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An Exploratory Factor Analysis And Reliability Analysis Of The Personal And Social Influence On Employability Among Youth From Marginalised Community

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Abstract

Exploration of personal and social factors that influence employability is an essential tool for the youth from marginalized communities to enter labour market and sustain in a career successfully. Previous studies have proven the contribution of personal and social factors in shaping the career of the youth population. However, there is a very limited access to instrument that assess the personal and social influence on employability that based on Malaysian context. Therefore, the research aimed at developing instruments that emphasis personal and social influence on employability. This study commenced to gain empirical evidence of validity and reliability of the item using a survey questionnaire. The instruments' validity and reliability were measured on youth from marginalized community in Malaysia. Quantitative research designs that employ questionnaire were selected by researchers in administrating the research. Around 1181 Malaysian youth at the age range from 15 to 25 years old from marginalised community were selected by using probability sampling method to participate in this study. The internal consistency reliability, standardized residual variance, construct validity, and composite reliability were measured. Findings of the study proved that all the constructs are significant in assessing personal and social influence on employability.

Keywords Self-Efficacy, Self Determination, Self Esteem, Role Model, Parental Influence and Socio Economy Status, Factor Analysis.

1. Introduction

Youth is a stage of life of an individual that involves self-exploration that drives them towards matured life roles. It is known as a dynamic process that focuses development in the aspects of physical, emotion, biochemical, psychology, social, and maturity (Aysel ÖZdemir et al., 2016). Basically, youth is believed to be a generation that is going through a critical period of development where an individual is believed to be transitioning to a more independent life and vulnerable to be influenced by negative aspects of development (Owens et al., 2020). Youth in Malaysia have a high tendency to endure various challenges and obstacles in life such as career issues, relationship problems, socializing issues, life stress problems, mental health problems, emotional turmoil, financial problems, and criminal issues (Hussain & Yasin 2016). Youth is categorised as a group of individuals with high spirits, energy, and value who form human resources that has the potential to promote future development of a country (Shah et al., 2015). Hence, during the youth life stage, an individual is indicated as dominant human capital and expected to equip oneself with appropriate academic qualification, training, and skills to contribute to the development of the nation. Failure to produce human resources with good quality may have negative impact to a country.

In Malaysia, unemployment issue among youth is considered as an alarming issue. Unemployment has a negative effect on psychological, economic, and social aspects of an individual and the society (Blustein et al., 2020; Ferreira et al., 2015). In 2019, the youth unemployment rate in Malaysia was 10.5%, which is six times higher than the unemployment rate for adults, which recorded 3.4 percent (Department of Statistics Malaysia 2020). Unemployment has become one of the main issues that dominate life of the younger generation. High rate of unemployment among youth has the potential to destroy psychological and economical aspect of a community. Unemployment that experienced by youth at early years has the tendency to impact

physical and mental health of the youth (Mokona et al., 2020; Voßemer et al., 2018; Thern et al., 2017). Besides that, unemployment can stimulate the youth to be involved in various social problems such as theft, robbery, murder, and drug addiction as an easiest way to overcome poverty (Ghani 2017; Hussin et al., 2020; Jawadi, et al., 2019).

Youth from marginalised communities is a group of people who faces challenges such as poverty, limited access to basic needs, poor knowledge of the academic dan career opportunities. Therefore, the prospect for self-development of the youth can be impeded and create instability in the lifestyle that negatively impacts career development of youth from marginalised community. It creates difficulty for the youth from marginalised communities to enter and sustain in the labour market. Based on this scenario, it is essential to explore and understand the main factors that hinder the youth from marginalised communities from entering the world of work.

