The adaptation of the Big Five Inventory in measuring Malaysian youths' personality traits

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A B S T R A C T

Personality refers to a person's typical patterns of thinking, feeling, and behaving. Personality can be measured using several instruments such as the NEO Personality Inventory (NEO-PI-R) and the Big Five Inventory (BFI), to name a few. The comprehensiveness of the NEO-PI-R in measuring the Big Five personality dimensions is well-documented, however, some researchers argue that it is rather lengthy and may not be practical in many research settings. In situations where time and cost is premium, a briefer measure such as the BFI is preferable. However, in contrast to NEO-PI-R, no study focusing on the validation of the Malay version of the BFI has been reported. This study sought to investigate the reliability and validity of the Malay version of BFI in Malaysia. The English version of the BFI was translated into Malay Language and administered to a calibration sample of 236 Malaysian young adults, with the final model of the BFI cross-validated using a replication sample of 201 Malaysian young adults. The Malay version of the BFI showed good internal consistency. Structural equation modeling analyses indicated that the Malay-translated BFI has good convergent and discriminant validity. The x^2 difference tests supported the five factor structure of personality in the Malaysian context. The brief Malay-translated BFI offers satisfactory psychometric properties and thus can be sufficiently used to measure the personality of the Malaysians.

1. Introduction

Personality is a recognized domain within psychology describing people's typical characteristics, such as outgoing, warm-hearted or imaginative (Matthews et al., 2009). The growth in the personality field has led to various conceptualizations of personality. However, McCrae (2009) claimed that human personality could adequately be captured with five factors. Most personality psychologists concur with McCrae that human personality is best summarized in terms of five broad dimensions: *Extraversion* (the tendency to be warm, sociable, assertive), *Agreeableness* (the tendency to have pro-social orientation towards others), *Neuroticism* (the tendency to experience negative emotions such as anxiety and depression), *Conscientiousness* (the tendency to be well organized, persistent, and reliable) and *Openness to Experience*

(the tendency to be imaginative, creative) (McCrae and John, 1992). Data obtained from cross-cultural samples from around the world, and from many disciplines, support the utility of the Five-Factor Model of personality (FFM). Additional evidence on the attractiveness of FFM is apparent through the development of numerous instruments to measure these five dimensions including the Revised NEO Personality Inventory "NEO-PI-R" (Costa and McCrae, 1992), the NEO Five Factor Index "NEO-FFI" (Costa and McCrae, 1992), the 100-item Trait Descriptive Adjectives "TDA" (Goldberg, 1990) and the Big Five Inventory "BFI" (John et al., 1991).

The comprehensiveness of the NEO-PI-R in measuring the Big Five Personality dimensions is acknowledged, though some researchers such as Benet-Martínez and John (1998), and Soto and John (2009) argued that it is lengthy (consists of 243 items) and may not be economical to use in many clinical and research settings. When time and cost is a serious consideration, a shorter and briefer, measure is called for. Based on this rationale, John et al. (1991) developed the Big Five Inventory (BFI), a short instrument to measure the five factor structure of personality. The BFI was developed to represent

the Big Five prototype definitions (John et al., 2008). The BFI includes 44 items divided into five subscales: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness.

The BFI items are easy to understand as it uses short phrases based on the trait adjectives that serve as the prototypical markers of the Big Five. John et al. (2008) further claim that the brevity of the BFI does not sacrifice its good psychometric properties. As evident in the U.S. and Canadian samples, the alpha reliabilities of the BFI averaged above 0.80. In terms of validity, the BFI demonstrate substantial convergent and divergent relations with other Big Five instrument such as the NEO-PI-R. Psychometric findings using Spanish, Dutch, Italian and German translated version of the BFI has been reported (Benet-Martínez and John, 1998; Denissen et al., 2008; Fossati et al., 2011; Soto and John, 2017). The findings from these researches have shown that the BFI is a reliable and valid instrument to measure the personality of the Spanish, Dutch, Italian and Germans. However, the translation and validation process of the BFI in Malaysian context has yet been published. Therefore, the utility of the BFI to measure the personality of the Malaysians is questionable. Hence, this study was set out to explore the reliability and validity of the Malay version of the BFI by appropriately translating the BFI into the Malay language and testing it on a Malaysian population.

