

## An Empirical Study of the Relationship between Mentoring Program and Mentees' Psychosocial Development

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**Abstract:** The study was undertaken to investigate the correlation between mentoring program and mentees' psychosocial development using self-report questionnaires collected from undergraduate students in teaching based higher learning institutions in Sarawak, Malaysia. The outcomes of SmartPLS path model analysis showed two important findings: firstly, communication positively and significantly correlated with psychosocial. Secondly, support positively and significantly correlated with psychosocial. In sum, the result demonstrates that mentoring program does act as an important determinant of mentees' psychosocial development in the organizational sample. In addition, this study provides discussion, implications and conclusion.

**Keywords:** mentoring; communication; support; psychosocial development

### 1. Introduction

Historically the first mentoring system can be traced back in Greek literature when Odysseus referred his son Telemachus for guidance in preparation for Trojan War (Ismail & Khian Jui, 2013; Ismail & Ridzuan, 2012; Merriam, 1993). The word mentor may also refers to a "father figure" who sponsors, guides and develops a younger person (Hansford, Ehrich, Lisa & Tennent, 2004; Ismail & Khian Jui, 2013). Mentors and mentoring have played a significant role in teaching, inducting and developing the skills and talents of mentee. Today, mentoring can be considered as a social-based activity by organization to promote development among new members or mentee. Mentoring also takes place in educational setting (Little, Kearney & Britner, 2010; Johnson, Geroy & Griego, 1991) and/or

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counseling services (Gregson, 1994; Zuraidah, Zaiton, Masiniah, Jamayah, Sabasiah & Abdul Halim, 2004). In this context, mentors are often selected based on wisdom, experiences and trustworthiness where their main functions are to guide mentees understanding the complexity of different organizational culture, norms and expectations (Ismail, Hasbullah, Bakar & Boerhanoeddin, 2005; Ismail, Hasbullah, Bakar, Ahmad & Junoh, 2006; Ismail & Ridzuan, 2012; Little et al., 2010).

In a current organizational perspective, mentoring is often seen as a learning tool which encourages relationship between a knowledgeable and experienced person with a novice. It also acts as an instrument to develop group and/or individuals' potentials in carrying out duties and responsibilities, learn new techniques, and well-being of mentees (Cummings & Worley, 2009; Ismail & Khian Jui, 2013; Johnson et al., 1991; Little et al., 2010; Long, 2002). There is no one best mentoring model that fits all organizations, but in general they are designed and implemented according to the organizational contexts in terms of beliefs, policy, orientations, stresses, strengths and weaknesses (Irving et al., 2003; Ismail et al., 2005, 2006; Ismail & Khian Jui, 2013; Ismail, Nik Daud, Hassan & Khian Jui, 2010; Santos & Reigadas, 2002, 2005). These factors have affected organizations to design and administer the various types of mentoring program, especially informal relationship (e.g., specific demands, spontaneous and adhoc) and/or formal relationship (e.g., structured and coordinated relationship between mentor and mentee, using standard norms, continuously action plans, time frame, and particular objectives) (Ismail et al., 2005, 2006; Ismail & Ridzuan, 2012; Santos & Reigadas, 2002, 2005). In organizations, formal and informal mentoring programs are viewed as equally important, but informal mentoring programs are often implemented to complement and strengthen formal mentoring programs in order to achieve organizational strategies and goals (Hansford & Ehrich, 2006; Ismail et al., 2010; Ismail & Khian Jui, 2013; Ismail & Ridzuan, 2012).

According to many scholars like Tennenbaum, Crosby & Gliner (2001), Bernier, Larose & Soucy (2005), Ismail and Ridzuan (2012), and Ismail & Khian Jui (2013) successful mentoring programs consist of two salient practices, i.e., communication and support. Oluga, Adewusi & Babalola (2001) generally describe communication as a the process of transmitting facts, ideas, views, thoughts, opinions, messages, feelings or information among individuals or organisations or systems thorough various type of media such as face to face conversations, written texts, figures and/or illustration which can be easily understood by the receiver. Communication can also be in the form of non-verbal means such facial expression, physical appearance, gesture, body movement and para language. In the context of university mentoring program, communication is specifically defined as mentors openly delivering information about the procedures, content, tasks and objectives of the mentoring programs, conducting discussions about tasks that should be

learned, giving detailed explanations about the benefits of attending mentoring programs and providing performance feedback (Fox, Stevenson Connelly, Duff & Dunlop, 2010; Ismail et al., 2005, 2006; Santos & Reigadas, 2005). The second factor for successful mentoring is support by the mentor to the mentees. Support is broadly defined as mentors provide emotional support (e.g. acquire new knowledge, skills, and attitudes, and guide them to properly apply in daily life) and instrumental support (e.g., assist mentees to adapt campus environments) at varying times to mentees (Davis, 2007; Fox et al., 2010; Stewart & Knowles, 2003).