Many previous studies focus on youth issues from marginalized communities that include profiles, social problems, and educational aspects. Aspects that explain the influence of personal and social factors towards youth from marginalized communities in Malaysian context are rarely explored. Furthermore, minimal emphasis is given by researchers in studying youth issues from marginalized communities compared to the indigenous people in Malaysian context (Amiruddin et al. 2020; Chew et al. 2022; Saifullah et al. 2021; Yew et al. 2019). Although there are local studies that examine marginalization by local researchers (Chong et al. 2020; Othman et al. 2016; Rahman et al. 2022), those studies do not focus on elements related to the career and employability of people from marginalized communities. Therefore, a study that analyse personal and social factors that influenced employability of youth from marginalized communities is a new movement in educational psychology research in the Malaysian context. Emphasis on personal and social factors in this study can help in understanding the barriers and challenges experienced by youth from marginalized communities to enter the world of work. Therefore, the outcome of the research is considered as a vital contribution in enhancing career development of the youth in Malaysia.

2. Methodology

2.1. Research Design

The researchers utilized quantitative approach in this study, whereby a quantitative cross-sectional survey was administered. Quantitative research is a research method which is used by the researcher to deals with both quantifying as well as analysis variables with the aim of obtaining the final outcomes (Apuke, 2017). The quantitative method was selected as it enables a larger sample size to be taken in a shorter amount of time as compared to the qualitative method.

2.2. Sample and Data Collection

A total of 1181 youth from marginalized community, including 723 males (61.2%) and 458 females (38.8%) was involved in this study using exploratory factor analysis (EFA). Youths aged between 15 to 25 years old were selected using stratified random sampling from five zones representing North, East, South, Middle and East Malaysia. It is a probability sampling technique wherein the researchers distribute the entire population into various subgroups or strata, then choose the final participants of the study randomly from the various strata. This sampling method is used to ensure the existence of the key subgroup within the sample. Based on the rule of thumb, the factor pattern developed by a larger sample size is more stable than small sample size (DeVellis, 2017). The researchers gained consent from the participants who volunteered to participate in the study. Paper-and-Pencil method used in collecting the data. Therefore, the questionnaires were distributed, completed, and gathered on the same day. The main advantage of this data collection method is it is capable in providing higher response rates than online questionnaires. Additionally, the majority of research participants often believe that printed questionnaires are more anonymous than online questionnaires, which leads to the belief that research participants tend to be more honest about printed questionnaires. Researchers did not set any time limitation for the participants to complete the questionnaire to create relaxed and warm atmosphere for the participants to complete the questionnaire. The freedom in completing questionnaires maintains accuracy and reliability of the participants' responses. However, the participants of the study successfully completed the questionnaire within 15 to 20 minutes.

2.3. Data Analysis

Self-assessment in Malay language was given to the research participants. The instrument is composed of 22 items with three constructs, namely, personal, social and employability. There were 3 dimensions for personal factors (self-efficacy, self-determination, and self-

esteem) and social factors (social economy status, role model and parental influence). The study used 5-point Likert scale scores range from 'strongly disagree' to 'strongly agree'. A survey of literature and interview with panel of experts were conducted in constructing the scale. A list of personal and social factors that influence the employability of an individual was identified. Face validity of the instrument is identified by using Content Validity (CVR). Opinions from six panel of experts were gained for validity purpose to identify whether the items were appropriate in answering the research questions and whether the items were written in comprehensible manner. A preliminary scale consisting of 22 items was developed after modifying the instrument based on the feedback given by the experts. The validity and reliability of the instrument were measured by using SPSS version 27. The construct validity of the instrument is assessed by using exploratory factor analysis (EFA). The internal consistency and stability measurement tests were utilised in identifying the reliability of the instrument developed in this study.

3. Findings

3.1. Descriptive Statistics

The result of the study was discussed based on the data presented in Table 1. The highest mean value of the research participants on the personal factors dimension which includes three subscales (self-esteem, self-efficacy, and self-determination). The lowest mean value of social factors dimension determines parental influence, socio economy status and role model in entering the labour market. The findings exemplify how the personal and social factors influence the employability of the youth from marginalized communities. Hence, the outcome of the research accentuates construct validity, the degree to which items of the instrument associate well to the appropriate theoretical construct (DeVon et al., 2007). Aligned to this, findings on dimensionality of subconstructs and confirmation of the conceptual framework structure is also included.

