

## The Factors affecting the Tendency of Drug Addiction among Malays in Malaysia

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### Abstract

*Drug addiction is a very serious issue in Malaysia that has been declared as the number one enemy and the main agenda of this country. Hence, the National Anti-Drugs Agency is committed to eradicate drugs through the campaign of total fight against drugs. It is a fact that drug addicts among Malay ethnic more than other ethnics. Various other factors may influence this tendency of drug addiction such as culture, economy, environment and religion. Therefore, this article aimed to measure the level, pattern and influence of the constructs of religion, socio-culture, socio-economic and environment, and identify factors that affect the tendency of drug addiction among Malays in Malaysia. This study used quantitative approach with research design of survey used questionnaires as research instrument. The location was divided by zones, namely northern, western, southern, east coast and Sabah. It involved 13 National narcotics addiction rehabilitation centres and three (3) private drug rehabilitation centres. A total of 674 respondents comprising 549 Malay clients were selected randomly as research sample. The obtained data had been analyzed using the IBM-SPSS-AMOS version 21.0 to run Structural Equation Modeling (SEM) analysis which consists of two main models: measurement model and structural model. Prior to the SEM test, several adaptation tests were conducted to ensure that the tested indicators truly represented the measured construct. The findings of the study have shown that the factors of religion, socio-cultural, socio-economic and environment have positive and significant impact on Malay drug addicts. Socio-cultural factor is the*

*most significant, followed by the environment, socio-economic and religion. This implies that the lack of religious teachings also affects the tendency of drug addiction among Malays.*

**Key-words:** Structural Equation Modeling (SEM), Malay Society, Drug Addition, Tendency of Addiction, Affecting Factors.

## **1. Introduction**

The issue of drug addiction have been debated by many individuals and organizations or government agencies that involved in the fight against drugs. Drug is considered as filthy or dirty which gives threats to Malaysia for a long time ago and it remains the first enemy of the country (Agensi Antidadah Kebangsaan, 2014; Zainudin Zainul, 2017). It is a matter of fact that drugs is important for medical purposes but unfortunately is often abused by some people. Drug abuse occurs when drugs are used for non-medical purposes and are taken by someone without medical supervision. Drug will give negative effect on the body system, human behavior and other other destructive effects. The drug addicts will get more harms than benefits of drugs. On the other hand, drugs are misused for personal gain such as avoiding pain, getting better, avoiding stress, escaping misery and so on. The various drugs known as heroin, morphine, and cannabis in fact include all of the substances that may be harmful. Tobacco and alcohol are also drugs and excessive consumption can have harmful effects. Actually there are thousands of different types of drugs around the world consumed by about 200 million people for different purposes. Drugs are one of the most complex social problems the country is facing. Whether or not it has been spoken since the 1970s and until now is still being debated (Asean Center for Research of Drug Abuse - ACREDA, 2014).

According to Agensi Antidadah Kebangsaan (2019), in 2010, 23,642 people were reported to be taking drugs in Malaysia. By 2016, this number continued to accumulate 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 jailed for billing, which is also a health and social problem. The Astro Awani report on June 14, 2017 stated that 33,500 of the 59,600 (approximately 56%) inmates nationwide were in prison for drug offenses. Of these, 71.35% are Malays, and 66% aged between 22 and 40 years old. In 2018, the Malaysian Prison Department reports that the number of incarcerated individuals reaches 64,000. It is a figure far beyond the capacity of prisons in our country that should only be able to accommodate 52,000 people. Too many Malaysians today have lost their lives due to drug problems. In November 2018, Al-Jazeera reported that out of 1,279 people sentenced to death in Malaysia, 932 (72.9%) were related to drug offenses. The cost to taxpayers in Malaysia to pay someone in prison is RM35 a day, equivalent to RM12,775 a year (Agensi Antidadah Kebangsaan,

2019). The problem of substance abuse is a universal problem and as a region that is widely accepted for change and development, the Asia Pacific region including Malaysia is also experiencing various social symptoms. Drug abuse, especially among adolescents, is particularly alarming and is closely linked to various social ailments such as prostitution, stroke, gambling and chronic health problems.

This situation presents great trials in the discipline of mental health and health promotion efforts for adolescents as once they are exposed to substance abuse issues, it also accumulates social costs especially for treatment and other medical costs. However, the data obtained, due to natural problems and poor quality of current data collection processes, can not be accurately determined. Epidemiological data show an accumulate in substance abuse in Iran and India, especially among adolescents. Therefore, it requires deep attention and intervention strategies especially in schools (Bashirian et al., 2012; Pati, 2014).

