Personality Traits as Predictors of Low Self-Control, Aggression and Self-Serving Cognitive Distortion: A Study among Malaysian Male Murderers

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ABSTRACT

An individual's personality traits seem to be a factor in developing and shaping violent criminal behaviour. Due to this realization, the present study seeks to explore the relationship of personality traits with low self-control, aggression, and self-serving cognitive distortion. The present study was an observational cross-sectional study using a guided self-administered questionnaire: M-PsychoQ. The source population was the male murderers incarcerated in 11 prisons in Peninsular Malaysia. 71 participants were selected based on a predetermined selection criteria using purposive sampling method. After undergoing the validation processes, the emerged M-PsychoQ consisted of four psychometric instruments: Malay versions of the Zuckerman Kuhlman Personality Questionnaire-40-Cross-Culture (ZKPQ-M-40-CC), Self-control Scale (SCS-M), Aggression Questionnaire (AQ-M-12), and "How I Think" Questionnaire (HIT-M). Regression analyses viz. simple and multiple linear regression approaches were conducted in order to predict whether personality traits would emerge as significant predictors. The findings evidenced certain personality traits as significant predictors of low self-control, high levels of aggression and self-serving cognitive distortion. This study imparts statistical evidence on the role of personality traits as an important predictor of low self-control, high aggression and self-serving cognitive distortion. The results were discussed in relation to the theory and context of murder.
Keywords: Aggression, Low self-control, Malaysian murderers, Murder, Personality traits, Self-serving cognitive distortion

INTRODUCTION

Over the years, studies on personality and criminality have attracted a diverse set of researchers from many fields, mainly criminology and social psychology. From these studies, it is understood that personality is a very important element in the behavioural and social sciences which include criminological, victimological and psychological research, risk assessment,

counseling, practice, prevention strategies, and education. According to the Diagnostic and Statistical Manual of the American Psychiatric Association (APA), personality traits are defined as the enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts (APA, 2004).

Over the years, a variety of mechanisms linking personality traits to criminal behaviour have been proposed. Ferguson et al. (2008) evidenced that personality factors are more critical than environmental factors in developing aggressive and criminal traits in an individual. Other researchers for example Ramírez and Andreu (2006), Bettencourt et al. (2006), and Cuomo et al. (2008) have provided more support for this assertion. Furthermore, personality aspects are known to be more useful in predicting offensive behaviour since it is relatively stable (Gustavsson et al., 1997; Engler, 2009) which can guide (Hall, Lindzey, and Campbell, 1998) and provide explanations (Pervin, 1993) for the behavior of a particular person.

In order to investigate personality traits in relation to criminal behaviour, psychologists and criminologists use a large number of models and concepts to explain personality traits that are associated with criminality. Examples include Big Five personality taxonomy (Goldberg, 1992), Five Factor Model (Costa & McCrae, 1992; Digman, 1990) and Eynseck Three Factor Model (Eynseck, 1967). Cognizant of the range of personality traits that underlie criminality, the Alternative Five Factor Model (AFFM) was operationalised in this study to explore specific personality traits and subsequently, identify relationships between several criminal traits. Therefore the current study posited that specific personality traits specifically Activity (Act), Sociability (Sy), Aggressiveness-Hostility (Agg-Host), Impulsive Sensation Seeking (ImpSS), and Neuroticism-Anxiety (N-Anx); are possibly associated with other psychological variables, namely low self-control, aggression, and self-serving cognitive distortions.

AFFM was first proposed by Zuckerman, Kuhlman, & Camac (1988). A newer version generated by Zuckerman et al. (1993) constituted of Impulsive Sensation Seeking, Aggression-Hostility, Neuroticism-Anxiety, Activity, and Sociability. According to its authors (Zukerman et al, 1993), the AFFM may be considered as culturally universal as it asserts five basic factors that describes and explains the personality traits of individuals. AFFM offers a broad and comprehensive framework for describing normative personality traits of individuals and provides a mechanism to compare traits between criminal and non-criminal populations.