Table 1 Descriptive Statistics

Construct	Sub-Construct	Mean	Standard deviation
Personal Factors	Self-efficacy	4.0593	0.6384
	Self determination	4.1403	0.5752
	Self esteem	4.0593	0.6384
Social Factor	Parental influence	3.8211	0.7129
	Role model	3.8211	0.7129
	Socio economy status	3.2456	0.9880

3.2. EFA analysis

EFA is a systematic procedure that summarize and organise large number of questionnaire items into accurate framework for the independent variables of the instrument. Researcher employed SPSS version 27 to run EFA on 22 items with varimax rotation. Six constructs, namely (i) self-efficacy, (ii) self-determination (iii) self-esteem (iv) parental influence (v) role model and (vi) socio economy status, were utilised to develop the framework for twenty-two items of personal and social factors that influence employability and to build a scree plot, based on theory and literature research. Three variables were considered in factor analysis: (i) sample, (ii) the Kaiser-Meyer-Olkin (KMO) sampling sufficiency or Bartlett's Test of Sphericity, and (iii) communality value of each item.

3.3. Normality Analysis

The normality test is used to determine the sample size distribution. Skewness and kurtosis test methods are employed as it is more precise for small and large sample size (Kim, 2013). Thus, for this research, skewness and kurtosis were utilised for large sample size. The skewness and kurtosis method are widely used by researchers due to the easier accessibility of references points on skewness and kurtosis in literature (Orcan, 2020). Although the use of skewness and kurtosis values are common in practice, there is no fixated agreement on the accurate values which indicate normality. Some

suggest skewness and kurtosis up to absolute value of 1 may indicate normality (Demir et al., 2016 & Ramos et al., 2018), while some others suggest much larger values of skewness and kurtosis for normality (Iyer, Sharp, & Brush, 2017; Perry, Dempster & McKay, 2017; Şirin, Aydın, & Bilir, 2018). As a general guideline, a skewness value between −1 and +1 is considered excellent (Hair et al., 2022). Hair et al. (2010) and Bryne (2010) argued that data is normal if skewness is between -2 to +2 and kurtosis is between -7 to +7. The value of skewness and kurtosis that close to zero indicates normal distribution (George & Mallery, 2019). All objects in this study have skewness and kurtosis values between 2 and 7. Table 2 illustrates that the skewness and kurtosis: personal factors (-.184 and - .524), social factors (-.010 and -.182) and employability (.055 and - .106). Thus, the result indicates that these variables are normally distributed.

Table 2 The Skewness and Kurtosis Analysis for Data Normality

	Personal factor	**Social factor**	**Employability**
Valid	1181	1181	1181
Missing	0	0	0
Skewness	-.184	-.010	.05
Kurtosis	- .524	-.182	- .106

3.4. Psychometric properties of EFA analysis

Kaiser-Meyer-Olkin is a statistical measure used in measuring suitability of the data for factor analysis. The Bartlett sphericity test is often presented before data reduction techniques such as principal component analysis or factor analysis in validating that a data reduction technique able to compress the data in a meaningful way. This test should generate a statistical significance chi-square score, which verify the utilisation of EFA. The value of the Kaiser-Meyer Olkin (KMO) method which is higher than 0.5 is considered in determining the sampling adequacy for each variable in the model (Hair et al., 2018). The KMO values between 0.8 to 1.0 indicate the sampling is adequate (Shrestha, 2021). Besides that, the sample was validated by employing Bartlett's sphericity test (Field, 2013). Table 3 shows the results of Bartlett's test of sphericity (Bartlett, 1954) are significantly different from zero, $\chi 2 = 11086.391$, $p < .001$, and the KMO statistic was 0.88. The value of KMO> 0.8 which indicates that sampling is adequate, and the factor analysis is appropriate for the data. The Bartlett's test of Sphericity is highly significant at $p < 0.001$ which shows that the correlation matrix has significant correlations among some of the variables. The significant value < 0.05 indicates that a factor analysis should be worthwhile for the data set. The value of communalities for each item were measured, with a value more than 0.3 is categorised as acceptable range of value for all items (MacCallum et al., 1999; Tabachnick & Fidell, 2007).