1.1. The current study

Against this background, the present study seeks to explore the applicability of the BFI in measuring the personality traits of the Malaysian youths. Many validation studies have been conducted to investigate the psychometric properties of the BFI. However, most of the studies have been carried out in the European countries such as Spain, Italy, and Germany. Malaysia offers an appropriate context for examining cross-cultural validity of the BFI because Malaysian population is multicultural: 68.6 % are *Bumiputeras* (Indigenous), 23.4% are Chinese, 7.0% are Indians and 1.0% 'others'. In terms of religion, 61.3% of the Malaysians are Muslims, 19.8% Buddhists, 9.2% Christians, and 6.3% are Hindus (Census, 2010). Malay or *Bahasa Melayu* is the official national language of Malaysia (Goddard, 2000). This study was part of a broader study exploring the relationship between spirituality, personality predispositions, and cognitive beliefs. As most Malaysians use Bahasa Malaysia in their daily conversations, the BFI needs to be translated into the Malay language. The translation requires a complex translation process taking into account the linguistic and/or cultural appropriateness of the instrument (Nintachan and Moon, 2007). For example, certain English expressions and colloquial phrases have no direct equivalents in Malay, so literal translation cannot adequately capture the original meaning and intent of the item. Failure to appropriately translate the items will have an

adverse effect on the outcome of the research. Therefore, it is high time to conduct the present study considering the needs for a shorter and valid personality instruments to measure the personality of the Malaysians.

2. Methodology

2.1. Respondents

The study population of this research consisted of Malaysian educated young adults. Data was collected from students in one of the public universities in Malaysia. 502 paper and pencil questionnaires were distributed to participants. However, 65 of the participants were excluded due to outliers and violation of assumptions of normality. The final validation and model generation study sample in this research consisted of 437 students with 193 (44.2%) male and 244 (55.8%) female. The participants' ages ranged from 18 to 25 years, with a mean of 21.15 (SD = 1.754). Eighty percent of the participants are Malay and 83.8% of the participants are Muslims. This diverse demographic reflects the cultural diversity of contemporary Malaysia. As one of the purposes of this study was to validate the measure, the sample was randomly split into the calibration and replication samples. Using SPSS version 20, 437 respondents were randomly allocated to a calibration sample of 236 (M_{age} = 21.2, SD = 1.69) and a replication sample of 201 (M_{age} = 21.1, SD = 1.83).

2.2. Measures

Personality traits were measured using the Big Five Inventory "BFI" (John et al., 1991). BFI measures five major domains of personality: Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C). Eight items were used to measure the dimension of Extraversion. Example of such item is "I see myself as someone who is talkative". Neuroticism was measured by items such as "I see myself as someone who is depressed, blue". Agreeableness was measured by 9 items. A sample item reads "I see myself as someone who has a forgiving nature". Nine items were used to measure Conscientiousness. A sample item is "I see myself as someone who does a thorough job". Finally, 10 items were used to measure the Openness dimension. Example of an item is "I see myself as someone who is curious about many different things". Items were scored on a 5-point Likert scale ranging from "Disagree Strongly" to "Agree Strongly". Scale scores were computed as the participant's mean item response (i.e., adding all items scored on a scale and dividing by the number of items on the scale). Soto and John (2009) reported high internal reliability in which Cronbach's alpha calculations ranged from 0.81 to .88, with a mean of 0.85. It was also reported that the BFI has demonstrated substantial

convergent and discriminant validity (John et al., 2008).

2.3. Procedures

Participants were recruited via flyers containing information such as the general purpose and the procedures of the research. In the flyers, the participants were informed that they can choose to complete the questionnaire using a paper and pencil version or an online version. If they preferred a paper and pencil version of the survey, they were asked to contact the author via the details stated on the flyers. They were requested to complete the questionnaire in one of the classrooms at the university. The return of the questionnaire implied their consent to take part in the study.

Alternatively, if the participants preferred an online version of the survey, the survey web page link provided in the flyer would take them to a site where they can complete the survey online and at their convenience. Before they started answering the questionnaire, they will be asked to read the explanatory statement attached online. It was stated on the explanatory statement that responding to the questionnaire implies consent. After reading the statement, they can start answering the questionnaire and submit it online.

2.4. Ethics approval

The research for this project received the approval of the Monash University Standing Committee for Ethical Research in Humans (CF10/1291 – 2010000679).

