



RESEARCH ARTICLE

INVESTIGATING THE MEASUREMENT OF MALAY VERSION OF INVENTORY OF DIMENSIONS OF EMERGING ADULTHOOD (M-IDEA) AMONG FIRST YEAR UNIVERSITY STUDENTS IN MALAYSIA

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ABSTRACT

This research aimed to investigate the measurement of the Inventory of Dimensions of Emerging Adulthood (IDEA). The IDEA consisted of 28 items that were used to assess five experiences of emerging adulthood (Identity Exploration, Negativity/Instability, Feeling "In-Between", Experimentation/Possibilities, Self-Focus). Statistical technique using Exploratory Factor Analyses (EFA) was conducted by using the IBM Statistical Package for Social Sciences (SPSS) Version 21.0, followed by Confirmatory Factor Analyses (CFA) via Structural Equation Modelling (SEM) to confirm the measurement model. EFA results revealed three factors and CFA results confirmed the correlations between the three factors (Identity Exploration/Feeling "in-between", Negativity/Instability, Experimentation/Possibilities) were all significant, respectively. The new Malay version of IDEA (M-IDEA) has only three subscales with a total of 10 items. This study contributes to the emerging adulthood literatures by adapting the IDEA into a non-western culture - Malaysia.

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INTRODUCTION

Arnett (2000) proposed the term emerging adulthood (EA) as a distinct developmental period between adolescent and adult in which young people are no longer feeling they are adolescents but at the same time not attaining full adult status. EA period occurs starting from late teens to the twenties, specifically 18 to 29 years old. The study on EA is gaining attention over the past years throughout different nations. This is probably due to the heterogeneity of EA experience among different cultures and nations (Arnett 2006) that leads to the growing number of research comparing the experiences of emerging adults in the context of culture, education and socioeconomic status. Although emerging adults share the same demographic similarities, their subjective experiences could be different during the EA period. The only way to determine the subjective experience of emerging adults during this period of time is by using the Inventory of Dimensions of Emerging Adulthood (IDEA) developed by Reifman *et al.* (2007).

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This measure consists of 31 items which are related to five EA features and one additional dimension which is "Other-focused". This dimension is not one of the features of EA experience, but rather included to complement one of the features in EA experience which is "Self-focus". Emerging adulthood is a period of active exploration in term of identity whereby emerging adults are no longer fully attached to their parents, therefore making this time as independent and moving towards achieving self-sufficiency as an adult. According to Arnett (2000), emerging adults during this period of time is actively exploring in the area of love, career, and worldviews. Furthermore, the majority of the emerging adults is given autonomy from their parents and many are deciding to move out of their house, whether entering university or starting a new career (Arnett 2014). Through that argument, this study embarks on an empirical study to investigate the EA experiences of first year university students in East Malaysia. To date, several studies have translated the IDEA and investigated its psychometric properties of different populations nationwide by investigating its factor structure. Atak and Çok (2008) reported three subscales (negativity/instability, exploration/feeling in-between, and experimentation/self-focus) in the Turkish version; Pérez,

Cumsille, and Martínez (2008) reported four subscales (identity exploration/feeling in-between, negativity/instability, experimentation/possibilities, and self/other-focused) in the Chilean Version; Lisha *et al.* (2014) excluded two of the subscales (instability and other-focused) and reported three subscales (identity exploration, experimentation/possibilities, and independence) in the sample of 'at-risk' latino; Dutra-Thomé (2013) reported five subscales (identity exploration, experimentation/possibilities, negativity/instability, self-focused, feeling in-between, and other-focused) in the Brazilian sample; Hill *et al.* (2015) reported six subscales (self-focus, negativity/instability, exploration: sense of self, exploration: future self, experimentation/possibilities, and other-focus) in the Dutch Sample.

To the author's knowledge, no study has been done to investigate the psychometric properties of IDEA among Asian sample, although research on EA topic has been conducted in several Asian countries such India (*see* Seiter 2009), China (*see* Nelson *et al.* 2004), Japan (*see* Rosenberger 2007; Crocetti *et al.* 2015), Taiwan (*see* Yang 1999), Malaysia (*see* Wider *et al.* 2015). EA theory was initially argued as a phenomenon which only experienced by the western and industrialized societies that promote individualistic culture; but now it has been widely accepted as a growing number of researches are conducted outside the norm and conclude that EA exists in a minority, non-western, traditional, and collectivist culture.