Table 3 KMO and Barlett's Test

KMO and Barlett's Test		
Kaiser-Meyer Olkin measure of Sampling Adequacy		0.879
Barlett's Test of Sphericity Approx. Chi-Square		11086.391
	df	703
	sig	0.000

Communalities are low in a situation where the estimation of factor loadings is inaccurate (Izquierdo et al., 2014). According to Table 4, the values are between 0.343 to 0.723 and considered acceptable.

Table 4 Communalities

Communalities		
	Initial	Extraction
B1_1	1.000	.637
B1_2	1.000	.640
B1_3	1.000	.500
B2_1	1.000	.460
B2_3	1.000	.450
B2_4	1.000	.525
B3_1	1.000	.470
B3_2	1.000	.517
B3_3	1.000	.528
B4_2	1.000	.423
B4_3	1.000	.452
B4_4	1.000	.540
B5_1	1.000	.723
B5_2	1.000	.718
B5_5	1.000	.343
B6_3	1.000	.494
B6_4	1.000	.611
B6_5	1.000	.529
C1_1	1.000	.373
C1_3	1.000	.441
C2_1	1.000	.478
C2_3	1.000	.453
C2_4	1.000	.510
C3_1	1.000	.512
C3_2	1.000	.536
C3_3	1.000	.534
C3_4	1.000	.459
C3_5	1.000	.501
C4_1	1.000	.413
C4_2	1.000	.701
C4_3	1.000	.634
C4_4	1.000	.474
C4_5	1.000	.566
C5_1	1.000	.513
C5_2	1.000	.459
C5_3	1.000	.506
C5_4	1.000	.523
C5_5	1.000	.506
Extraction Method: Principal Component Analysis		

3.5. Summary of the Standardized Residual Variance

Considering these general indicators, 22 items were then extracted. The cumulative total variance extracted using varimax rotation in the study may also be used to reduce the number of items before further analysis. Scale items account for 58.51 percent of the overall variance using principal component analysis, as displayed in Table 5.

Based on the behavioural science research filed, 40% is acceptable range of variance (Yeşil, 2017).

Table 5 Total Variance Explained (N= 1181)

Component	Extraction Sum of Squared loadings			Rotation Sum of Squared loadings		
	Total	% of vari-ance	Cumulative %	Total	% of vari-ance	Cumula-tive %
1	2.490	41.505	41.505	2.490	41.492	41.492
2	1.020	17.008	58.513	1.021	17.020	58.513

3.6. Reliability Measures

Reliability test is known as internal consistency that assesses the consistency of results between factors within a test. It is a major component in measuring quality of the instrument which indicates the reproducibility, consistency, and performance of the participants on the instrument (Said, 2018). Assessing the reliability of an instrument is essential in measuring accuracy and consistency of the developed instrument before progressing to the next level of data analysis. Cronbach's alpha coefficient considered as one of the most common indicators used in assessing internal consistency of the construct in an instrument of the quantitative study. Reliability of an instrument can be measured by the values of Cronbach's alpha coefficient, inter-item correlation, item-total correlations, and Cronbach's alpha for deleted items. Table 6 shows that the alpha values for the six constructs (22 items) are above 0.7 and vary between 0.712 and 0.921. Thus, the results indicate that the internal consistency of the instrument is satisfactory for newly constructed research instruments (Hair et al., 2018). The overall Cronbach's alpha of the instrument also shows a reliability value of 0.819, which is considered good, i.e., above 0.8 (DeVellis, 2017).

Table 6 Reliability for Each Construct (N= 1181)

Construct	**Sub-construct**	**Cronbach Alpha**
Personal	Self -Efficacy	0.732
	Self-Determination	0.730
	Self-Esteem	0.811
Social	Parental Influence	0.712
	Role Model	0.921
	Socio-Economy Status	0.762
Employability Skills		0.741
Total		0.819

3.7. Composite Reliability

Additionally, the composite reliability, as well as the convergent and discriminant validity, were all assessed by using SPSS 27, resulting in the following: (i) All factor loadings were significant and greater than 0.5; (ii) All CR and Cronbach's alpha coefficients were greater than 0.7 in all dimensions; and (iii) Each construct had an AVE greater than 0.5.

