

The Validity and Constructive Reliability of The Drug Addiction in The Malay and Chinese Communities

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Abstract

The youths aged 19 to 39 years old recorded the highest percentage as drug and substance abusers and addicts, which is 68.1 percent of the total drug and substance addicts. Two age categories showed an increase from the previous year, namely the Youth and Adult age categories with an increase of 6.7 percent and 19.9 percent respectively. While for Children and Adolescents recorded a decrease of 50.0 percent and 33.1 percent compared to the previous year. The greatest number of drug addicts are among the Malays as the majority population in the country. Some argue, that is a reasonable thing to do. Compatriots like China, many Chinese are addicted. Of course, for a country with a Malay majority like Malaysia, then the Malays are the most numerous. The question that needs to be considered together is, should not the Malays be the champion of all social problems that occur in Malaysia even though the Malays are the majority of Malays who are Muslims. Islam should be a barrier to the Malays from getting caught up in this despicable scene. This study uses a quantitative study based on the Structural Equation Model (SEM) to analyze the various relationships between variables in the model. This study aims to develop and verify the validity and reliability of the instrument using the Exploratory Factor Analysis (EFA) to measure the construction of religion based on practices, philosophies of life and community morals; socio-cultural factors of the community based on their lifestyle, cultural customs, family culture and education; community factors based on community environment,

community information, community support, community challenges and community environment; and factors in addressing drug addiction among communities in the East Coast state of Malaysia. A total of 100 people was used as the study sample to test the validity and reliability of the instruments that have been developed. Overall, the findings of the study show that all items of the questionnaire used in this research instrument have met the conditions proposed by Awang (2015). KMO value (> 0.60), Significant Bartlett Test, Total Variance Explained ($> 60\%$), all items have factor loading exceeds the minimum limit of 0.6 (> 0.60) and Alpha Cronbach value exceeding the value of 0.6 (> 0.60). The researchers need to recalculate the value of Internal Indicators of the current instrument for the new Alpha Cronbach value.

Keywords: Exploratory Factor Analysis (EFA), Validity, Reliability, Community Empowerment, Drug Addiction

Introduction

Drug abuse is the single most complicated social problem that is plaguing Malaysia. From the 1970s to the present, the problem of drug abuse and addiction is still lacking in encouraging changes. As a region that is said to receive a lot of change and development, the Asia Pacific region, including Malaysia, is also experiencing various social symptoms related to drug abuse. Drug abuse is closely linked to various other social diseases such as prostitution, violence, crime, AIDS and HIV. This is what threatens and harms a country whether in terms of socio-economic, socio-cultural, political or security.

In 1983, the government took a new approach in combating the drug epidemic in the country. In that year the problem was declared a threat to national security. The philosophy of this policy is to create a society free from the threat of drugs. This policy was declared by Tun Dr. Mahathir bin Mohamad, former Prime Minister of Malaysia on 19 February 1983 while launching the Anti -Drug Campaign. The government has created a National Anti -Drug Committee and placed it under the National Security Council. The Government has approved the establishment of the National Drug Agency which is responsible as the Secretariat to the National Drug Council and responsible for all anti -drug actions. Since then, drugs have been considered the number one enemy of the country, not to mention the main target of drug addiction is the young generation who are the backbone and hope of the future country. Widespread drug trafficking and addiction can threaten the socio-economic, socio-cultural, spiritual well-being of the masses, weaken national resilience and threaten national security (Agensi Dadah Kebangsaan, 1997).

Drug law in Malaysia covers aspects of prevention to treatment and rehabilitation. In its implementation, there are legislative weaknesses that have been identified on an ongoing basis and several amendments have been made to be more effective. The severe punishment imposed reflects the Malaysian government's determination to eradicate the drug problem. Various measures have been implemented by the government and Non-Governmental Organizations (NGOs) to combat the problem of drug abuse. The first step is to practice efforts to eliminate or reduce one of the main causes of this problem, which is the source of drug supply. To that end, various preventive measures and punishments have been implemented including imposing severe punishment on drug offenders. The Dangerous Drugs Act 1952, covers drug trafficking. The punishment is imprisonment of not less than 5 years or life imprisonment with 10 strokes of the cane. A person is deemed to have committed an offense

under Section 6 (B) of the Dangerous Drugs Act 1952 if he is found planting or cultivating a cannabis tree (even a tree) and is punishable by life imprisonment and whipping of not less than 6 strokes. Section 39B of the Dangerous Drugs Act 1952 provides for the mandatory death penalty for traffickers convicted of drug trafficking (Rohany et al., 2016).

For each offense proved, the court has no discretionary power to reduce the sentence (Anwarul, 1996: 179). Meanwhile, Dangerous Drugs Act 1952 (Amendment) 2002 Act A1167 was passed and gazetted on 8 August 2002. With the coming into force of this act from 11 November 2002, drug addicts who re-addicted after 2 times undergoing treatment and rehabilitation at Serenti Center or supervision from 5 up to 7 years will be whipped no more than 3 times. If they are found addicted again for the 4th time, they will be sentenced to imprisonment from 7 to 13 years and lashes of 3 to 6 lashes (AADK, 2015).