Interestingly, recent studies in university/faculty mentoring programs reveal that the ability of mentors to appropriately implement such mentoring practices may have a significant impact on positive mentee outcomes, especially psychosocial development (Allen & Finkelstein, 2003; Dutton, 2003; Ismail & Khian Jui, 2013). In a higher education context, psychosocial is often viewed as students making preparations to adapt to campus life which entails social integration, well being and self confidence (Dutton, 2003; Pope, 2002; Santos & Reigadas, 2005). Within a mentoring program model, many scholars think that communication, support and psychosocial are distinct, but strongly interrelated constructs. For example, the ability of mentors to properly implement comfortable communication and provide adequate support have been essential factors that may enhance positive mentee outcomes, especially psychosocial (Allen & Finkelstein, 2003; Dutton, 2003).

Even though the nature of this relationship is significant, little is known about the role of mentoring program as an important determinant of mentee outcomes in the mentoring program research literature (Allen & Finkelstein, 2003; Bernier et al., 2005; Ismail & Khian Jui, 2013). Many scholars argue that this situation is due to many previous studies have much emphasized on the internal properties of mentoring program, employed a simple survey method to explain different respondent perceptions toward particular mentoring program models and used a simple correlation analysis to measure the strength of association between mentoring program and mentees' psychosocial. Consequently, these studies have not provided sufficient information to be used as guidelines by practitioners in formulating strategic action plans to improve the design and administration of mentoring programs in dynamic higher learning institutions (Bernier et al., 2005; Dutton, 2003; Ismail & Khian Jui, 2013; Ismail & Ridzuan, 2012). Therefore, this situation motivates the researchers to further explore the nature of this relationship.

## **2. Objective of the Study**

This study has twofold objectives: first, is to determine the relationship between communication and mentees' psychosocial development. Second, is to determine the relationship between support and mentees' psychosocial development.

### 3. Literature Review

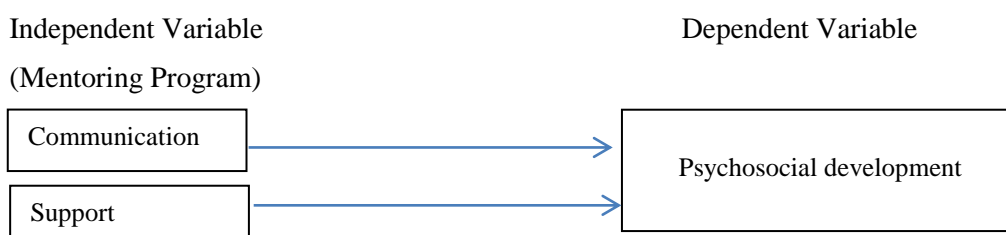
Previous research on higher education student development program recognizes that the implementation of mentoring programs have enhanced positive learning process for both mentors and mentees (Hansford et al., 2002; Ismail et al., 2005, 2006, Little et al., 2010; Vieno et al., 2007). For example, Hansford et al. (2002) found that the implementation of mentoring programs had produced seven positive outcomes: first, almost 21 % mentors received benefit from collaboration, networking and sharing ideas with colleagues. Second, 19.5 % were able to reflect on their teaching, 17.5 % in professional development. Third, 16.4% mentors gained personal satisfaction. Fourth, 42.1 % mentees benefited from support, empathy, counseling, encouragement and friendship while 35.8 % claimed to receive guidance in subject knowledge and resources for learning. Fifth, 32.1 % mentees got benefit from discussion and sharing of ideas. Finally, 27.7 % mentees gained positive reinforcement and constructive comments from the mentoring programs.