Table 7 Composite Reliability for Each Construct (N= 1181)

Construct	Sub-construct	Item	Loading Factor	AVE (Above 0.5)	Composite Reliability
Personal	Self -Efficacy	EK1	0.825	0.643	0.843
		EK2	0.835		
		EK3	0.742		
	Self-Determination	DD1	0.584	0.503	0.749
		DD2	0.821		
		DD3	0.703		
	Self-Esteem	HD1	0.747	0.612	0.825
		HD2	0.842		
		HD3	0.755		
Social	Parental Influence	PIB1	0.665	0.496	0.742
		PIB2	0.839		
		PIB3	0.584		
	Role Model	RM1	0.775	0.681	0.742
		RM2	0.838		
		RM3	0.859		
	Socio-Economy Status	SES1	0.795	0.604	0.819
		SES2	0.663		
		SES3	0.861		
Employability Skills		KBP1	0.681	0.501	0.8
		KBP2	0.734		
		KBP3	0.707		
		KBP4	0.708		

Researchers aimed to develop a scale to assess personal and social factors that influence employability of youth from marginalised communities. The findings of the study proven that the six sub-constructs have a high degree of reliability. The personal and social constructs were empirically validated based on Malaysian setting using CFA. All the 22 items of the scale had loading values greater than 0.6. The researcher fulfils the criteria for using model fit indices as a measure of construct validity. The researchers also analysed the convergent and discriminant validity of the model, which included 22 items. Three approaches were used to determine the items' convergent validity: the loading factor value, the average variance extracted (AVE), and composite reliability (CR). An acceptable factor loading value is more than 0.5 and any value that is above 0.7 is considered as a good indicator (Hair et al.,2010). Ultimately, all items have a factor loading value greater than the given threshold value of 0.5. Accordingly, the AVE value was between 0.496 to 0.681, thus indicated that the 22 items were consistent with the constructs. Additionally, the composite reliability value ranged between 0.742 to 0.843.

The construct validity and reliability index analyses were conducted using the composite reliability (CR) index and Cronbach's alpha, respectively. All reliability indices in this investigation exceeded the 0.70 cut off value (Griethuijsen et al., 2014). Based on the outcome of the study, the instrument has been proven to have high consistency across the research populations.

Figure 1 shows the influence of personal and social factors towards employability of youth from marginalized communities. Personal factors consist of three sub-constructs that include Self-Efficacy, Self-Determination, and Self-Esteem. Social factors compromise three sub-constructs that include Role Model, Parental Influence and Socio Economy Status.