The phenomenon of drug addiction is a global issue and problem. Arguably no country is exempt from these symptoms of drug addiction. The difference, is only in the form of scale whether large or small, serious or not. In Malaysia, the issue of drug addiction is a very serious matter that has become the main agenda of the country that needs to be given attention. The Malaysian government is committed to the War on Drugs, because drugs are the number one enemy of the country. According to statistics AADK (2019), a total of 142,199 people has been identified as involved in drug abusers and addicts in Malaysia, from 32.4 million people to 32.6 million people, an increase of 200,00 people compared to the previous year (2018). The findings in 2019 show that out of 100,000 residents, there are a total of 436 drug and substance abusers and addicts, which is a ratio of one (1) person for 229 residents.

The ASEAN Drug Monitoring Report 2018 Manop et al (2019) shows that out of the total ASEAN population of 654.3 million people in 2018, 76.7 drug addicts have sought treatment and rehabilitation per 100,000 population. This number shows an increase of 50.6 people compared to 2017. If broken down by country, Vietnam reported 231 people, Thailand reported 221 people and Cambodia reported 114 people in 100,000 people receiving treatment and rehabilitation. AADK (2019) also show that Malays are the highest number in terms of drug addiction, which is 107,503 people or 75.6 percent. While other nations are at a lower level. Logically, it may be because Malays are the majority population in the country out of a total population of 32.4 million. Table 1 shows the statistics of drug addicts by ethnicity released by AADK (2019).

Table 1

Statistics of Addicts by Ethnicity

No	Ethnic	Percentage
1	Malay	75.6
2	Chinese	7.9
3	Indians	6.5
4	Sabahans	6.8
5	Sarawakians	2.7
6	Punjabi, Siamese, Serani & Orang Asli	0.5
	Total	100.0

Source: AADK (2019)

AADK (2019) showed that youths aged 19 to 39 years old recorded the highest percentage as drug and substance abusers and addicts, which is 68.1 percent of the total drug and substance addicts. Two age categories showed an increase from the previous year, namely the Youth and Adult age categories with an increase of 6.7 percent and 19.9 percent respectively. While for Children and Adolescents recorded a decrease of 50.0 percent and 33.1 percent compared to the previous year.

According to the AADK (2019), in 2010, 23,642 people were reported to be taking drugs in Malaysia. By 2016, this number continued to increase to 30,844 people. In 2017, a total of 163,931 drug -related arrests were made. This has created a situation where a group of Malaysians have been imprisoned for addiction, which is also a health and social problem. In 2019 a total of 33,500 out of 59,600 (approximately 56 percent) inmates nationwide were in prison for drug offenses. Of this number, 71.35 percent are Malays, and 66 per cent are between 22 and 40 years old. It is a figure that far exceeds the capacity of the prisons in our country which should only be able to hold 52,000 people. Too many Malaysians today have lost their lives due to drug problems. In November 2019, Al-Jazeera reported that among the 1,279 individuals sentenced to death in Malaysia, 932 (72.9 percent) were related to drug offenses. The cost that taxpayers in Malaysia have to bear to bear someone in jail is RM35 a day, equivalent to RM12,775 a year (AADK, 2019).

According to the study of Tee et al (2021), the greatest number of drug addicts are among the Malays as the majority population in the country. Some argue, that is a reasonable thing to do. Compatriots like China, many Chinese are addicted. Of course, for a country with a Malay majority like Malaysia, then the Malays are the most numerous. The question that needs to be considered together is, should not the Malays be the champion of all social problems that occur in Malaysia even though the Malays are the majority of Malays who are Muslims, while Islam is the best religion among all religions. Islam should be a barrier to the Malays from getting caught up in this despicable scene. Why do Malays continue to be champions in all these problems, especially drug addiction?

The involvement of local leaders and volunteers from all walks of life has a positive impact in efforts to address social problems, especially drug abuse in the country (Fahmi & Halim, 2018). In conjunction with the 35th National Anti-Drug Day (HADK-35) campaign themed "Our Community is Our Responsibility", the approach to community empowerment is in line with the theme according to the Deputy Prime Minister, Datuk Seri Dr Ahmad Zahid Hamidi (Fahmi & Halim, 2018). He who is also the Home Minister stated that, the implementation of the leadership program with volunteers is seen as a reminder of the role of leaders to help address social problems, especially drug abuse through the element of commitment or 'political will' in conjunction with volunteers. According to him, "Community empowerment is implemented in 14 high -risk areas (drug addiction problems) and now added 50 areas to make a total of 64 areas". The effort was successful and can be proven through the Anti-Drug Campaign (PDH) 2.0 when the decrease in new addicts by 16 percent compared to 2016. From the findings of the study, the decrease in new addiction cases decreased to 18,440 last year compared to 22,923 in 2018 (AADK, 2019).

Thus, this article attempts to identify whether the factors used in this study meet the required validity and reliability before conducting further studies in detail. Among the factors

used are religious factors based on practices, philosophy of life and community morals; socio-cultural factors of the community based on their lifestyle, cultural customs, family culture and education; community factors based on community environment, community information, community support, community challenges and community environment; and factors in addressing drug abuse among communities in the East Coast state of Malaysia.