## **2. Methods**

This study used quantitative approach using a research instrument adapted to suit the factors that lead to drug addiction by Malays in Malaysia. The obtained data were analyzed using Structural Equation Modeling (SEM) with the application of the IBM-SPSS-AMOS version 21.0 program. SEM is established with two major models which are measurement model and structural model. Prior the SEM testing, a modified test must be performed to make sure that the tested indicator will truly represent the measured construct. Two prerequisites should be met before performing SEM analysis namely Factor Exploration Analysis (EFA), and Confirmatory Factor Analysis (CFA). CFA is a test of measurement models to make sure that each construct fulfil the criteria for validity and reliability of each construct tested. The fit of the measurement model is crucial to make sure that each latent construct has a good fit with the data studied before the SEM can proceed (Schumacker & Lomax, 2004; Awang, 2015; Kline, 2016).

Using the CFA method can evaluate how much the observed factors are significant to the latent construct applied. This evaluation is made by examining the strength values of the regression structure from the factors to the observed variables (i.e. Factor Loading value) rather than the relationship between factors (Byrne, 2001). Any item that does not match the measurement model through the use of CFA is ommitted from the model. This inequality is caused by the less value of factor loadings. The researcher needs to run the CFA process on all the constructs covered in the model, either individually or collectively (pooled CFA model) (Chik & Abdullah, 2018).

The fit of the hypothesized model was verified using Fitness Indexes to observe values for Root Mean Square Error of Approximation (RMSEA < 0.08), Goodness of Fit Index (GFI > 0.90), Comparative Fit Index (CFI > 0.90) and Chi Square / Degrees of Freedom (chisq / df < 5.0). Hair et al. (2006) mention that if the value of  $\chi^2$  is less than 2.00 but significant, it is necessary to state whether the sample is large or otherwise. Sample sizes above 200 can cause  $\chi^2$  values to be significant. Therefore, Hair et al. propose two more indices, CFI and RMSEA, to make sure that CFA analysis establishes the unidimensionality of the research. If the CFI value exceeds 0.90 and the RMSEA is less than 0.08 then it is assumed that there is a Unidimensionality for the construction of each construct.