Further, several studies were conducted using a direct effects model to investigate mentoring program based on different samples like perceptions of 88 participants of a large south eastern university in United States (Allen & Finkelstein, 2003), perceptions of 18 students at University of Brighton, United Kingdom (Dutton, 2003), and perceptions of 110 students in Canadian colleges (Bernier et al., 2005). These studies found that the ability of mentors to properly implement comfortable communication and provide adequate support in formal and/or informal mentoring relationships had been important determinants of mentees' psychosocial development in the respective organizations (Allen & Finkelstein, 2003; Bernier et al., 2005; Dutton, 2003).

These studies support the notion of adult learning theory. For example, Erikson's (1963) theory of psychosocial development explains that human being is said to undergo eight stages of psychosocial development from infancy through maturity. It refers to the development of personality, acquisition of social attitudes and skills. At university level most students will be at stage 6 (intimacy versus isolation) where their main task is to develop a healthy relationship with the opposite sex. Undergraduates also need to equip themselves with knowledge and skills as students at tertiary level. They also need to gain qualities of leadership, team-work spirit, communication skills and ability to solve problems critically and creatively. In order to perform this task, students need support and guidance from mentors usually appointed by faculty. Besides that, Chickering's (1969) vector theory of identity development suggests seven factors which strongly affects the development of young adult identities that is developing competence, managing emotions, becoming autonomous, developing interpersonal relationships, establishing identity, developing purpose, and developing integrity. Application of these theories in higher education institutions shows that the essence of mentoring

program is to enhance mentees' psychosocial development. For example, the willingness of mentors to appropriately implement comfortable communication and provide adequate support in formal and/or informal mentoring activities may lead to an enhanced mentees' psychosocial development in higher education institutions (Allen & Finkelstein, 2003; Bernier et al., 2005; Dutton, 2003).

The literature has been used as foundation of developing a conceptual framework as illustrated in Figure 1.



**Figure 1. Conceptual Framework**

Based on the framework, it can be hypothesized that:

H1: There is a positive relationship between communication and psychosocial development.

H2: There is a positive relationship between support and psychosocial development.

## **4. Methodology**

### **4.1. Research Design**

This study used a cross-sectional research design which allows the researchers to integrate the mentoring program literature, the pilot study and the actual study as a main procedure to gather data for this study. Such approach is said to enable researchers to gather accurate data, decrease bias and increase the quality of data collected (Sekaran & Bougie, 2010; Zikmund, 2000). The location of this study is teaching based higher learning institutions in Sarawak, Malaysia. For confidential reasons, the name of the organization is kept anonymous. In the initial stage, survey questionnaires were prepared based on mentoring program literature. After that, a pilot study was conducted involving 10 senior year students (2<sup>nd</sup> year and above) five students from public and five from private institutions. A back translation technique was employed to translate the survey questionnaires into English and Malay languages in order to increase the validity and ensure the reliability of research findings (Sekaran & Bougie, 2010; Zikmund, 2000).

#### **4.2. Measures**

This survey questionnaire has three sections. First section is about communication adapted from mentoring communication system literature (Foxon, 1993; Ismail et al., 2005, 2006, 2010; Ismail & Ridzuan, 2012; Sullivan, 2000; Yamnill & McLean, 2001; Young & Cates, 2005). Secondly, support was measured using 5 items that were adapted from mentoring support system literature (Chiaburu & Takleab, 2005; Langhout et al., 2004; Ismail et al., 2005, 2006; Ismail & Ridzuan, 2012; Rayle, Kurpius & Arredondo, 2006; Tsai & Tai, 2003; Vieno et al., 2007). Thirdly, psychosocial development was measured using 3 items that were modified from undergraduate student psychosocial literature (Allen, Day & Lentz, 2006; Noe, Greenberger & Wang, 2002; Ismail, A., & Khian Jui, 2013; Noe, 1988; Noe, 1988). All items used in the questionnaires were measured using a 7-item Likert scale ranging from “strongly disagree/dissatisfied” (1) to “strongly agree/satisfied” (7). Demographic variables were used as controlling variables because this study focused on student attitudes.