Exploratory Factor Analysis (EFA)

The validity and reliability of the questionnaire items should be done before the actual study is conducted in order not to perform the correct techniques to make its assessment. Therefore, to generate the validity and reliability of the questionnaire items, investigators should use Exploratory Factor Analysis (EFA). This study will explain in detail the methods for obtaining the validity and reliability of questionnaire items by using EFA for measurement of religious, socio-cultural, community and drug abuse prevention. EFA is to identify the components that exist in the set of questionnaires that have been established. EFA is a statistical technique that transforms a set of data constructs originally linearly into a set of smaller constructs that can provide a complete overview of all the information contained in the original constructs (Duntemen, 1989). The purpose of the EFA is to reduce the dimensions of the original data to some smaller components and can be interpreted more easily and meaningfully (Duntemen, 1989; Field, 2006; Lewis-Beck, 1994). According to Tabachnick & Fidell (2007), EFA needs to go through several levels. The first rank calculates the correlation matrix between all factors analyzed by factor. The next stage deprives extracting several factors from the matrix correlation and determining the number of factors formed. Reversal of these factors is done to improve the interpretation so that factors are more meaningful and interpretable. The final and most important stage in factor analysis is to interpret the results of the acquired factors and give the appropriate names to each factor.

The instruments used in this study have adapted the instruments that have been developed by some earlier researchers, as well as modifying some of the statements to suit the current study. According to Awang (2010;2012a); Hoque & Awang (2016); Hoque *et al* (2017); Chik & Abdullah (2018); Noor *et al* (2015), if a researcher adapts instruments previously established by researchers and modifies the statement to suit current studies, then they have to re-run the EFA procedure. This is because the current study area may differ from previous studies, or the current study population is far from previous studies in terms of socio-economic status, race and culture. There are some items built earlier, no longer suitable for current studies or there may be different structural items in the current study compared to the structure in the previous study. Therefore, researchers need to recalculate the Internal Reliability value for the current instrument, the new Alpha Cronbach value (Chik & Abdullah, 2018).

In this study, researchers conducted pilot studies on 100 Malay and Chinese communities in addressing drug addiction and relaunched the EFA on items measuring construct considering the recommendations by Chik & Abdullah (2018).

EFA for Constructs for Religion

Constructs of Religion are measured using 15 items labeled AL1 to AL5, FH1 to FH5 and MO1 to MO5. Each item statement is measured using the Interval Scale between 1 to 10. The EFA Procedure using the Principal Component Analysis (PCA) with Varimax Rotation has been

carried out on 15 items to measure the construct of the Religion. Table 2 shows the Bartlett Test value is significant (P-Value < 0.05). Measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.903 which is above the minimum value 0.6 (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Both achievements (Significant Bartlett Test and KMO value > 0.6) reflects the observed data as appropriate for the next procedure for Factor Exploration Analysis (EFA) (Hoque *et al.*, 2017; Chik & Abdullah, 2018).

Table-2

Value of KMO and Bartlett Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.903
Bartlett's Test of Sphericity	Approx. Chi-Square	2437.986
	Df	171
	Sig.	0.000

The total value of the Total Variance Explained is important for the researcher to know how many percent of the items used measure a study can construct. Table 3 shows the total value of the variance estimated by the items used to measure the construct of Religion. The reading from Table 3 found that the construction of the Religion which is measured using 15 items in 3 components can measure the constructs of the Religion of 77.957%. This value is sufficient because it exceeds the minimum requirement of 60% (Hoque *et al.*, 2017; Chik & Abdullah, 2018).

Table-3

Estimated Amount of Variance for Religion Construct

Total Variance Explained						
Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.583	13.593	63.968	3.905	20.552	41.313
2	1.396	7.347	71.316	3.600	18.946	60.260
3	1.262	6.641	77.957	3.362	17.697	77.957

The findings from Table 4 show the constructs of Religion measured by only 3 components. Thus, researchers want to know the items selected to measure the components. Table 4 shows the distribution of received items to measure the construct of Religion. All items have factor loading exceeds the minimum limit of 0.6 as suggested by (Chik & Abdullah, 2018). Items with a weight of less than 0.6 should be excluded as they do not contribute to the construction of the constructs (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Items with a weighting factor of less than 0.6 and excluded from the questionnaire for further study.

Table-4

Number of Extracted Components for Religion Construct

Items	Component		
	1	2	3
AL1	0.844		
AL2	0.852		
AL3	0.879		
AL4	0.760		
AL5	0.881		
FH1		0.800	
FH2		0.840	
FH3		0.816	
FH4		0.784	
FH5		0.745	
MO1			0.752
MO2			0.802
MO3			0.830
MO4			0.830
MO5			0.757