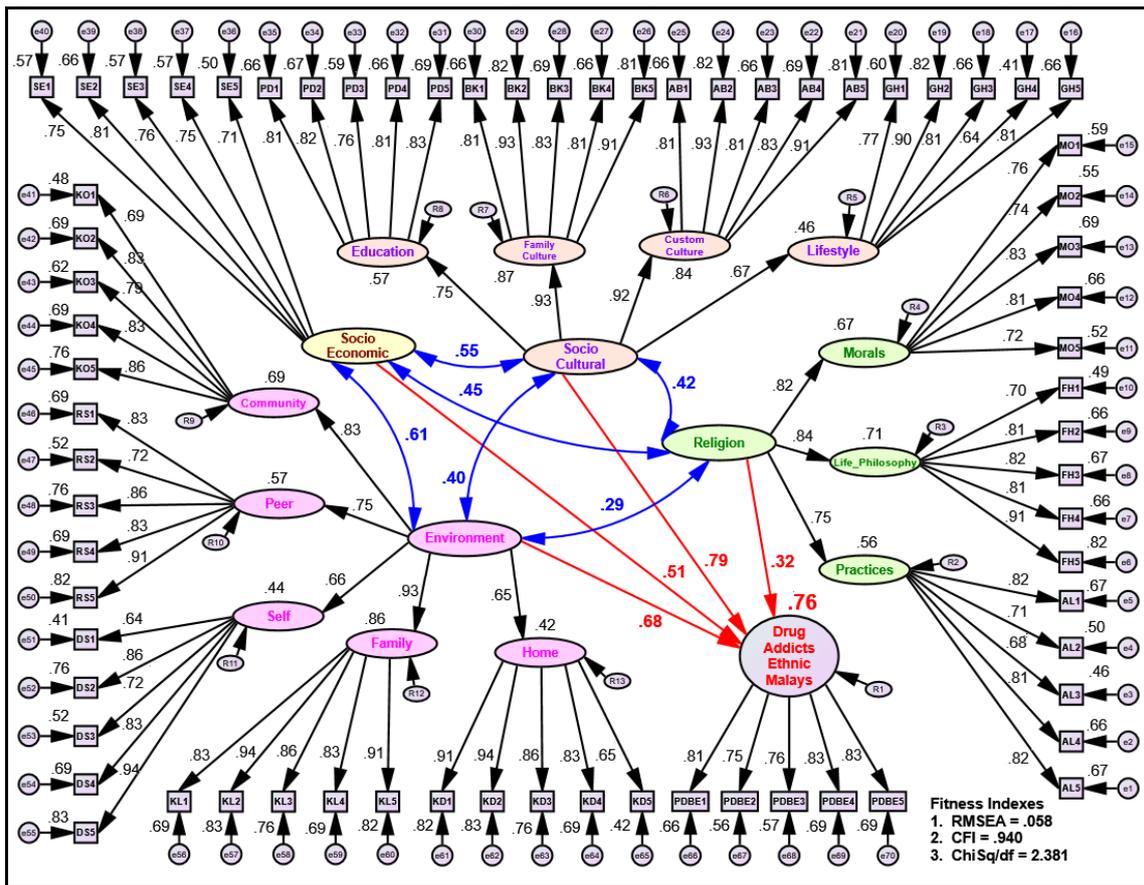
Hypothesis models are considered to correspond to analyze data when the chisq / df value is less than 5.0 (Marsh & Hocevar, 1985). The hypothesis model is also regarded to be equivalent when the GFI value exceeds 0.90 (Joreskog & Sorbom, 1993). The RMSEA value is excellent when it is less than 0.08 (Hair et al. 2006; Brown & Cudeck, 1993), but is still acceptable if less than 0.1 (Byrne, 1998; 2013). Bentler (1990) proposed a CFI value of 0.90. Thus, CFI values between 0.80 and 0.89 are still within acceptable margins. In order to validate the model established, the bootstrapping value is determined. According to Bollen and Stine (1992), an established model is regarded valid when bootstrapping values exceed 0.05 meaning that there is no difference between the data obtained from the research sample and the proposed model. Therefore, it is valid in accordance with the data obtained from the research sample. In this article, the constructs included in the research model are Religion, Socio Cultural, Socio Economic, Environment and Malay Drug Addicts.

### **3. Findings**

#### **Effect Analysis between Constructs**

The analysis using SEM yields standardized regression weight values between constructs as well as unstandardized regression weight values and both have certain functions. Figure 1 shows the results of standardized regression weights, whereas Figure 2 indicates unstandardized regression weights, as a result of the effects of Religion, Socio Cultural, Socio Economic and Environment constructs on Malay Drug Addicts, according to the SEM procedure.

Figure 1 - SEM Results Shows Standardized Regression Weight between Constructs for Malay Drug Addicts