#### **4.3. Sample**

The researchers obtained an official approval to conduct the study from the heads of teaching based higher learning institutions in Sarawak, Malaysia. Due to the constraints of the organization rule, duration of study and finance, 250 survey questionnaires were distributed to undergraduate students using a convenient sampling technique. This sampling technique was chosen because the management of the organizations did not allow the researchers to perform random sampling procedures. From the total number, 196 questionnaires were returned to the researchers, yielding 78.4 percent of the response rate. The survey questionnaires were answered by participants based on their consents and on voluntarily basis. The number of this sample exceeds the minimum sample of 30 participants as required by probability sampling technique, showing that it may be analyzed using inferential statistics (Sekaran & Bougie, 2010; Zikmund, 2000).

#### **4.4. Data Analysis**

The SmartPLS 2.0 was employed to assess the psychometric of survey questionnaire data and thus test the research hypotheses (Henseler, Christain, Ringle & Sinkovics, 2009; Ringle, Wende & Will, 2005). The main advantage of using this method may deliver latent variable scores, avoid small sample size problems, estimate every complex models with many latent and manifest variables, hassle stringent assumptions about the distribution of variables and error terms, and handle both reflective and formative measurement models (Henseler et al., 2009; Ringle et al., 2005). The SmartPLS path model was employed to assess the magnitude and nature of the relationship between many independent variables and one or more dependent variables in the structural model using standardized beta ( $\beta$ ) and t statistics. The value of  $R^2$  is used as an indicator of the overall predictive

strength of the model. The value of  $R^2$  are considered as follows; 0.19 (weak), 0.33 (moderate) and 0.67 (substantial) as suggested by Chin (1998), and Henseler et al. (2009). A global fit measure was conducted to validate the adequacy of PLS path model based on Wetzel, Kneebone, Woloshynowych, Moorthy & Darsy's (2006) global fit measure. If results of testing hypothesized model exceed the cut-off value of 0.36 for large effect sizes of  $R^2$ , showing that it adequately support the PLS path model globally.

## 5. Results

### 5.1. Sample Profile

Table 1 shows the sample characteristics. Majority of the respondents were female (70.9 %), age ranging from 22 to 24 years (70.4 %), 68.9 % sample comprises of third year students, students achieving CGPA between 3.01 to 3.50 (48.5 percent%) and students from public institutions of higher learning consists of (85.7 %).

**Table 1. Respondents' Characteristics (n=196)**

Sample Profile	Sub-Profile	Percentage
Gender	Male	29.1
	Female	70.9
Age	19 to 21 years old	25.0
	22 to 24 years old	70.4
	25 to 27 years old	4.6
Education	SPM	6.1
	STPM	51.0
	Diploma	10.8
	Matriculation	32.1
Year of Study	Second Year	6.1
	Third Year	68.9
	Fourth Year	24.5
	Fifth Year	0.5
Academic Achievement	CGPA 2.01-2.50	5.6
	CGPA 2.51-3.00	34.7
	CGPA 3.01-3.50	48.5
	CGPA 3.51-4.00	11.2
Institution	Public Institutions of Higher Learning	85.7
	Private Institutions of Higher Learning	14.3

Note: *SPM/MCE - Sijil Pelajaran Malaysia/ Malaysia Certificate of Education, STPM - Sijil Tinggi Pelajaran Malaysia/ Higher School Certificate*

*Source: Research Findings*

**5.2. Validity and Reliability Analyses**

The confirmatory factor analysis was conducted to assess the psychometric of survey questionnaire data. Table 2 shows result of convergent and discriminant validity analyses. All constructs had values of average variance extracted (AVE) larger than 0.5, which is within the acceptable standard of convergent validity (Henseler et al., 2009). All constructs also had the values of AVE square root (in diagonal) were greater than the squared correlation with other constructs (in off diagonal). This shows that all constructs met the acceptable standard of discriminant validity.

**Table 2. The Results of Convergent and Discriminant Validity Analyses**

Variable	AVE	Communication	Support	Psychosocial
Communication	0.725	.851		
Support	0.741	0.418	.861	
Psychosocial	0.703	0.438	0.416	.838

*Source: Research Findings*

Table 3 shows the factor loadings and cross loadings for different constructs. The correlation between items and factors had higher loadings than other items in the different constructs, as well as the loadings of variables were greater than 0.7 in their own constructs in the model are considered adequate (Henseler et al., 2009), thus the validity of measurement model met the criteria.