Nonetheless, the subjective experience of EA is different across cultures (Atak 2011) and this brings about a whole new important area to study in the EA topic. Adding to that, research on EA is currently focusing on comparing the perceptions of EA experience among different groups that have different demography characteristics, education and occupational systems, developmental contexts and political rules.

The importance of IDEA in examining EA experiences has been recognized nationwide by many researchers, all the more, several studies have adapted the IDEA to be used in own culture. Nevertheless, a valid Malay version of IDEA is still not available. There is still an ambiguity in Malaysia regarding the concept of EA due to lacking of research on EA topic (Baptist *et al.* 2012). Therefore, the present study aims to validate the IDEA and expects that many individuals, especially the counsellors who work with emerging adult clients, particularly first year university students will benefit from having a valid Malay version of IDEA.

Methodology

This study aims to adapt the IDEA into Malaysian culture. The data for this research was taken from an ongoing study on university adjustment among first year students in East Malaysia.

Participants

A total of 700 questionnaires was administered to the first year students using a convenience sampling technique in one of the public universities in East Malaysia. From that, a total of 568

usable responses was gathered with a response rate of 81.1%. The majority of the respondents are aged between 21-23 (65%) and female (63.2%). The mean age is 20.81 with a standard deviation of 0.903. Table 1 presents the respondents' profile.

Table 1. Respondents' Profile

	Frequency (N=568)	Percentage (%)
Age		
18-20	188	33.1
21-23	369	65.0
24-26	11	1.9
Gender		
Male	209	36.8
Female	359	63.2

Measures

The original scale was translated to Malay language by using the 'standard' back translation technique (Tamanini *et al.* 2003). This technique consisted of four steps: firstly the scale was translated to Malay language by the first translator; second, the translated scale was again sent to the second translator to translate the Malay language scale back to English language. Thirdly, an adjustment session was conducted between the translators and research team to finalize the Malay version of the scale. During the last stage, the translated scale was undergone a pre-test among the targeted population. The questionnaire booklet consists of five sections, whereby section A consisted of demographic questions, Section B to D were not used in this study, whereas Section E was related to IDEA. All 31 items of IDEA by Reifman *et al.* (2007) was used, but for the purpose of analyses, only 28 items were used, meanwhile three items from other-focused sub-scale was excluded. Respondents were instructed to think about this time in their life, focusing on present time, and the last few years and the coming few years. They responded by using four scales from one (strongly disagree) to four (strongly agree).

Statistical Analysis

Firstly, data were analysed by using the Statistical Package of Social Sciences (SPSS) version 20.0 software. The Exploratory Factor Analysis (EFA) was carried out to test the construct validity of IDEA by means of Principal Component Analysis (PCA). Prior to that, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were performed in order to ensure the sample size was adequate. KMO value must be more than 0.60 and Bartlett's test of sphericity is at the significant p-value of below 0.05 (Kaiser 1974). In extracting the components, the components with eigenvalues of over 1 were retained followed by Varimax rotation in order to optimize the factor loadings on the extracted components. Factor loadings of more than 0.5 were used.

In order to confirm the measurement model, Confirmatory Factor Analysis (CFA) was executed via structural equation modelling (SEM) technique using analysis of moment structures (AMOS) version 21 software, the overall goodness-of-fit indices were also determined for the measurement model. The last analyses were performed to examine the correlation between factors.

RESULTS

Exploratory Factor Analysis (EFA)

Based on table 2, the EFA results revealed three factors with eigenvalues of over 1 which explained approximately 56.45% of the variance. The KMO value was 0.923, suggesting an adequate sampling and Bartlett's Test of Sphericity = 4083.626, and significance = 0.000. As a result of EFA, Eight items (5, 6, 10, 12, 15, 21, 23, and 31) were deleted because the factor loadings were lower than 0.50.

The first factor consists of items from the combination of Identity Exploration, Possibilities, Self-focused and Feeling "In-between" dimensions in the original scale. A second factor consists of items from Instability dimension. Third factor consists of items from Possibilities dimension.