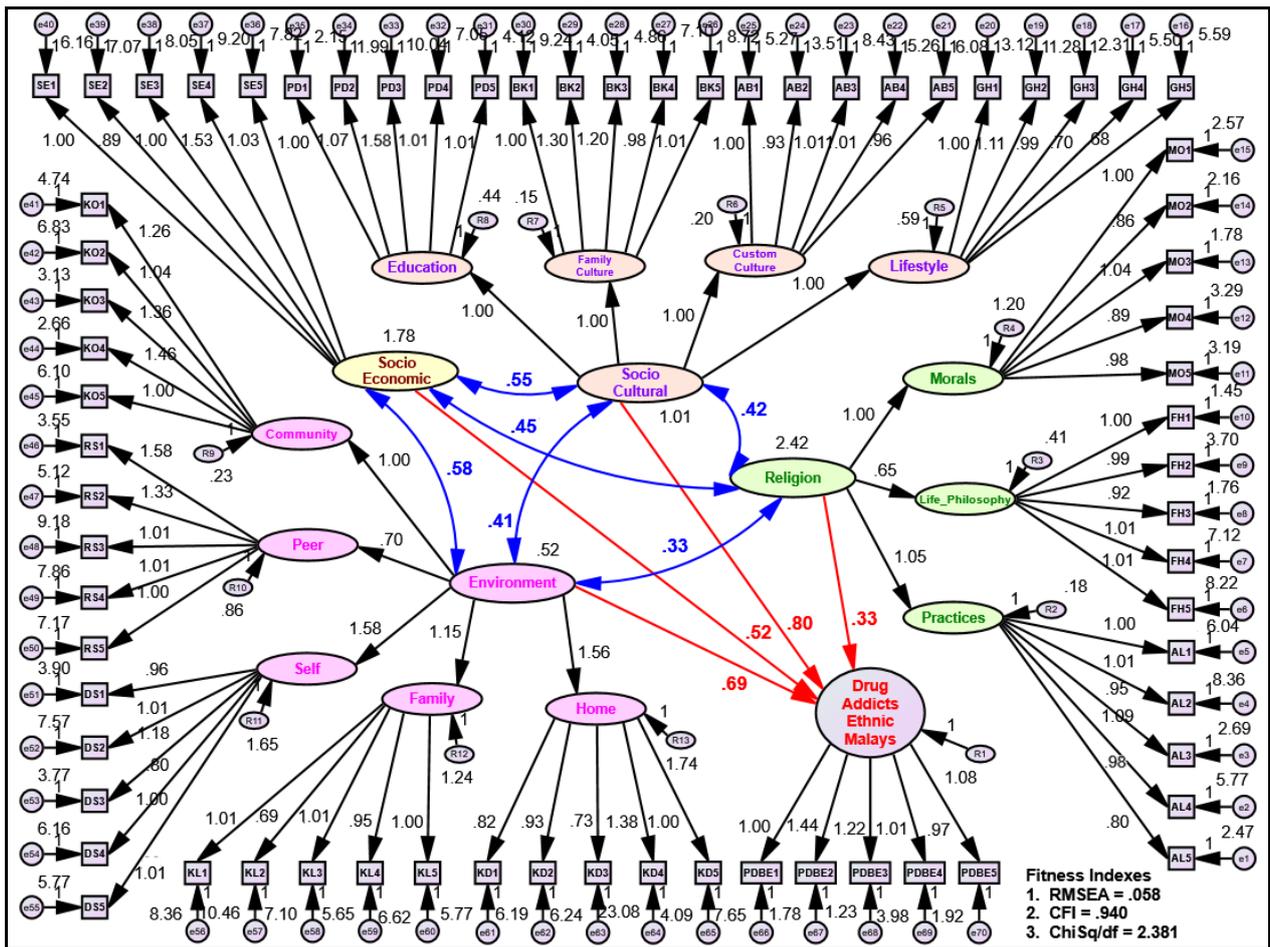


**Significant Summary of the SEM Results in Figure 1 (Standardized Regression Weight):**

1. The R<sup>2</sup> value for Malay Drug Addicts is 0.76. This shows that four (4) predictors in the model (see arrows) of Religion, Socio Cultural, Socio Economic and Environment accounted for 76% of Malaysian Drug Addicts among the population in the study.
2. The correlation values between the two independent constructs in the model indicated by the double headed arrow such as are as follows: the correlation between Religion between Socio Cultural is 0.42, Religion between Socio Economic is 0.45, Religion between Environment is 0.29, Socio Cultural between Socio Economic is 0.55, Socio Cultural between Environment is 0.40 and Socio Economic between Environment is 0.61. This reveals that the SEM model is valid and has no multicollinearity problem.

Figure 2 indicates the regression value obtained between constructs in the model, to foster the necessary regression equations and do hypothesis testing.

Figure 2 - SEM Findings show Unstandardized Regression Weight between Constructs for Malay Drug Addicts



**Significant Summary of the SEM Results in Figure 2 (Unstandardized Regression Weight)**

The regression equation for Malay Drug Addicts (MDA), Religion (Rel), Socio Cultural (SC), Socio Economic (SE) and Environment (Env) is as follows:

$$MDA = 0.33Rel + 0.80SC + 0.52SE + 0.69Env (R^2 = 0.76 = 76\%)$$

The researchers will then test each of the hypotheses formulated in this research. Table 1 displays the estimated direct effect value of each independent construct on the dependent construct in the model as illustrated in Figure 2 above.

Table 1 - Regression Coefficient between Construction and Probability Value (p) for Malay Drug Addicts

Constructs		Constructs	Estimate	S. E.	C.R.	P	Label
Malay Drug_Addicts_	<---	Religion	0.333	0.095	3.507	***	Significant
Malay Drug_Addicts	<---	Socio_Cultural	0.802	0.109	7.323	***	Significant
Malay Drug_Addicts	<---	Socio_Economic	0.519	0.100	5.189	***	Significant
Malay Drug_Addicts	<---	Environment	0.686	0.065	10.554	***	Significant

\*\*\* Significant value at the level, p<0.001

Table 2 indicates the decision of testing the direct effect hypothesis of free constructs against lean constructs. Hypothesis testing in Table 2 is conforming to on SEM results rather than Table 1 above.

