bias*

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Mean_character	Equal variances assumed	.044	.835	-.425	211	.671
Mean_Lack_of_support	Equal variances not assumed	5.266	.023	-1.661	193.361	.098
Mean_Treatment	Equal variances assumed	.078	.780	-.342	211	.733
Mean_Family_Issues	Equal variances assumed	.012	.913	-1.902	211	.058

An independent t-test was used to compare the respondents' response bias towards the questions asked in questionnaire. The output shows the Levene's test for equality of variances. If the significant level is greater than 0.05, we have evidence to conclude that the variance of the two groups of respondents are indeed homogeneous. Based on the results generated in Table 7, Levene's test shows a significant value of 0.835, 0.023, 0.780, and 0.913, respectively for mean character, mean lack of support, mean treatment and mean family issues. For factors with significant value greater than 0.05, we use the computations derived from equal variances assumed. Based on the output demonstrated in Table 7, there is no significant response bias obtained for all of the factors, character (t=-0.425; p >0.05), lack of support (t=-1.661; p >0.05), treatment (t=-0.342; p >0.05), and family issues (t=-1.902; p >0.05). This can be concluded that there is no response bias because there is no significant differences exist.

## Multivariate Analysis of Variance (MANOVA)

Table 8: Multivariate Analysis of Variance

Source	Pillai's Trace	F	Hypothesis df	Error df	Sig.	Partial $\eta^2$
Gender	.041	2.164 <sup>b</sup>	4.000	204.000	.074**	.041
Programme	.060	1.577	8.000	410.000	.130	.030
Gender by Programme	.050	1.321	8.000	410.000	.231	.025

\*\* Significant at 5%

A multivariate analysis of variance (MANOVA) was used to conduct overall effects (gender, programme, gender by programme) on the four dependent variables represented by the extracted factors (lack of support, treatment, character, and family issues). The results obtained in Table 8 showed that there were no significant differences due to gender (Pillai's Trace = 0.041,  $F=2.164$ ,  $p>0.05$ ), programme (Pillai's Trace = 0.060,  $F=1.577$ ,  $p>0.05$ ) and gender by group interaction (Pillai's Trace = 0.050,  $F=1.321$ ,  $p>0.05$ ).

## Conclusions

This study shows there is no difference in the perceptions by gender (male and female) or by programme (business, hospitality and engineering) or gender by programme. Four factors were tested to study the perceptions of the learners and shows that all the factors; character, lack of support, treatment and family issues have significant impact on the respondents' perception in this study. Nevertheless, the overall findings of this research have limitations in terms of generalising to learners in the country because the data were collected from several private higher education providers only. Although Malaysian government has given continuous effort in promoting women's equality, but it is undeniable that women still face significant problems in advancing to the top management. The results of this study are consistent with previous studies; which have assessed the under-representation of women managers and gender discrimination issues in the workplace (Woods & Kavanaugh, 1994; Fagenson & Jackson, 1993; Gregg & Johnson, 1990).

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