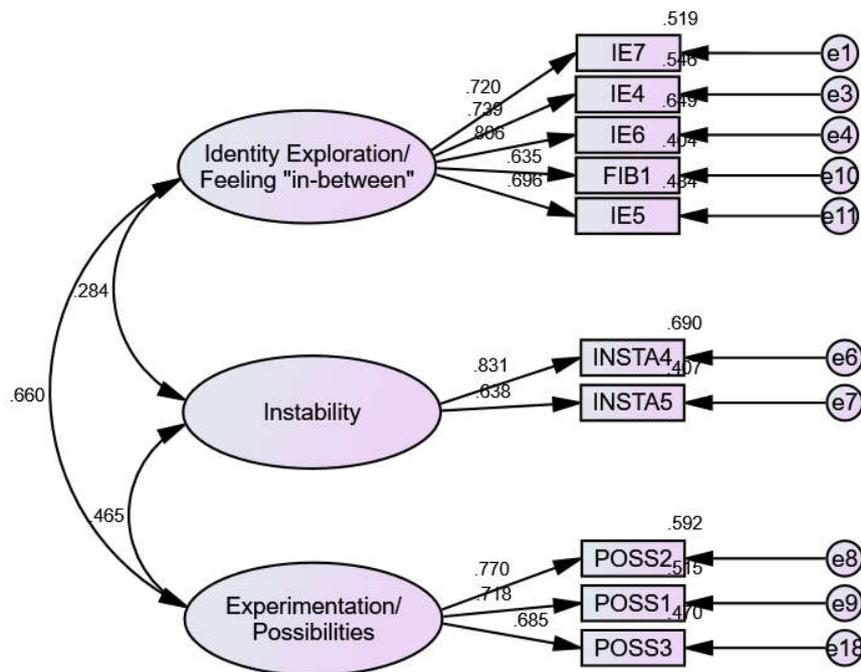
Confirmatory Factor Analyses (CFA)

With regards to CFA, due to small coefficients of absolute value below 0.50, five items (7, 16, 22, 24, and 30) were deleted from factor 1; whereas three items (3, 8, and 20) were deleted from factor 2. The final model is shown in figure 1. Table 3 shows the comparison of factor loadings for EFA and CFA, all items is loaded heavily in their respective factor ranged from 0.656 to 0.763 in EFA, thus fulfilling the threshold point suggested by Hair *et al.* (2010) above 0.50.

Table 2. EFA results

No.	Original scale	IDEA items	1	2	3
28	IE	Time of learning to think yourself	.753		
30	FIB	Time of gradually becoming an adult	.744		
25	IE	Time of planning the future	.744		
27	IE	Time of seeking a sense of meaning	.719		
29	FIB	Time of feeling adult in some ways but not others	.711		
26	IE	Time of deciding on your own beliefs and values	.678		
22	SF	Time of focusing on yourself	.643		
24	IE	Time of being not sure whether you have reached full adulthood	.582		
16	POS	Time of open choices	.518		
7	SF	Time of independence	.511		
8	INS	Time of high pressure		.780	
11	INS	Time of confusion		.758	
9	INS	Time of instability		.748	
20	INS	Time of feeling restricted		.723	
3	INS	Time of feeling stressed out		.641	
2	POS	Time of trying out new things			.763
1	POS	Time of exploration			.754
4	POS	Time of experimentation			.656
		Eigenvalues	6.468	2.559	1.134
		% of variance	35.935	14.215	6.300
		% of cumulative variance	35.935	50.150	56.45

Notes: IE=identity exploration; SF=self-focused; FIB=feeling "in-between"; POS=possibilities; INS=instability



IE=identity exploration; SF=self-focused; FIB=feeling "in-between"; POSS=possibilities; INSTA=instability

Figure 1. Measurement model

Table 3. Item Factor Loadings

Measure	Label	EFALoadings	CFALoadings
Exploration/Feeling "in-between" ($\alpha = 0.841$)			
Time of learning to think for yourself?	IE7	0.753	0.720
Time of planning the future?	IE4	0.744	0.739
Time of deciding on your own beliefs and values?	IE6	0.719	0.806
Time of feeling adult in some ways but not others?	FIB1	0.711	0.635
Time of seeking a sense of meaning?	IE5	0.678	0.696
Instability ($\alpha = 0.692$)			
Time of instability?	INSTA4	0.748	0.831
Time of high pressure?	INSTA5	0.758	0.638
Experimentation/Possibilities ($\alpha = 0.767$)			
Time of exploration?	POSS2	0.763	0.770
Time of many possibilities?	POSS1	0.754	0.718
Time of experimentation?	POSS3	0.656	0.685