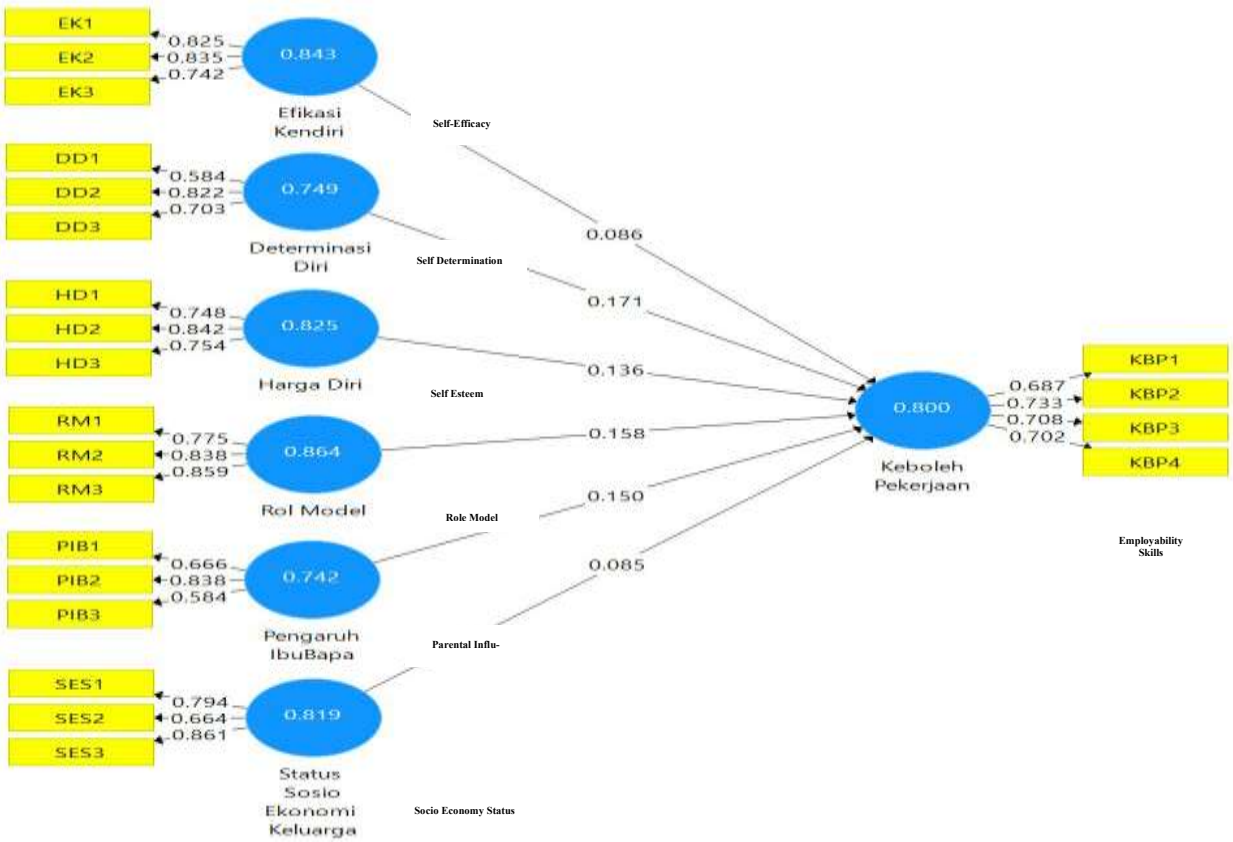

Figure 1 Measurement Model

4. Discussion

The proposed research framework is developed based on the two common conceptual features of factors that influence employability in the literature review: personal and social. Overall, the study contributes to the current interest in employability by developing a valid and reliable instrument which can be significant in measuring the factors that influence employability. Researchers reported the development of an instrument that assesses the factors that influence employability of youth. First, the developed instrument had satisfactory psychometric properties. The analysis showed that the constructs were reliable where the items that were employed in assessing the instrument are significant. The testing of the personal and social constructs in assessing employability was empirically demonstrated using the EFA and reliability analysis. Based on the psychometric measurement results, the validity and reliability are in satisfactory range as the scores of the instrument exceeded the proposed cut-off. The construct and items of the developed instrument proved that it has the potential to contribute to employability related exploration of younger generation.

The utilization of exploratory factor analysis and reliability analysis assists in boosting the researchers' confidence in using personal and social constructs in assessing the employability of the youth. This work depicts a significant assessment tool for researchers and academics in exploring the personal and social factors that influence employability. This study contributes to the body of knowledge in career and employability by providing a more comprehensive overview of personal and social constructs, as well as their influence employability among youth from marginalised communities.

5.1. Conclusion

As has been demonstrated, this research proved that the developed instrument is valid and psychometrically sound using classical procedures. This study provides researchers and academicians with a validated instrument for measuring personal and social factors that influence employability. The finding of this research enhances the body of knowledge regarding employability by providing a more comprehensive account of personal and social factors that impact the youth's readiness to enter labour market. Although it was developed in the context of youth from marginalised community, with some modifications, there is scope to adapt the instrument to youth from different categories with various educational level.

5.2. Recommendations

Samples from diverse population such as secondary students and university students to be considered in validating the instrument. This study focused on the personal and social influence so future researchers could extend the current work by exploring other factors that can influence the employability of the younger generation.

5.3. Limitations

The main shortcoming of this study is that it was conducted among youth from marginalised community in only one country, Malaysia. The instrument failed to consider samples from different countries. On the other hand, the instrument does not include all of the aspects depicted in literature, and it is possible that some relevant aspects were left out. Future researchers could encompass other factors in assessing the influence towards employability.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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