As mentioned above, other than the AFFM personality traits, the present study concentrates on three important psychological factors: low self-control, aggression, and self-serving cognitive distortion; that are often associated with criminality. Over the years, self-control seems to be an important concept in determining the likelihood of an individual's violent behaviour (Buker, 2011). According to Gottfredson and Hirschi (1990), self-control is the primary cause of violent behaviour. Likewise, aggression

is often assessed in relation to behavioural and conducts problems (Goodman and New, 2000). Meanwhile, a growing body of literatures (e.g., Bandura, 1991; Barriga and Gibbs, 1996; Liau et al., 1998; Barriga et al., 2000; Palmer, 2007; Walters, 2002) have acknowledged the importance of cognitive distortion as a causal factor for wide ranges of externalising behaviour problems such as delinquency, aggression, and antisocial behaviour.

Since personality traits act as independent factors to develop criminal behaviour, the present study aimed to identify the relationship between personality traits and specific psychological variables (low self-control, aggression, and self-serving cognitive distortion) among Malaysian male murderers. It is anticipated that the findings generated from this study would provide support for the importance of identifying personality traits to predict the potential involvement in crime and criminal behaviour.

METHOD

Study Design and Participants

The present study was an observational cross-sectional study using a guided self-administered questionnaire for data collection. The present study is the first national study that is conducted on murder by focusing on incarcerated Malaysian male murderers within Peninsular Malaysia. The sampling frame took into account all the male murderers from 11 prisons in Peninsular Malaysia who had committed murder.

The samples consisted of 71 Malaysian male murderers aged 21 and older. The respondents were selected using the purposive sampling method due to researcher safety concerns and prison regulations. The selection of the sample was based on the predetermined selection criteria. The ethical approval and permission was granted by the Malaysian Department of Prisons and Human Ethical Committee of Universiti Sains Malaysia.

The participation was on volunteer basis and the murderers were assured with secrecy and anonymity of their responses in order to maintain the honesty and validity of their responses. The participants were also informed regarding the disposal of the given information at the end of this study. Written and signed consent from the participants were obtained prior to their participation. Respondents were allowed to retract their involvement at any time during the collection of data.

Measures

The guided self-administered questionnaire was named Malay Psycho Questionnaire (M-PsychoQ). This emerged instrument consisted of mainly two sections. The first section contained items on socio-demographic

Personality Traits as Predictors of Low Self-Control, Aggression and Self-Serving Cognitive Distortion: A Study among Malaysian Male Murderers

39

information while the later part consisted of four Malay validated psychometric instruments.

Section one: This section gathered personal and socio-demographic information of the respondents which included age, ethnicity, marital status, occupation, income level, and highest level of education. The marital and occupational status was based on status prior to incarceration. These variables were used to determine classifications and for comparative purposes.

Section two: In this study, AFFM personality traits were operationalised as independent variables while low self-control, aggression subscales, and self-serving cognitive distortion subscales were dependent variables. The following sections describe the psychometric properties of each instrument that used to measure the respective psychological variables.

i. ZKPQ-M-40-CC: This instrument was the simplified original version of ZKPQ-50-CC which consisted of 50 items (Aluja et al., 2006) measuring AFFM personality traits. However, only 40 items were included in the Malay version of ZKPQ as the outcome of the validation study. The ZKPQ-M-40-CC assesses five types of personality traits: Activity (Act), Sociability (Sy), Aggressiveness-Hostility (Agg-Host), Impulsive Sensation Seeking (ImpSS), and Neuroticism-Anxiety (N-Anx). The overall internal consistency of ZKPQ-M-40-CC was 0.75 (*see* Mohammad Rahim et al., 2013a).

ii. SCS-M: SCS-M is a Malay version of the Self-Control Scale by Grasmick et al. (1993). The SCS was developed to operationalize low self-control elements based on the General Theory of Crime by Gottfredson and Hirschi (1990). In this study, SCS-M was administered as a unidimensional scale which consisted of 18 items. The scales were reverse coded so that high scores indicate low self-control. The internal consistency of SCS-M was 0.80 (*see* Mohammad Rahim et al., 2013b).