Table 2 - Testing the Impression Hypothesis Immediately between Constructs for Malay Drug Addicts

Direct Effect Hypothesis	P	Result
H <sub>1</sub> : Religion gives a significant effect on Malay Drug Addicts in Malaysia.	***	Supported
H <sub>2</sub> : Socio Cultural gives a significant effect on Malay Drug Addicts in Malaysia	***	Supported
H <sub>3</sub> : Socio Economic gives a significant effect on Malay Drug Addicts in Malaysia	***	Supported
H <sub>4</sub> : Environment gives a significant effect on Malay Drug Addicts in Malaysia	***	Supported

### The Effect of Religion On Malay Drug Addicts

Table 3 shows that Religion had a significant direct effect on Malay Drug Addicts with a regression weights ( $\beta$ ) of 0.333 at a significant level of 0.001 (Estimate = 0.333, CR = 3.507,  $p < 0.001$ ). This implies that Religion has a positive and significant effect on Malay Drug Addicts. This means that when Religion accumulates by 1 unit, then Malay Drug Addicts will accumulate by 0.333 units. The results show that Religion have a positive and significant influence on Malay Drug Addicts.

Table 3 - Regression Coefficient between Construction and Probability Value (p) for Malay Drug Addicts

Constructs		Constructs	Estimate	S. E.	C.R.	P	Label
Malay Drug_Addicts	<---	Religion	0.333	0.095	3.507	***	Significant

\*\*\* Significant value at the level,  $p < 0.001$

### The Effect of Socio-Cultural on Malay Drug Addicts

Table 4 shows that Socio Cultural had a significant direct effect on Malay Drug Addicts with an estimated regression weights ( $\beta$ ) of 0.802 at a significant level of 0.001 (Estimate = 0.802, CR = 7.323,  $p < 0.001$ ). This means that the Socio Cultural construct has a positive and significant influence on the Malay Drug Addicts construct. This means that as Socio Cultural grows by 1 unit, Malay Drug Addicts will accumulate by 0.802 units. The results show that the Socio Cultural construct has a positive and significant influence on the Malay Drug Addicts construct.

Table 4 - Regression Coefficient between Construction and Probability Value (p) Malay Drug Addicts

Constructs		Constructs	Estimate	S. E.	C.R.	P	Label
Drug_Addicts_Ethnic_Malays	<---	Socio_Cultural	0.802	0.109	7.323	***	Significant

\*\*\* Significant value at the level,  $p < 0.001$

### The Effect of SocioEconomic on Malay Drug Addicts

Table 5 shows that Socio Economic has a significant direct effect on Malay Drug Addicts with an estimated regression weights ( $\beta$ ) of 0.519 at a significant level of 0.001 (Estimate = 0.519, CR = 5.189,  $p < 0.001$ ). This means that the Socio Economic construct has a positive and significant influence on the Malay Drug Addicts construct. This means that when Socio Economic accumulates by 1 unit, then Malay Drug Addicts will accumulate by 0.519 units. The results show that the Socio Economic construct has a positive and significant influence on the Malay Drug Addicts construct.

Table 5 - Regression Coefficient between Construction and Probability Value (p) Malay Drug Addicts

Constructs		Constructs	Estimate	S. E.	C.R.	P	Label
Drug_Addicts_Ethnic_Malays	<---	Socio_Economic	0.519	0.100	5.189	***	Significant

\*\*\* Significant value at the level,  $p < 0.001$

### The Effect of Environment on Malay Drug Addicts

Table 6 shows that Environment had a significant direct effect on Malay Drug Addicts with a regression weights ( $\beta$ ) of 0.686 at a significant level of 0.001 (Estimate = 0.686, CR = 10.554,  $p < 0.001$ ). This means that the Environment Builder has a positive and significant effect on the Malay Drug Addicts. This means that if Environment accumulates by 1 unit, then Malay Drug Addicts will accumulate by 0.686 units. The results show that the Environment construct has a positive and significant influence on the Malay Drug Addicts construct.