2.5. Translation method

The BFI was adapted using a procedure based on Brislin's translation/back-translation method and committee approach (Brislin, 1970; 1980). The details of the method were as follows:
a. Three translators (A, B and C) [All translators (A, B and C) are bilingual with Malay as a first language, completed tertiary education in both Malaysia and Australia and thus knowledgeable about both cultures] independently translated the English version of the BFI into Malay.
b. The principal investigator and another bilingual translator (D) [D is bilingual and has completed her doctorate in Counselling Psychology at Monash University, Australia.] compared and discussed inconsistencies in the three versions of the Malay-translated BFI. A draft version of the Malay-translated BFI was produced after consensus was reached.
c. Another translator (E) [E is bilingual and teaches Psychology courses in a Malaysian private university. E was instructed to not refer to the BFI's original version and asked to treat the Malay version of the BFI as the original.

4 F and G are Australians, Faculty members of the Faculty of Education, Monash University, Australia], who had not seen the original English version, translated the draft back into the English language.
d. Two native English speakers (F and G) worked independently on the original version and the back-translated version comparing the similarity in language and meaning (on a Likert-type scale of 1 to 7, with 1 'not at all comparable/similar' to 7 'extremely comparable/similar'). Items scoring less than an average of 4 were revised; those scoring more than an average of 4 were retained in the questionnaire (Nintachan and Moon, 2007).
e. Steps (a) to (c) were repeated until the translated version was comparable to the original English version. Another bilingual expert (H) compared the reconciled version with the original version: the resulting Malay experimental version (MEV-BFI) was then ready for initial validation with a calibration sample of respondents.

3. Results and discussions

3.1. Translation results

Translation of items in the MEV-BFI typically did not reproduce into an exact transliterated copy of the original items. As an example, item "is reserved" was back-translated into "is less open". A mere transliteration of this item into the Malay language may result in several words such as "*terpelihara*" or "*dikhaskan*", which can ambiguously be interpreted as put aside or specially allocated for a particular person or at a particular time. These terms however, did not rightfully capture the intent of the original item. Hence, we decided to base the translation on the sentence's whole meaning, rather than a simple transliteration.

The final back-translated version of the item therefore read "*is less open*" which differed literally from the original English item. Nevertheless, if the meaning and intent of the original item was captured, it was considered acceptable (Cha et al., 2007). The two versions were evaluated in terms of language and interpretability with the two evaluators seemed to agree that the back-translation version of 5 items were not comparable to the original (mean score less than 4). These items were re-translated until satisfactory translations were achieved. Table 1 illustrates the results of the translations.

3.2. Validation of the MEV-BFI

The MEV-BFI was analyzed using Maximum Likelihood Confirmatory Factor Analysis (CFA) in AMOS 19 (Goddard, 2000) with bootstrapping. Six fit indices were used to evaluate the model fit: CMIN/*df*, Bollen-Stine *p-value*, CFI, TLI, SRMR and RMSEA. Cut-off values were as follows: CMIN/*df*, below 5 is acceptable, value close to 1 indicates a good fit; Bollen-Stine, *p-value* greater than 0.05; CFI and TLI,

greater than 0.9 (Holmes-Smith, 2011); and, finally, SRMR and RMSEA of less than 0.08 (Byrne, 2016).

Table 1: The results of the translation/back translation version of the BFI

No	English version	Back translation	Item comparability (1)		(2)		Back translated into English
			L	I	L	I	
1	Is talkative	Is friendly	2	2	2	2	Talkative
16	Generates a lot of enthusiasm	creates strong interest	4	3	3	5	Often enthusiastic
18	Tends to be disorganized	is quite unmanageable	2	2	2	1	Tends to be not organized
27	Can be cold and aloof	sometimes does not really mix around with other people	2	2	2	2	Can be cold and distant
41	Has few artistic interests	is quite interested in artistic domain	1	1	1	1	Possess limited artistic interests

In this research, we used the two-step analysis based on Joreskog's (1971) and Holmes-Smith and Rowe's (1994) recommendations. These analyses involved estimating a series of one-factor congeneric measurement model. Using Structural Equation Modelling, relationships between the single latent variables and indicator variables were evaluated with modification indices (MI).

MI identifies items for removal to improve goodness-of-fit indices. Squared multiple correlations (SMC) evaluated whether a substantive relationship existed between an item and its underlying latent variables (Holmes-Smith and Rowe, 1994).