iii. AQ-12-M: AQ-12 is the short version of the Aggression Questionnaire by Buss and Perry (1992). The AQ-12 consisted of 12 items (Bryant and Smith, 2001) which measures four types of aggression: Physical aggression, Verbal aggression, Anger, and Hostility. Each subscale had three items. The internal consistency of AQ-12 for the Malaysian criminal population was 0.80 (*see* Zaihairul Idrus et al., 2012).

iv. HIT-M: HIT-M is a Malay version of "How I Think" Questionnaire designed by Barriga et al. (2001). In this current study, HIT-M consisted of items which measure four subscales of self-serving cognitive distortion (SSCD): self-centered, blaming others, minimizing/mislabeling, and assuming the worst. Each subscale had six items respectively. The internal consistency of HIT-M was 0.90 (*see* Mohammad Rahim et al., 2013c).

Analyses Protocol

The required information was compiled into a set of systematic and computerised data. The analysis of the compiled data was performed using the Statistical Package for Social Sciences (SPSS) version 20.0. Descriptive statistics were employed to summarize the socio-demographic information of the respondents.

In order to determine personality as a significant predictor of other psychological measures, regression analyses were employed. In this study, two forms of regression analyses were conducted: simple linear regression (SLR) and multiple linear regressions (MLR).

Prior to performing the bivariate regression analyses, scatter plots were generated using SPSS. These allowed the researcher to check for the violation of the assumptions of linearity and impart a better view on the nature of the relationships between the variables of interest. The assumptions for MLR such as individual linearity, normality, and homoscedasticity were checked as well.

RESULTS

Socio-Demographic Information

The basic socio-demographic information of the respondents was collected and presented in the form of descriptive data. Table 1 below provides a summary of respondents' socio-demographic information. The age of respondents during commission of murder ranged from 21 to 64 years old with a mean age of 29.94 years (SD = 10.76).

Table 1: Socio-demographic profile of Malaysian male murderers (n = 71)

Variables	n (%)
Age group (years old)	
21 – 29	44 (62.0)
30 – 39	14 (19.7)
40 – 49	8 (11.3)
50 – 59	3 (4.2)
60 – 69	2 (2.8)
Ethnic	
Malay	29 (40.8)
Chinese	17 (23.9)
Indian	24 (33.8)
Others	1 (1.4)
Religion	
Islam	32 (45.1)
Buddha	16 (22.5)
Hindu	19 (26.8)
Christian	4 (5.6)
Educational status	
Never been to school	1 (1.4)
Primary education	18 (25.4)
Lower secondary education	26 (36.6)
Upper secondary education	22 (31.0)
Pre-university/ matriculation	2 (2.8)
Diplomas and above	2 (2.8)
Occupational status	
Not working	8 (11.3)
Semiskilled	42 (59.2)
Clerical-skilled	9 (12.7)
Self-employed/ business	8 (11.3)
Government servant	4 (5.6)

As mentioned earlier, the independent variables (predictors) consisted of five AFFM personality traits. Meanwhile, the dependent variables (outcomes) comprised of other psychological measures: low self-control, subscales of aggression, and subscales of SSCD. Results obtained from the SLR between each personality traits and psychological measures are tabulated in Table 2 below.

Table 2: Relationship between each AFFM personality traits, low self-control, aggression, and self-serving cognitive distortion (n = 71)