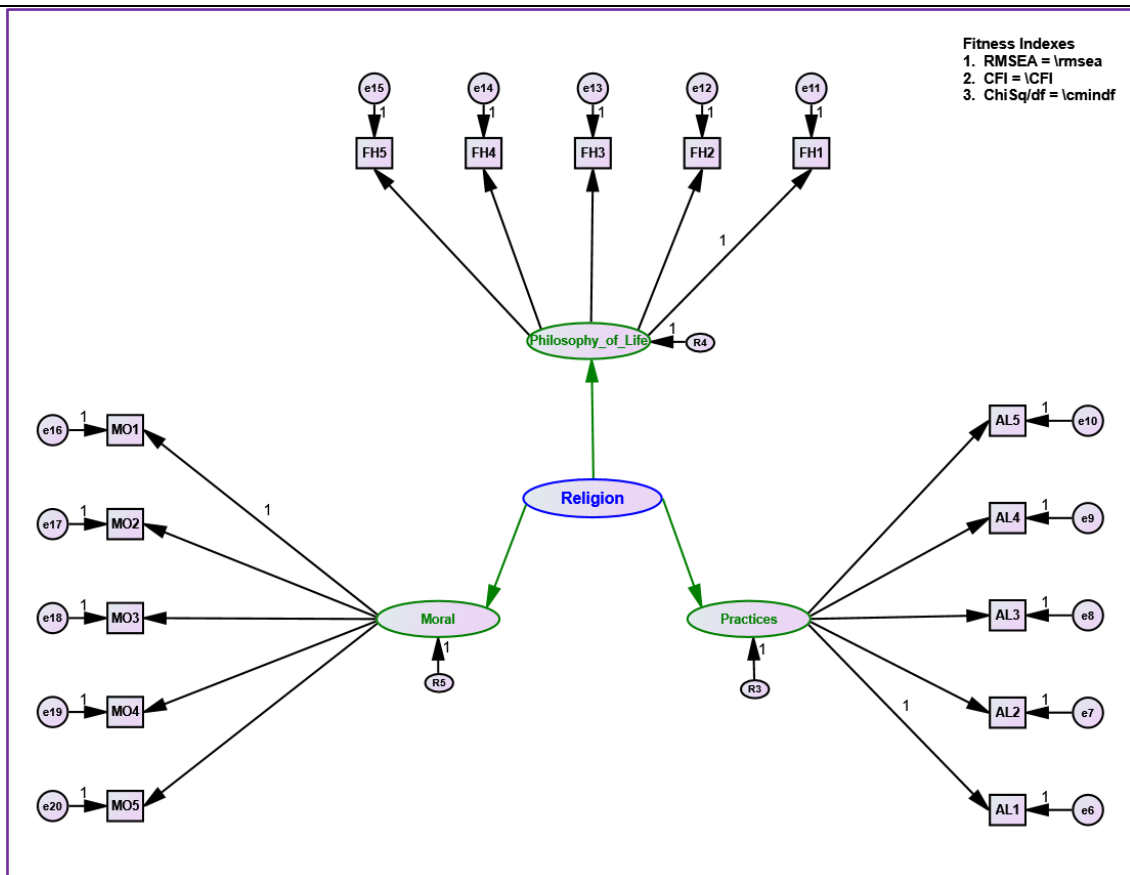


Figure-1. Component Position and Item for the Religion (After EFA)

Another information to be reported by the researcher is the reliability of the items that have been built to measure the construct. The instrument reliability measure is estimated through Alpha Cronbach value. Alpha Cronbach value of an instrument must exceed the minimum of 0.7 for adoption in the study. Table 5 shows the Alpha Cronbach value for each

component of the Religion component. This construct has Alpha Cronbach value exceeding the value of 0.6 and can be applied in this study (Hoque *et al.*, 2017; Chik & Abdullah, 2018).

Table-5

Instrument Reliability Value for Religion Construct

Component	Item Number	Alpha Cronbach
1	5	0.924
2	5	0.932
3	5	0.908
Total	15	

EFA for Socio-Cultural Community Construct

Construct of Socio-Cultural Community are measured using 20 items abbreviated as GH1 to GH5, AB1 to AB5, BK1 to BK5 and PD1 to PD5. Each item statement was measured using the Interval Scale between 1 to 10. The findings show that Bartlet Test values are significant (P-Value < 0.05), Measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.871 which is above the minimum value 0.6 (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Both of these achievements (Significant Bartlet Test, and KMO value > 0.6) reflect the data are feasible for the next procedure in the EFA (Hoque *et al.*, 2017; Chik & Abdullah, 2018). The Construct of Socio-Cultural Community measured by four (4) component can measure the construct of Socio-Cultural Community as much as 81.133%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018).

Items received for measuring Socio-Cultural Community construct were four (4) with factor loading exceeding the minimum limit of 0.6 as proposed by (Chik & Abdullah, 2018). Items with a factor loading of less than 0.6 need to be excluded as they do not contribute to the measurement of the construct (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Measurement of internal reliability values of the instruments estimated through Alpha Cronbach values must exceed the minimum of 0.7 for adoption in the study. The Alpha Cronbach value for each component of the Socio-Cultural Community component is 0.940 exceeding the value of minimum 0.7 and can be applied in this study (Chik & Abdullah, 2018).