If an item had SMC < 0.30; low regression weights; and several error covariance (Berry and Shipley, 2009), item deletion was considered. The model (with the item deleted) was re-run to assess the item removal's impact on that particular single factor. The process was repeated until a satisfactory model was gained.

3.3. Confirmatory factor analysis (CFA)

Fit statistics for all five congeneric models of MEV-BFI suggested that the hypothesized models did not fit the data well, indicating that one or more items were poor indicators of the respective personality dimensions in the Malaysian context. Since most fit indices for all five models did not show an acceptable fit; some problematic items from the *Extraversion, Agreeableness, and Conscientiousness, Neuroticism*, and *Openness* models were removed to enhance their validity and reliability. From this modelling, eighteen indicator variables were removed from five latent constructs measuring personality. The fit indices for five congeneric models of the MEV-BFI were reported in Table 2. After re-specifications, the fit statistics from all five congeneric measurement models of personality were within the acceptable range of fit as established in earlier section.

Table 2: Fit indices for the congeneric models in the calibration sample (n = 236)

Model	χ^2	df	CMIN/df	Bollen-Stine p-value	CFI	TLI	SRMR	RMSEA
Extraversion	14.264	6	1.585	0.206	.96	.94	.040	.050
Agreeableness	4.967	5	0.993	0.450	1.00	1.01	.026	.000
Conscientiousness	3.200	5	0.634	0.758	1.00	1.01	.017	.000
Neuroticism	10.179	5	2.036	0.108	.96	.93	.044	.066
Openness	21.198	14	1.514	0.321	.98	.96	.040	.047

Note: x^2= chi-square, df = degrees of freedom; CMIN/df = Normed chi-square; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; SRMR = Standardized Root Mean-Square Residual; RMSEA= Root Mean-Square Error of Approximation

The second step identified and eliminated multi-factorial items by conducting pair-wise multi-factor CFA that identified cross-loadings between factors. Items where the standardized residual values exceeded ± 1.96 and with large MIs (Byrne, 2016; Holmes-Smith, 2011) were identified for removal. In total, 8 multi-factorial items were discovered and thus eliminated for subsequent analyses. Although the results indicated no more cross-loading items, the five-factor model for the MEV-BFI still did not attain satisfactory fit indices (x^2 = 249.911; df = 125; Bollen Stine p = 0.002; CMIN/df = 1.999; SRMR = 0.06; RMSEA = 0.07; CFI = 0.89, TLI = 0.86). Some researchers such as and Hair et al. (2010) assert that low factor loading of the indicators (less than 0.50) signify potential measurement problems, thus should be removed from the scale. Hence, we removed five items with factor loading less than the recommended level of 0.50. The removal of these items resulted in a model with acceptable fit to the data (x^2 = 90.947; df = 55; Bollen Stine p = 0.06;

CMIN/df = 1.654; SRMR = 0.05; RMSEA = 0.05; CFI = 0.96, TLI = 0.94).

The original version of the BFI operationalized 44 items: after the two-step process, only 13 items were found to be satisfactory indicators of personality traits in the Malaysian context (Table 3).

In this study, Hancock and Mueller's *Coefficient H* was used to calculate the reliability of each subscales because it allows for a maximized reliability of congeneric measures (Holmes-Smith, 2011). Hancock and Mueller recommend a cut-off value of 0.70 for *Coefficient H*. Calculations of *Coefficient H* revealed that the reliability for *Extraversion, Agreeableness, Conscientiousness, Neuroticism*, and *Openness to Experience* was 0.74, 0.77, 0.70, 0.70 and 0.60 respectively.

Generally, the findings revealed that the reliability for Extraversion, Agreeableness, Conscientiousness and Neuroticism was within the recommended cut-off value of 0.70, with the exception of Openness. This finding was consistent with previous Malaysian findings where the

reliability of the Openness dimension seemed to be the lowest among the five personality dimensions (Mastor et al., 2000; Muhamad, 2006; Yap, 2009).

Table 3: Personality items applicable in Malaysian context

No	Item description
3	Does a thorough job
4	Is depressed, blue
7	Is helpful and unselfish with others
11	Is full of energy
13	Is a reliable worker
16	Generates a lot of enthusiasm
17	Has a forgiving nature
19	Worries a lot
28	Perseveres until the task finished
30	Values artistic, aesthetic experiences
39	Gets nervous easily
40	Likes to reflect, play with ideas
42	Likes to cooperate with others

Perhaps, the low reliability exhibited by Openness dimension reflects a difference in the way Malaysians conceptualized Openness. As speculated by Schmitt et al. (2007), "because Asian cultures tend to be more collectivist, may be that openness takes on a different form or function in more collectivist cultures". In future, Malaysian researchers should qualitatively investigate how the Malaysians conceptualize Openness.