**Table 3. The Results of Factor Loadings and Cross Loadings for Different Construct**

Construct/ Item	Communication	Support	Psychosocial
Communication			
Objective	<b>0.836673</b>	0.387340	0.323892
Moral values	<b>0.897438</b>	0.393681	0.415470
Critical thinking	<b>0.818922</b>	0.287202	0.372452
Support			
Motivation	0.405739	<b>0.841673</b>	0.365538
Listen to suggestion	0.340172	<b>0.842116</b>	0.356740
Praise	0.339573	<b>0.875203</b>	0.371674
Help	0.327694	<b>0.868722</b>	0.323846
Listen to problems	0.384191	<b>0.875777</b>	0.372699
Psychosocial			
Self-confidence	0.374836	0.414254	<b>0.874918</b>
Decision	0.337479	0.370728	<b>0.871433</b>
Balance	0.346155	0.278371	<b>0.790566</b>
Role model	0.408610	0.320868	<b>0.813711</b>

*Source: Research Findings*



Table 4 shows the results of reliability analysis for the instrument. The values of composite reliability and Cronbach's Alpha were greater than 0.8, indicating that the instrument used in this study had high internal consistency (Henseler et al., 2009; Nunally & Benstein, 1994).

**Table 4. Composite Reliability and Cronbach's Alpha**

Construct	Composite Reliability	Cronbach Alpha
Communication	0.888	0.810
Support	0.935	0.913
Psychosocial	0.904	0.859

*Source: Research Findings*

### 5.3. Analysis of Research Constructs

Table 5 shows that the mean values for the variables are between 5.1 and 5.3, showing that the levels of communication, support, psychosocial and academic performance are ranging from high (4) to highest level (7). The correlation coefficients for the relationship between the independent variable (i.e., communication and support) and the dependent variable (i.e., psychosocial development) are less than 0.90, indicating the data are not affected by serious collinearity problem (Hair, Anderson, Tatham & Black, 2006).

**Table 5. Pearson Correlation Analysis and Descriptive Statistics**

Variable	Mean	Standard Deviation	Pearson Correlation Analysis (r)		
			1	2	3
1. Communication	5.3	.92	1		
2. Support	5.1	1.17	.42**	1	
3. Psychosocial	5.2	.98	.43**	.69*	1

Note: Significant at \*\* $p < 0.01$  Reliability Estimation is Shown in a Diagonal

*Source: Research Findings*

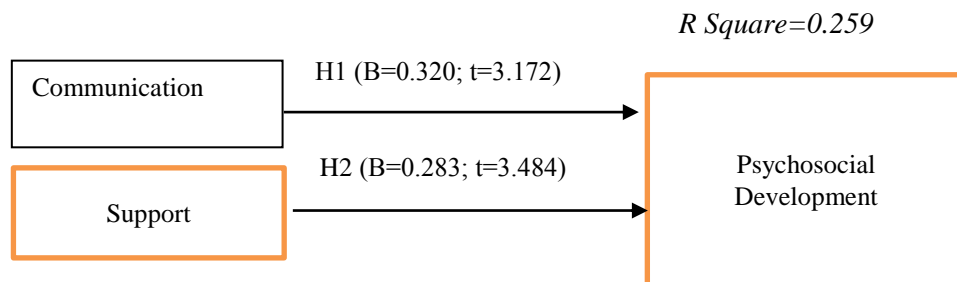
### 5.4. Testing Hypotheses 1 and 2

Figure 2 shows the outcomes of SmartPLS path model for testing the direct effects model. In terms of exploratory of the model, the inclusion of communication and support in the analysis had explained 26 percent of the variance in dependent variable. Specifically, the results of testing hypothesis highlighted two important findings: first, communication significantly correlated with psychosocial

development ( $\beta=0.320$ ;  $t=3.172$ ), therefore H1 is accepted. Second, support significantly correlated with psychosocial development ( $\beta=0.283$ ;  $t=3.484$ ), therefore H2 is also accepted. Thus results of this study strongly supported that mentoring program does act as an important determinant of mentees' psychosocial development in the studied organizations.

Independent Variable  
(Mentoring Program)

Dependent Variable



Note: Significant at  $t > 1.96$

Figure 2.