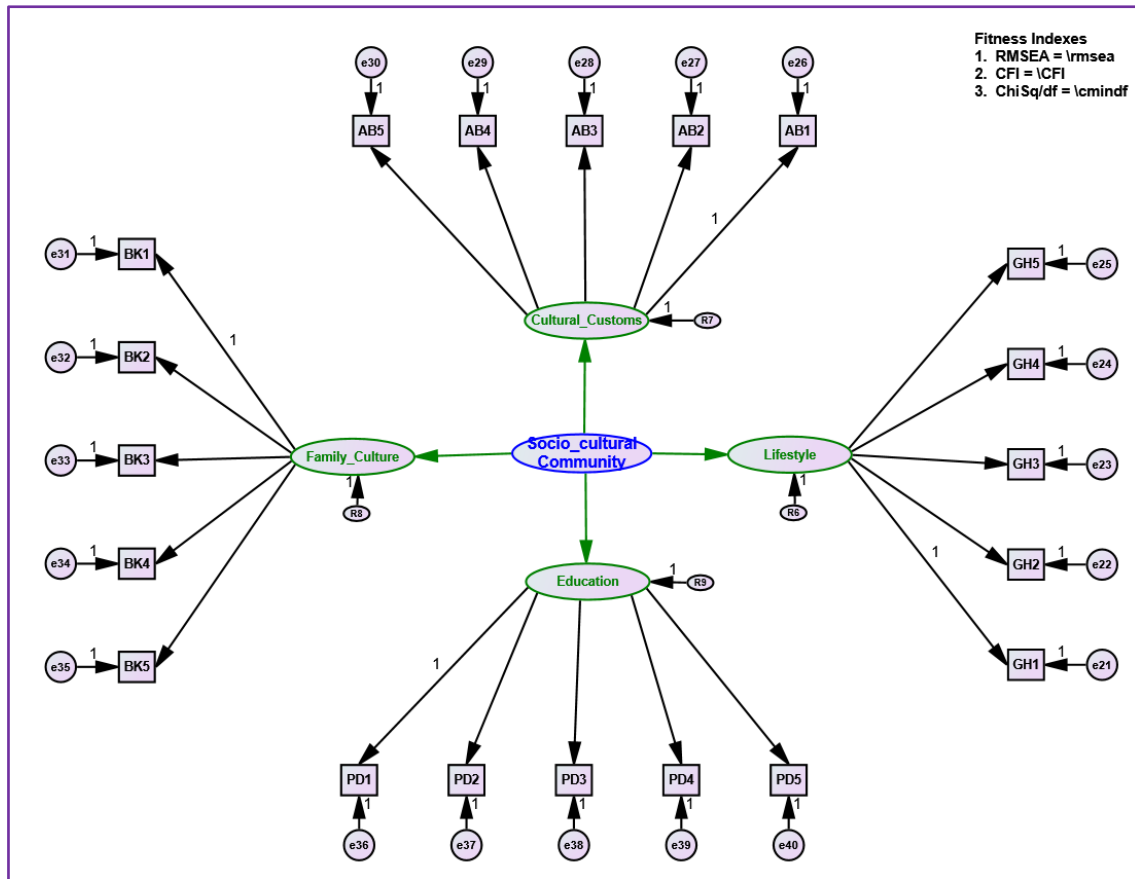


Figure-2. Component Position & Item for Socio-Cultural Community Construct (After EFA)

EFA for Community Construct

Construct of Community are measured using 20 items abbreviated as IK1 to IK5, SK1 to SK5, CK1 to CK5 and PK1 to PK5. Each item statement was measured using the Interval Scale between 1 to 10. The findings show that Bartlet Test values are significant (P-Value < 0.05), Measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.871 which is above the minimum value 0.6 (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Both of these achievements (Significant Bartlet Test, and KMO value > 0.6) reflect the data are feasible for the next procedure in the EFA (Hoque *et al.*, 2017; Chik & Abdullah, 2018). The Construct of Community measured by one component can measure the construct of Community as much as 80.011%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018).

Items received for measuring Community construct were 4 with factor loading exceeding the minimum limit of 0.6 as proposed by Chik & Abdullah (2018). Items with a factor loading of less than 0.6 need to be excluded as they do not contribute to the measurement of the construct (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Measurement of internal reliability values of the instruments estimated through Alpha Cronbach values must exceed the minimum of 0.7 for adoption in the study. The Alpha Cronbach value for each component of the Community component is 0.911 exceeding the value of minimum 0.7 and can be applied in this study (Chik & Abdullah, 2018).