Personality trait	Psychological measures	b[a] (95% CI)	P value	R^{2b}
Activity	Low self-control	-0.58 (-0.89, -0.27)	<0.001*	0.17
	Overall aggression	0.00 (-0.37, -0.36)	1.000	0.00
	Physical aggression	0.02 (-0.12, 0.15)	0.830	0.00
	Verbal aggression	0.01 (-0.09, 0.12)	0.820	0.00
	Anger	-0.01 (-0.13, 0.12)	0.900	0.00
	Hostility	-0.02 (-0.14, 0.11)	0.760	0.00
	Overall SSCD	0.07 (-0.60, 0.74)	0.840	0.00
	Self-centered	-0.22 (-0.45, 0.01)	0.060*	0.05
	Blame others	0.23 (-0.01, 0.46)	0.060*	0.05
	Minimisations	-0.13 (-0.34, 0.09)	0.240*	0.02
	Assuming worst	0.19 (-0.01, 0.38)	0.060*	0.05
Sociability	Low self-control	0.22 (-0.16, 0.59)	0.250*	0.02
	Overall aggression	-0.04 (-0.44, 0.37)	0.860	0.00
	Physical aggression	0.07 (-0.08, 0.22)	0.970	0.01
	Verbal aggression	-0.05 (-0.16, 0.07)	0.420	0.01
	Anger	-0.05 (-0.19, 0.08)	0.440	0.01
	Hostility	-0.01 (-0.15, 0.13)	0.900	0.00
	Overall SSCD	-0.22 (-0.96, 0.53)	0.560	0.01
	Self-centered	0.01 (-0.25, 0.27)	0.960	0.00
	Blame others	-0.03 (-0.30, 0.25)	0.850	0.00
	Minimisations	-0.01 (-0.34, 0.14)	0.410	0.01
	Assuming worst	-0.10 (-0.32, 0.12)	0.380	0.01
Agg-Host	Low self-control	0.68 (0.47, 0.88)	<0.001*	0.39
	Overall aggression	0.86 (0.66, 1.05)	<0.001*	0.53
	Physical aggression	0.31 (0.23, 0.38)	<0.001*	0.49
	Verbal aggression	0.16 (0.09, 0.23)	<0.001*	0.23

	Anger	0.23 (0.15, 0.31)	<0.001*	0.32
	Hostility	0.16 (0.08, 0.25)	<0.001*	0.17
	Overall SSCD	1.21 (0.78, 1.63)	<0.001*	0.31
	Self-centered	0..41 (0.26, 0.56)	<0.001*	0.30
	Blame others	0.21 (0.03, 0.40)	0.020*	0.07
	Minimisations	0.41 (0.27, 0.55)	<0.001*	0.35
	Assuming worst	0.17 (0.02, 0.32)	0.030*	0.07
ImpSS	Low self-control	0.79 (0.56, 1.01)	<0.001*	0.41
	Overall aggression	0.68 (0.41, 0.95)	<0.001*	0.26
	Physical aggression	0.22 (0.11, 0.32)	<0.001*	0.19
	Verbal aggression	0.13 (0.05, 0.22)	0.003*	0.13
	Anger	0.20 (0.11, 0.30)	<0.001*	0.20
	Hostility	0.13 (0.03, 0.23)	0.015*	0.08
	Overall SSCD	1.34 (0.85, 1.82)	<0.001*	0.30
	Self-centered	0.49 (0.33, 0.66)	<0.001*	0.34
	Blame others	0.21 (0.01, 0.42)	0.006*	0.06
	Minimisations	0.39 (0.22, 0.55)	<0.001*	0.24
	Assuming worst	0.24 (0.08, 0.41)	0.004*	0.11
N-Anx	Low self-control	0.41 (0.08, 0.75)	0.015*	0.08
	Overall aggression	0.64 (0.29, 0.98)	<0.001*	0.17
	Physical aggression	0.18 (0.05, 0.32)	0.007*	0.10
	Verbal aggression	0.13 (0.03, 0.23)	0.015*	0.08
	Anger	0.19 (0.08, 0.31)	0.002*	0.13
	Hostility	0.13 (0.01, 0.25)	0.040*	0.06
	Overall SSCD	0.93 (0.28, 1.58)	0.006*	0.11
	Self-centered	0.23 (-0.00, 0.46)	0.051*	0.05
	Blame others	0.32 (0.08, 0.55)	0.010*	0.09
	Minimisations	0.23 (0.01, 0.44)	0.040*	0.06
	Assuming worst	0.16 (-0.05, 0.36)	0.130*	0.03

Note:
[a] Crude regression coefficient,
[b] Coefficient of determination,
*Significant variable

Many relationships between the specific AFFM personality traits and other psychological variables were confirmed via SLR [Table 2]. For example, Impulsive Sensation Seeking (ImpSS) and Neuroticism-Anxiety (N-Anx) were significantly associated with all the investigated dependent variables. As such, further regression analyses were conducted to examine the effect of the specific personality traits towards the psychological measures. For this purpose, MLR was employed.