3.4. The BFI model in Malaysian's context

We tested the fit of four competing models to determine whether the hypothesized five-factor model of the BFI is the best fitting model in the Malaysian context. First, we modelled M1, which assumes that all 13 items load on one general personality factor. Second, M2 assumes that the BFI is best described with only four dimensions (all dimensions excluding *Openness* to address the issue of low reliability of *Openness* dimension). Third, model M3-original 5 Factors assumes that the BFI was best described with all 44 items loaded on its respective five factors as hypothesized by the FFM of personality. Lastly, in model M3-respecified 5 Factors, all 13 items were allowed to load on its respective five hypothesized factor of personality. The goodness-of-fit (GOF) estimates of these models are illustrated in Table 4.

Table 4: Comparison of alternative models

Model	x^2	df	CMIN/df	SRMR	RMSEA	CFI	TLI	Δx^2
M1-1 Factor	249.265	65	3.835	.100	.11	.771	.725	-
M2-4 Factors	69.979	38	1.842	.046	.06	.945	.933	-
M3-original 5 Factors	2892.8	892	3.243	.147	.09	.4654	.431	-
M3-respecified 5 Factors	90.947	55	1.654	.048	.05	.955	.937	-
M2-4 Factors → M3-respecified 5 Factors								20.968

As shown in Table 4, only M2-4 Factors and M3-respecified 5 Factors models' GOF were within the conventional acceptance limits. However, the Δx^2 test revealed that the Δx^2 between the four-factor and five-factor model was insignificant (Δx^2= 20.968, df = 17, p-value = 0.228) suggesting that both models explained the data equally well. Hence, we chose M3-respecified 5 Factors as the best model that the current data represented (x^2= 90.947; df = 55; Bollen Stine p = 0.06; CMIN/df = 1.654; SRMR = 0.05; RMSEA = 0.05; CFI = 0.96, TLI = 0.94) because at a theoretical level it aligns better with the Big 5 model as well as exhibiting marginally better GOF indices than the M2-4 Factors. Therefore, we concluded that the five-factor model represents an adequate description of the personality structure in Malaysian young adults.

3.5. Model cross-validation with replication sample

In order to rule out the chance factor, the BFI model needs to achieve satisfactory invariance between the calibration and replication samples (Byrne, 2016). The model invariance is evaluated with the x^2 difference tests. Evidence of non-invariance is demonstrated if the x^2 difference values are statistically significant (Table 5).

Table 5: Goodness-of-fit indices for model cross-validation

Model	x^2	CMIN/df	df	CFI	TLI	RMSEA	Δx^2
Constrained	211.283	1.718	123	.93	.92	.04	
Unconstraint	190.986	1.736	110	.94	.91	.04	20.297

($n_{calibration}$ = 236, $n_{validation}$ = 201) (x^2 = chi-square, df = degrees of freedom, CMIN/df = Normed chi-square, CFI = Comparative fit index, TLI = Tucker-Lewis Index, RMSEA = Root mean-square error of approximation)

Computation of the x^2 difference test between the unconstrained and constrained model yielded a difference of 20.297 with 13 degrees of freedom, statistically non-significant at p = 0.09. The x^2 difference tests indicated multigroup invariance, which means that the BFI model that has been respecified in the calibration sample was replicated in the validation sample. With this replication, we can conclude that the validity of the Big Five personality structure in Malaysian context was ascertained.