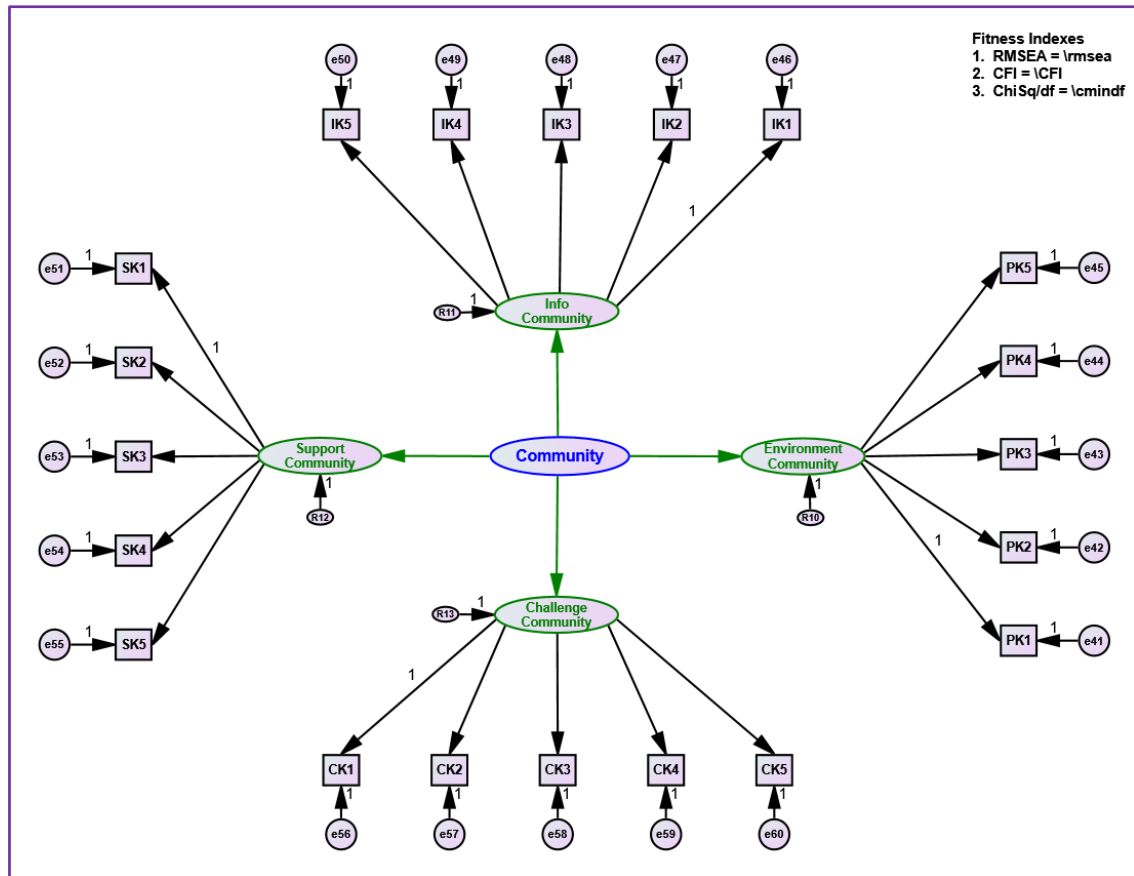


Figure-3. Component Position & Item for Community Construct (After EFA)

EFA for Socio-Economic Community Construct

Construct of Socio-Economic Community are measured using 5 items abbreviated as SE1 to SE5. Each item statement was measured using the Interval Scale between 1 to 10. The findings show that Bartlet Test values are significant ($P\text{-Value} < 0.05$), Measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.871 which is above the minimum value 0.6 (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Both of these achievements (Significant Bartlet Test, and KMO value > 0.6) reflect the data are feasible for the next procedure in the EFA (Hoque *et al.*, 2017; Chik & Abdullah, 2018). The Construct of Socio-Economic Community measured by one component can measure the construct of Socio-Economic Community as much as 82.438%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018).

Items received for measuring Socio-Economic Community construct were one (1) with factor loading exceeding the minimum limit of 0.6 as proposed by Chik & Abdullah (2018). Items with a factor loading of less than 0.6 need to be excluded as they do not contribute to the measurement of the construct (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Measurement of internal reliability values of the instruments estimated through Alpha Cronbach values must exceed the minimum of 0.7 for adoption in the study. The Alpha Cronbach value for each component of the Socio-Economic Community component is 0.905 exceeding the value of minimum 0.7 and can be applied in this study (Chik & Abdullah, 2018).