Table 6 - Regression Coefficient between Construction and Probability Value (p) Malay Drug Addicts

Constructs		Constructs	Estimate	S. E.	C.R.	P	Label
Drug_Addicts_Ethnic_Malays	<---	Environment	0.686	0.065	10.554	***	Significant

\*\*\* Significant value at the level,  $p < 0.001$

#### 4. Conclusion

In conclusion, the study found that the effects of socio-cultural factor is the most significant contributing to the drug addiction among Malays, followed by the factors of environment, socio-economic and lastly, by religion. Effects of socio-cultural factor involved lifestyle, custom culture, family culture and education of Malay drug addicts. While environment factor was associated with the community, peer, self, family and home, also affects this tendency. The socio-economic factor also affects the tendency of drug addiction among them. However, the effects of religious factor showed the least significant among other factors affecting the tendency of drug addiction among Malays. Notwithstanding this religious factor, especially Islam for Malays teaches all mankind the right way of daily life, it is still ignored by some of its devotees including Muslim Malays who are involved in drug addiction. This study has implications on Malay society for practicing healthy and balanced lifestyle, establishing an integrated community support system, exercising good family financial management and internalizing comprehensive of religious teachings and doctrine.

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#### References

- National Anti -Drug Agency (2014). *Drug Report 2013*. Kuala Lumpur: Percetakan Nasional Berhad.
- Agensi Antidadah Kebangsaan (2019). *Drug Statistics*.  
[https://www.adk.gov.my/author/ulwel/page/10/?lang=en&\\_\\_ncforminfo=uFz-\\_7HB-qFr23c11BQhG-XfN0CGcwhpEh9XoFUVMIgVtVjcOksLw9Qcp3-wAK1ZgXXo5R9OXBH0pTFViiSB9pMsjhnELO7b](https://www.adk.gov.my/author/ulwel/page/10/?lang=en&__ncforminfo=uFz-_7HB-qFr23c11BQhG-XfN0CGcwhpEh9XoFUVMIgVtVjcOksLw9Qcp3-wAK1ZgXXo5R9OXBH0pTFViiSB9pMsjhnELO7b)
- Asean Centre for Research of Drug Abuse (ACREDA) (2014). *Introduction to drugs*.  
<http://acreda.usim.edu.my/koleksi-acreda/pengenalan-mengenai-dadah> [8 Ogos 2014].
- Awang, Z. (2015). *SEM Made Simple: A gentle approach to learning Structural Equation Modeling*. Bangi: MPWS Rich Publication Sdn. Bhd.

- Bashirian, S., Hidamia, A.R., Allahverdipour, H., & Hajizadeh, E. (2012). Application of the theory of planned behavior to predict drug abuse related behaviors among adolescent. *Journal of Research in Health Science*, 12(1): 54 - 60.
- Bentler, P.M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, 107(2), 238.
- Bollen, K.A., & Stine, R.A. (1992). Bootstrapping goodness-of-fit measures in structural equation models. *Sociological Methods and Research*, 21, 205–229.
- Brown, M.W., and R. Cudeck. (1993). Alternative Ways of Assessing Model Fit. *Sage focus editions*, 154, 136-136.
- Byrne, B.M. (1998). *Structural equation modeling with LISREL, PRELIS and SIMPLIS: Basic concepts, applications and programming*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Byrne, B.M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Byrne, B.M. (2013). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). New York: Routledge.
- Chik, Z., & Abdullah, A.H. (2018). Developing and validating instruments for measurement of motivation, learning styles and learning disciplines for academic achievement. *International Journal of Academic Research in Business and Social Sciences*, 8 (4), 594 – 605.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2006). *Multivariate data analysis* (6th ed.). New Jersey: Pearson Education International.
- Joreskog, K.G., & Sorbom, D. (1993). *LISREL 8, Structural equation modelling with the SIMPLIS command language*. Chicago, IL: Scientific Software International Inc.
- Kline, R.B. (2016). *Principles and practice of structural equation modeling* (4th ed.). New York: The Guilford Press.
- Marsh, H.W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of selfconcept: First-and higher order factor models and their invariance across groups. *Psychological bulletin*, 97(3), 562.
- Pati, S. (2014). *Prevention of Drug Abuse Among Adolescents: Needs Educational Approach*. Indian Institute of Public Health.
- Zainudin Z.S. (2017). *The operational focus of factors contributing to the desire to reuse drugs and the formation of affective treatment and rehabilitation models*. Thesis Dr. Fal, Universiti Teknologi Malaysia.
- Schumacker, R.E. & Lomax, R. (2004). *A beginner's guide to structural equation modeling* (2nd ed.). Mahwah, New Jersey: Lawrence Erlbaum Associates Publishers.