Personality traits that were found to be significant with either low self-control, aggression, and self-serving cognitive distortion at the levels of $p \leq 0.25$ were chosen as the predictor variables for particular outcomes (psychological trait). The reason for including personality traits that were significant at the level of $p \leq 0.25$ was to ensure that any important variables were not left out.

In general, there was no multicolinearity found as the values of Variation Inflation Factor were low (less than 10) (Pallant, 2005). The assumption of overall and individual linearity, normality, and homoscedasticity (equal variance) were fulfilled and the final models were confirmed for each psychological trait. The results are shown in Table 3 below.

Table 3: Significant association between AFFM personality traits, low self-control, aggression, and self-serving cognitive distortion among Malaysian male murderers (n = 71)

Outcome	Predictors	b^a (95% CI)	P value	R^{2b}
Low self-control	Activity	-0.35 (-0.59, -0.11)	0.004*	0.57
	Sociability	0.16 (-0.10, 0.42)	0.228	
	Agg-Host	0.34 (0.10, 0.57)	0.005*	
	ImpSS	0.45 (0.18, 0.71)	< 0.001*	
	N-Anx	0.11 (-0.14, 0.37)	0.375	
Overall aggression	Agg-Host	0.75 (0.51, 0.99)	< 0.001*	0.58
	ImpSS	0.07 (-0.20, 0.34)	0.600	
	N-Anx	0.33 (0.06, 0.59)	0.016*	
Physical aggression	Agg-Host	0.30 (0.20, 0.39)	< 0.001*	0.51
	ImpSS	-0.01 (-0.12, 0.10)	0.830	
	N-Anx	0.08 (-0.03, 0.18)	0.153	
Verbal aggression	Agg-Host	0.13 (0.05, 0.22)	0.004*	0.26
	ImpSS	0.02 (-0.08, 0.12)	0.680	
	N-Anx	0.07 (-0.03, 0.17)	0.173	
Anger	Agg-Host	0.18 (0.08, 0.27)	< 0.001*	0.37
	ImpSS	0.05 (-0.06, 0.16)	0.377	
	N-Anx	0.11 (-0.01, 0.22)	0.052	
Hostility	Agg-Host	0.14 (0.03, 0.25)	0.014*	0.19
	ImpSS	0.01 (-0.12, 0.14)	0.856	
	N-Anx	0.07 (-0.05, 0.20)	0.252	

Overall SSCD	Agg-Host	0.73 (0.22, 1.25)	0.006*	0.40
	ImpSS	0.72 (0.13, 1.32)	0.018*	
	N-Anx	0.37 (-0.21, 0.95)	0.207	
Self-centered	Activity	-0.07 (-0.26, 0.13)	0.490	0.41
	Agg-Host	0.22 (0.03, 0.40)	0.023*	
	ImpSS	0.33 (0.12, 0.54)	0.002*	
	N-Anx	0.02 (-0.18, 0.22)	0.848	
Blaming others	Activity	0.32 (0.09, 0.55)	0.008*	0.22
	Agg-Host	0.20 (-0.03, 0.42)	0.081	
	ImpSS	0.07 (-0.18, 0.32)	0.576	
	N-Anx	0.22 (-0.02, 0.46)	0.072	
Minimisations	Activity	0.03 (-0.16, 0.21)	0.787	0.38
	Agg-Host	0.32 (0.15, 0.50)	< 0.001*	
	ImpSS	0.16 (-0.04, 0.35)	0.121	
	N-Anx	0.04 (-0.15, 0.24)	0.646	
Assuming worst	Activity	0.27 (0.09, 0.46)	0.005*	0.22
	Agg-Host	0.11 (-0.07, 0.29)	0.238	
	ImpSS	0.21 (0.01, 0.41)	0.049*	
	N-Anx	0.04 (-0.16, 0.24)	0.673	

Note:
[a] Adjusted regression coefficient,
[b] Coefficient of determination,
* Signficant variable
No multicolinearity.
Models assumptions are fulfilled.