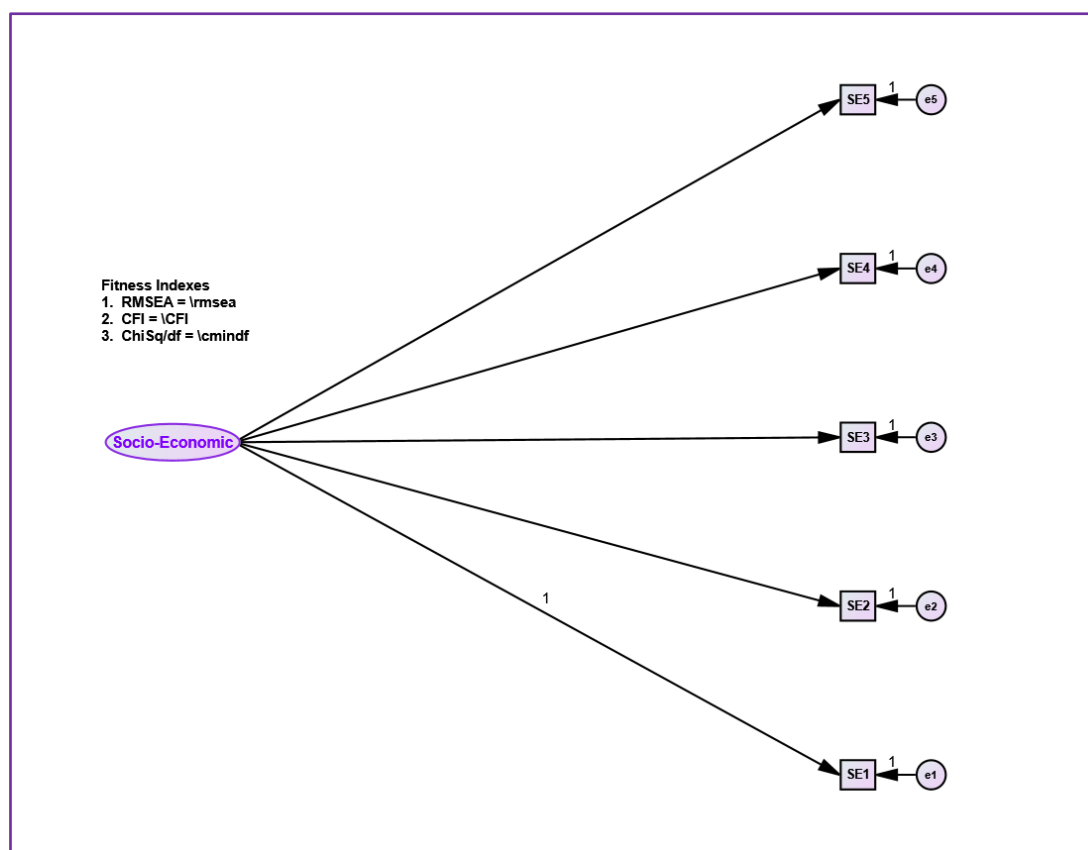


Figure-4. Component Position & Item for Socio-Economic Community Construct (After EFA)

EFA for Addressing Drug Addiction Construct

Construct of Addressing Drug Addiction are measured using 5 items abbreviated as PK1 to PK5. Each item statement was measured using the Interval Scale between 1 to 10. The findings show that Bartlet Test values are significant ($P\text{-Value} < 0.05$), Measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.871 which is above the minimum value 0.6 (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Both of these achievements (Significant Bartlet Test, and KMO value > 0.6) reflect the data are feasible for the next procedure in the EFA Hoque *et al.*, 2017; Chik & Abdullah, 2018). The Construct of Addressing Drug Addiction measured by one component can measure the construct of Addressing Drug Addiction as much as 86.882%. This value is sufficient because it exceeds the minimum requirement of 60% (Chik & Abdullah, 2018).

Items received for measuring Addressing Drug Addiction construct were one (1) with factor loading exceeding the minimum limit of 0.6 as proposed by (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Items with a factor loading of less than 0.6 need to be excluded as they do not contribute to the measurement of the construct (Hoque *et al.*, 2017; Chik & Abdullah, 2018). Measurement of internal reliability values of the instruments estimated through Alpha Cronbach values must exceed the minimum of 0.7 for adoption in the study. The Alpha Cronbach value for each component of the Addressing Drug Addiction component is 0.981 exceeding the value of minimum 0.7 and can be applied in this study (Chik & Abdullah, 2018).