This study sought to determine the cross-cultural relevance of Western personality constructs for a Malaysian culture by appropriately translating, adapting and validating the BFI, a well-established Western five-factor model of personality. The adaptation solved a number of challenges including the preservation of meaning, which was well-achieved by comparing the similarity in language

and meaning between the original and translated versions. For instance, the clarity of item "have few artistic interests" was questionable because two of the translators had misunderstood this item as "is quite interested in artistic domain", which significantly deviated from the original meaning. A simple transliteration may lead to an invalid item and may cost the validity of the scale as a whole. For all five problematic items, re-translations were conducted and the results were compared until satisfactory translations were achieved. The final version of the MEV-BFI was deemed to be semantically equivalent to the original BFI. Problems associated with conceptual equivalence were not detected in the MEV-BFI. Perhaps, personality traits are not unique to any one culture and also as evident in many cross-cultural researches (McCrae and Terracciano, 2005; Schmitt et al., 2007). The translation process takes time and effort but is crucial and needs to be conducted. It enabled the identification and correction of confusing items, resulting in a more relevant and meaningful instrument. Results showed that the BFI's constructs are relevant for understanding personality in the Malaysians context; however the CFA results indicate that the original BFI needed to be modified before it could be used in the Malaysian context.

From the modelling of one-factor congeneric measurement models, eighteen indicator variables were removed from five latent constructs measuring personality. We noted that most of the deleted items were the negatively worded items ("is reserved", "tends to be quiet", and "is sometimes shy, inhibited"). The result was consistent with a recent study by Leung et al. (2012) where they also found that most items that were removed from their Chinese-translated BFI were negatively worded. It seemed that in Malaysian and Chinese sample, reversed items did not represent the personality constructs well. Perhaps Malaysian youths cannot fully comprehend the content of the items. Furthermore, according to DeVellis (2003), it is possible that the poor performance of negatively worded items is caused by the respondents' confusion in expressing their strength of agreement with that particular item.

Results from modelling confirmatory factor analysis (CFA) of two multi-factors showed eight multifactorial items. For example, BFR6, "is reserved" cross-loaded on Neuroticism factor, suggesting that other than measuring Extraversion, it may also measure Neuroticism. It is possible that the introverts (opposite of extraverts) who tend to be quiet and retiring sometimes can be mistaken as moody and depressed, resulting in them being characterized as suffering from Neuroticism. Modelling the measurement models two by two was to identify only uni-factorial items, so this item was removed from Extraversion scale. No previous research was available for comparison with the current findings. In addition, we also removed five items with low factor loading (less than 0.50), in accordance to Hair et al. (2010) assertion that these

items signify potential measurement problems. Following validity analyses, 13 items were found to be valid indicators of five personality dimensions of Malaysian young adults. This study's results also showed that the multidimensional structure of personality was invariant across the calibration and replication samples, and implied that the five-factor model did not capitalize on chance relationships.

Overall, our findings from the CFAs demonstrated that conceptual equivalence between the original BFI and MEV-BFI is sufficiently evident. The results also showed that personality cross-culturally, at least in the Malaysian context, best represented as five distinct constructs as suggested in most current Western personality literature.

4. Conclusion

Generally, our results promisingly support the Western based MEV-BFI as valid for delineating personality constructs in an eastern multicultural context as represented by a sample within the Malaysian context. However, modifications and revisions need to be made to the English BFI in order to establish a valid and reliable personality measurement in a Malaysian context, which resulted in the development of the MEV-BFI. We noted that the resulting scale was reduced in size in comparison to the original English version, which might cause a loss of information. However, many researchers have applied CFA in their attempt to examine the model fit of the FFM of Personality (Denissen et al., 2008; John et al., 2008). In fact, based on their assessment of the model fit of the NEO-FFI (NEO Five-Factor Inventory) (Costa and McCrae, 1992), Gignac et al. (2007) recommended that: Each proposed facet/dimension should be examined and refined, individually, according to both theory and empirical CFA results. Such a process would be consistent with the two-step procedure commonly endorsed in SEM research. Until this is achieved, it makes little sense to evaluate the FFM based on models that incorporate all five dimensions, simultaneously.

Moreover, research by Hahn et al. (2012) and Soto and John (2017) have shown that that their shorter version of BFI can reliably and validly measure the personality traits of their respective respondents. Hence, although it is possible that a loss of information might occur due to the removal of the items, we considered that the shorter MEV-BFI scale not only reflects the cross-culturally relevant five personality dimensions, but also can be considered as a good measuring instrument assessing the five personality factors of the Malaysian young adults. Clearly, the constructs underlying the BFI are cross-culturally relevant in other than Western contexts results. In widening and deepening the current investigation, it is worthwhile to embark on further studies validating the MEV-BFI, including investigations of the factorial equivalence of the MEV-BFI to the Spanish and German translations. With the evidences supporting the

cross-cultural applicability, the BFI is recommended when a shorter and briefer measure of personality is required.

Acknowledgement

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