Notes: Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.923; Bartlett's Test of Sphericity = 4083.626; Significance = 0.000
IE=identity exploration; FIB=feeling "in-between"; POSS=possibilities; INSTA=instability

Table 4. Reliability analysis and Mean

Constructs	CR	AVE	Mean
Identity exploration/Feeling "in-between"	0.844	0.520	3.29
Instability	0.705	0.549	2.57
Possibilities	0.769	0.526	3.09

Table 5. Goodness-of-fit indices for measurement model

	χ^2	df	χ^2/df	CFI	GFI	NFI	RMSEA	PNFI	PCFI
Recommended values	N/A	N/A	< 3.0	> 0.9	> 0.9	> 0.9	< 0.08	> 0.5	> 0.5
Model values	65.49	32	2.047	0.983	0.977	0.967	0.043	0.688	0.699

Table 6. Correlations between variables

			Estimate	S.E.	C.R.	<i>p</i>
Identity exploration/ Feeling "in-between"	<-->	Instability	0.107	0.021	5.061	0.000*
Identity exploration/ Feeling "in-between"	<-->	Possibilities	0.205	0.021	9.664	0.000*
Instability	<-->	Possibilities	0.193	0.026	7.420	0.000*

Therefore, the construct could be considered as one-dimensional and factorially idiosyncratic. The lowest loading is item POSS3 'time of experimentation' and the highest loading is POSS2 'time of exploration'. Whereby the standardized factor loadings for CFA shows that the item ranged from 0.638-0.806. The lowest loading is FIB1 'time of feeling adult in some way but not others', and highest loading is item IE6 'time of deciding on your own beliefs and values'. The composite reliability (CR) and average variance extracted (AVE) were calculated for each construct in order to determine the reliability.

According to Hair *et al.* (2010), the threshold value for AVE must be above 0.50 and CR above 0.70. Based on the reliability analysis is shown in the table 4, the AVE value for all construct ranged from 0.520 and 0.549, whereas the CR value ranges from 0.705 and 0.844. Thus, the convergent validity of the overall model is sufficient. The highest mean is Identity exploration/Feeling "in-between" with 3.29, followed by Experimentation/Possibilities with 3.09, and lastly Instability with 2.57. There is no single universally accepted fit index in assessing the overall goodness-of-fit indices for the measurement model (Suki, 2014). Based on table 5, the χ^2 of the model was 65.49 with 32 degrees of freedom ($\chi^2/df = 2.047$). The indices value for comparative fit index (CFI),

goodness of fit index (GFI), and normed fit index (NFI) were above 0.90 and root mean square error of approximation (RMSEA) is below 0.08 (Byrne, 2001). Thus, the hypothesized model was a good fit and acceptable.

Correlation Analysis

Table 6 shows the correlation results between constructs. All constructs were correlated less than 1 and were statistically significant at the $p < 0.01$ level, thus affirming a positive correlation among constructs. All dimensions of EA should be positively interrelated (Crocetti *et al.*, 2015). Identity exploration/ Feeling "in-between" have the highest correlation with Possibilities ($r = 0.205$, $p = 0.000$), followed by correlation between Instability and Possibilities ($r = 0.193$, $p = 0.000$), whereas Identity exploration/ Feeling "in-between" and Instability shows the least correlation ($r = 0.107$, $p = 0.000$).

DISCUSSION

This study aims to investigate emerging adulthood experience among first year university students in Malaysia. The concept of EA is relevant to the current study's sample due to high total scores of IDEA. The lowest average score is instability with

2.57 which in accordance with past nation studies such as Macek, *et al.* (2007); Arias and Hernández (2007); Facio *et al.* (2007); Sirsch *et al.* (2009); Negru (2012); Hill *et al.* (2015); Croceti *et al.* (2015). All these studies reported instability as the lowest mean in EA dimensions, whereas the highest average score of EA dimension in the current study is Identity Exploration/Feeling “in-between”. Furthermore, the three items that have the highest average scores are “time of planning the future?”, “time of learning to think of yourself?”, and “time of deciding on your own beliefs and values?” with 2.39, 2.34, 2.28 respectively are from the original subscale of identity exploration. This indicates that first year university students in this study have a positive experience of EA by focusing on self-exploring and minimal experience of instability. The item “time of feeling an adult in some ways but not others” also shows high average score with 3.18 that indicates emerging adults exists in the sample of the first year university students in Malaysia.