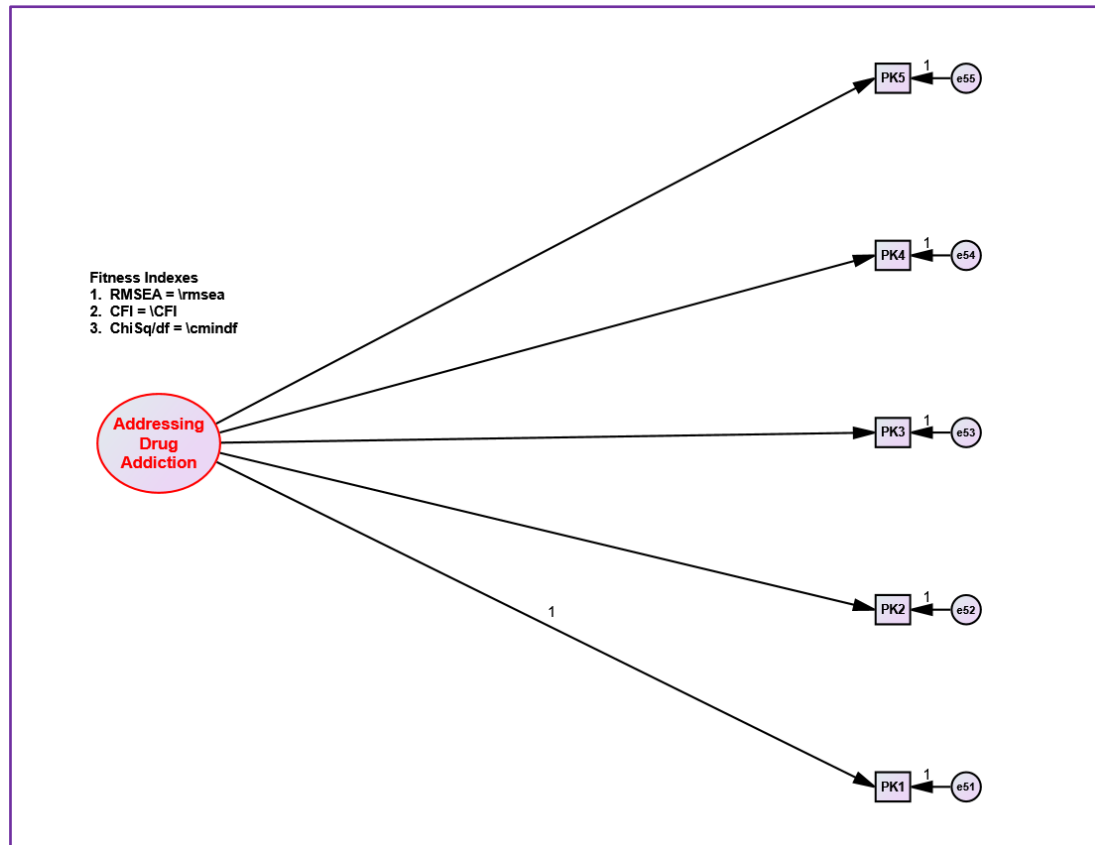


Figure-5. Component Position & Item for Addressing Drug Addiction Construct (After EFA)

Conclusion

Overall, the needs of the items in each construct fulfilled the Bartlett Test (significant), the KMO value (> 0.6), the factor loading exceeds the minimum limit of 0.6 and Alpha Cronbach exceeded the minimum limit of 0.7 for adoption in the study. This reflects that items that are not set aside are feasible to apply in this study (Hoque *et al.*, 2017; Chik & Abdullah, 2018). After implementing the EFA, all items remain with the original total of 65 items. Figure 6 shows the total number of items used in the study.

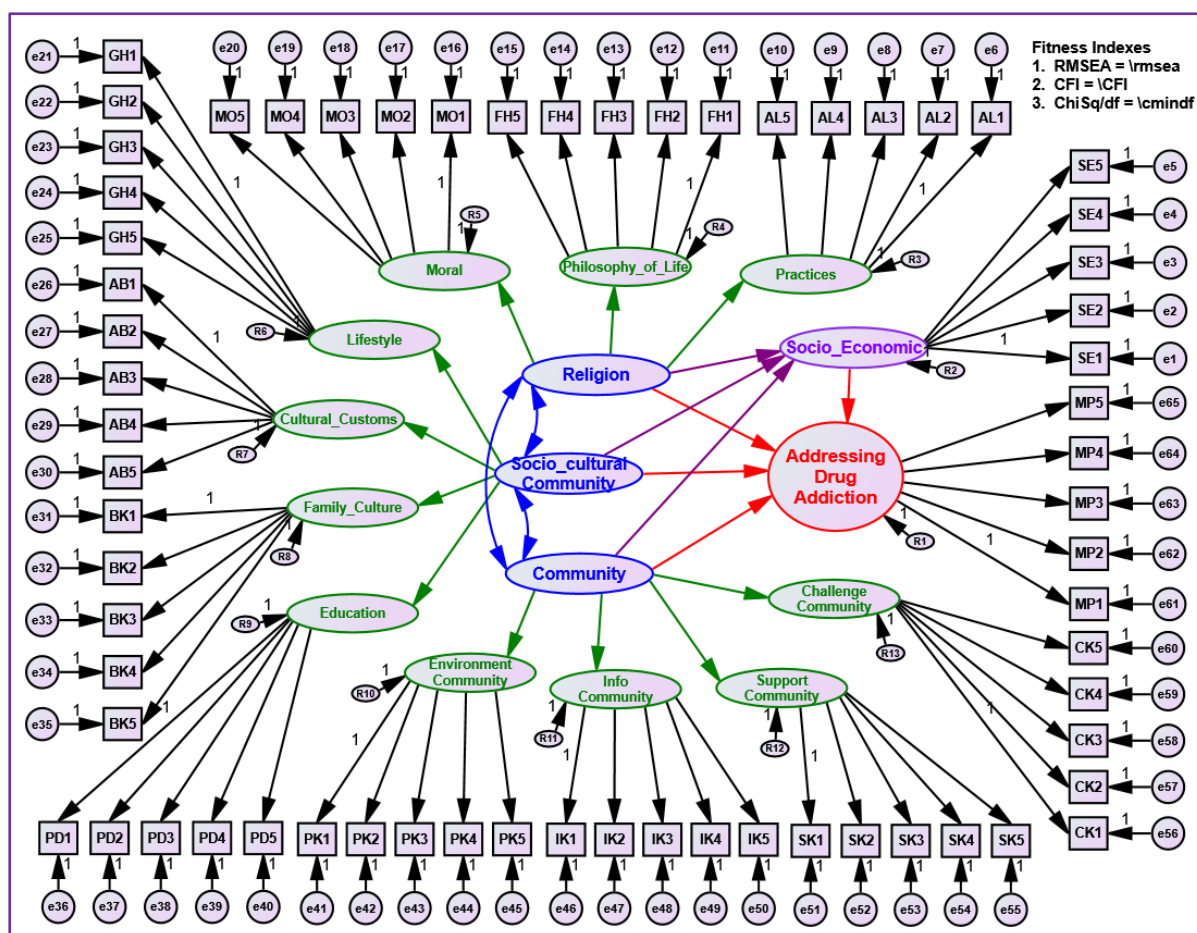


Figure-6. Overall Constructs of Community Empowerment After EFA (65 items)

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