In order to determine a global fit PLS path model, a global fit measure (GoF) was carried out based on Wetzel et al.'s (2009) guideline as follows:  $GoF = \sqrt{\text{MEAN (Communality of Endogenous)} \times \text{MEAN (R}^2\text{)}} = 0.718$ , signifying that it exceeds the cut-off value of 0.36 for large effect sizes of  $R^2$ . This result confirms that the PLS path model has better explaining power in comparison with the baseline values (GoF small=0.1, GoF medium=0.25, GoF large=0.36). It also provides strong support to validate the PLS model globally (Wetzel et al., 2006).

## 6. Discussion and Implications

The findings of this study show that mentoring program does act as an important determinant of mentee psychosocial development in the studied organizations. In the context of this study, mentors were reported to have appropriately planned and implemented mentoring relationships according to broad policies and procedures instructed by the organizations. Majority of respondents perceived that communication and moral support are actively practiced in formal and/or informal mentoring activities. As a result, it may lead to an enhanced mentees' psychosocial development in the studied organizations.

This study presents three major implications: theoretical contribution, robustness of research methodology, and practical contribution. In terms of theoretical contribution, the results of this study confirm that communication and support are

important determinants of mentees' psychosocial development in the organizational sample. This result is consistent with studies by Allen and Finkelstein (2003), Bernier et al. (2005), and Dutton (2003).

With respect to the robustness of research methodology, the survey questionnaires used in this study have met the acceptable standards of validity and reliability analyses. This situation may lead to the production of accurate and reliable findings.

In regards with practical contribution, the findings of this study may be used as guidelines by practitioners to improve the management of mentoring programs in higher education institutions. In order to realize these objectives, management should consider the following aspects: first, training content and methods for mentors need to be improved in order to enhance their competencies in teaching, counseling and guiding different mentee backgrounds. Second, mentoring groups need to be formed based on students' academic performance in order to ease mentors making proper plans to fulfill the requirements of mentees who have different academic performance. Third, mentors need to plan and implement the various kinds of activities in order to motivate mentees to commit with mentoring programs. Finally, mentors need to encourage high performing students to be co-mentors and/or role models to other students in formal and/or informal mentoring programs. If these suggestions are given attention this may motivate mentees to perform the higher education mentoring program goals.

## **7. Conclusion**

This study proposed a theoretical framework based on the higher education mentoring program research literature. The confirmatory factor analysis showed that the measurement scale used in this study met the acceptable standards of validity and reliability analyses. Furthermore, the outcomes of SmartPLS path analysis confirm that mentoring program does act as an important determinant of mentees' psychosocial development in the studied organizations. This result has also supported and broadened past studies mostly published in Western countries. This study further suggests that the willingness of mentors to appropriately practice comfortable communication and provide adequate support will increase subsequent positive mentee outcomes (e.g., self-efficacy, satisfaction, commitment, career, and leadership skills). Thus, it may lead to sustained and enhanced the performance of higher education institutions in an era of global competition.

Findings and conclusions drawn from this study however are subject to some limitations. First, a cross-sectional research design used to gather data at one time within the period of study might not capture the causal connections between variables of interest. Second, this study does not specify the relationship between

specific indicators for the independent variable and dependent variable. Third, the outcomes of SmartPLS path model have only focused on the level of performance variation explained by the regression equations, but there are still a number of unexplained factors that affect the causal relationship among variables and their relative explanatory power. Finally, the sample of this study was taken from teaching based higher learning institutions in Sarawak that allowed the researchers to gather data via survey questionnaires. These limitations may decrease the ability to generalize the results of this study to other organizational settings.

The conceptual and methodological limitations of this study should be improved when designing future research. First, several organizational and individual characteristics need to further discover, as this may broaden knowledge of mentoring systems. Second, another form of research designs such as longitudinal study could be used to collect data as this would describe patterns of change and the direction and magnitude of causal relationships between variables of interest. Third, other specific theoretical constructs of mentoring program like formal and informal learning styles need to be considered because they have widely been recognized as an important link between mentoring program and many aspects of individual attitudes and behavior (Davis, 2007; Ismail et al., 2010; Ismail & Khian Jui, 2013; Ismail & Ridzuan, 2012; Vieno et al., 2007). Finally, other mentee outcomes such as self-efficacy, academic performance and career should be given attention because they are strongly recognized in mentoring program research literature (Fox et al., 2010; Ismail et al., 2010; Ismail & Khian Jui, 2013; Ismail & Ridzuan, 2012). The importance of these issues needs to be further discussed in future studies.

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