The original IDEA was also tested for validity in the Malaysian sample. The M-IDEA was reduced from 28 items to only 10 items. The M-IDEA was retained into three sub-scales with Identity exploration/Feeling “in-between”, Instability, and Possibilities. Other-focused dimension was excluded from the analysis, whereas self-focused was removed due to low loadings during the CFA. This indicates that the sample of this study does not experience self-focus. Arnett (2000) mentioned that EA period is a culturally constructed group. Countries in Asia are focusing highly on the filial bond where children need to oblige their parents. Similarly, emerging adults in Malaysia, particularly first year university students share the same characteristics with other Asian countries as having collectivist culture, where emerging adult children are interdependence and authority goes to the parent (Ishak 2000; Syed and Mitchell 2013).

Due to the elimination of all self-focus items in the current study, it can be assumed that first year students in Malaysia experience a period of achieving responsibility towards self and others, they are not completely free from obligations and responsibilities, but rather negotiating their autonomy and relationship with their parents (Katsiaficas *et al.* 2014). The second sub-scales for M-IDEA is Instability, with only two items which are “time of instability?” and “time of high pressure?” During the transition to the university, the first year students tend to perceive whether they could fulfil all the demands of university life (Siah and Tan 2015). During this period, they are achieving autonomy from their parents, experiencing and focusing on exploring the new environment and creating a new social tie among faculty members, course mates and staffs.

All this new experience has prompted an unstable condition that would point to a stressful experience of transition. Instability shows a consistent dimension in IDEA for several research, such as Atak and Çok (2008); Hill *et al.* (2015); Pérez *et al.* (2008). Therefore, the finding of the current research corroborates the aspect of unstable experience during EA. The third sub-scale derived from M-IDEA is Experimentation/Possibilities with three items (e.g. Time of exploration?). The current findings for Experimentation/

Possibilities sub-scale are similar to the findings of Dutra-Thomé (2013) in the sample of Brazilian emerging adults. Although the transition to the university is perceived as tense and full of struggles, first year students are optimistic in dealing with university demands. The first year students' idea of experimentation/possibilities seems to be taken by seeing this period of EA as a time of trying out new things by experiencing a healthy transition to a new environment. Nevertheless, two of the items from the original scale, namely “time for open choices?” and “time for trying out new things?” were removed from the M-IDEA. This indicates that although first year students in Malaysia are engaging in an active exploration, they may face fewer opportunities in exploring various choices. In addition, the five items from Instability dimension were also excluded due to low loadings which indicates that the first year students in this study did not experience “confusion”, “feeling of restricted”, “stressed out”, “unpredictability”, and “worries” during the transition to university.

This can be assumed that the first year students did not explore different choices openly, therefore reducing their instability aspect. Arnett (2014) emphasized that majority emerging adults are currently in the higher education. Higher institutions are one of the good examples as compared to other institutions which could provide emerging adults with suitable challenges and opportunities for development. In addition, university life is a “social island” which could differentiate with other society and could serve as a secure place for emerging adults to explore opportunities in term of love, career and worldview (Arnett 2000). Practically, the transition to university can enhance the experience of EA with a large opportunity to explore various aspects such as education, social activities, and interaction with people. In order to have a successful transition to university, first year students must remain optimistic about the future and think that everything will flow smoothly if they experiment every possibility offered by the university.

Conclusion

The results of the current study contribute to the psychometric properties of IDEA. It seems like EA experiences are different in the Malaysian culture, particularly among first year university students. This is the first study that examined in detail the experience of EA in the culture of South East Asia, predominantly Malaysia, although a preliminary analysis had been conducted by Wider *et al.* (2015) among second year university students in Malaysia.

In this study, three dimensions (Identity Exploration/Feeling “In-between”, Instability, and Possibilities) emerged after undergoing EFA and CFA. “Other-focused” sub-scale was excluded from this study, whereas “Self-focus” dimension was not a factor in the current findings. A total of 18 items was removed and only 10 items were retained for the short version of M-IDEA, thus conclude that the concept of EA by Arnett (2014) is relevant to the sample of this study. As a conclusion, the short version of IDEA-M is a valid measure to assess EA experiences among first year university students in Malaysia.

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Conflict of interest

The authors declare no conflict of interest for this study.

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