From the analyses, the explainable variance in relationships ranged between 18.5% and 57.6%. Via MLR, the lowest value of variance within relationships was noted for the predictors: Agg-Host, ImpSS and N-Anx and outcome: hostility. The highest value of variance within relationships was noted for the predictors: Agg-Host, ImpSS and N-Anx and outcome: overall aggression (combining subscales of physical aggression, verbal aggression, anger and hostility).

Based on the table above, it was very interesting to find that ImpSS was the associated variable that contributed the most towards low self-control after controlling all the variables. This was followed by Activity and Agg-Host personality traits. These three personality traits significantly predict low self-control as they explained 56.6% of the total variation.

Personality traits Agg-Host and N-Anx seem to be the significant predictors for overall aggression as they explained 57.6% of the total variation. The personality trait Agg-Host had the strongest relation with overall aggression. In addition, only Agg-Host seemed to be the significant predictor for physical aggression, verbal aggression, anger and hostility. Among these subscales, Agg-Host had the strongest relation and prediction

towards physical aggression as the model explained 50.8% of the total variation.

Contrary to findings in SLR, ImpSS in MLR did not show a significant prediction towards any of the aggression subscales after controlling all the variables. In relation to overall SSCD, two significant personality traits: Agg-Host and ImpSS predict overall SSCD. These traits explained 39.6% of variation in the overall level of SSCD (combining subscales self-centered, blaming others, minimisations, and assuming worst) in the study sample of murderers.

DISCUSSION

Personality traits seem to act as an independent factor in developing and shaping the violent criminal behaviour. Due to this realisation, the role of personality traits as predictors of low self-control, aggressive behaviour, and cognitive distortion traits were explored. As mentioned earlier, SLR and MLR were employed to determine the relationship between personality traits and three other psychological variables (low self-control, aggression, and self-serving cognitive distortions.).

SLR is a statistical test that was employed to examine the relationship between a predictor (independent) variable and a single dependent variable (Elliot and Woodward, 2007). Following SLR, MLR was conducted to examine the relationships between multiple predictors (personality traits) and a single outcome variable (Coakes and Ong, 2011). In regression analyses, the coefficient value (r^2) indicates percentage of variation in outcome variables that is explained by predictor variables (Field, 2009).

The results of the relationships between personality traits and other psychological variables posed an interesting discussion. For low self-control, the personality trait ImpSS was the major significant predictor compared to Agg-Host and Activity. According to AFFM, individuals with ImpSS are characterised as having a lack of planning and tend to act quickly on impulse without thinking. Such individuals also prefer thrills and excitement which are also considered as strong traits of low self-control (Zuckerman et al., 1993). This is because individuals who lack self-control are likely to be impulsive and risk takers (Gottfredson and Hirschi, 1990) without thinking of the consequences of their actions to themselves or others.

With regards to overall aggression, Agg-Host and N-ANx were the significant predictors in which Agg-Host was the major significant predictor for overall aggression. This is in agreement with the theoretical perspective of AFFM in which individuals with high Agg-Host are described as physically and verbally aggressive, rude, thoughtless and have a quick temper with other aggressive behaviours (Zuckerman et al., 1993). However, in this present study only Agg-Host was the significant predictor

for all the subscales of aggression. The highest predictive value of Agg-Host was noted for physical aggression.

These results may have implications. Firstly, there may be cultural differences between Malaysian murderers and murderers who are not Malaysians. This may signify that the personality profiles of Malaysian murderers are not typical as murderers elsewhere, particularly in regards to blaming others for their actions and minimising their actions. As such, non-Malaysian theories of murder may not be applicable to the Malaysian context. However a cross-cultural study is needed in order to provide more insight into this.

Secondly, in addressing crime prevention in terms of reducing crime opportunities; it appears that there are specific traits that require early attention. The findings herein agree with several previous researches. In this study, it is recommended that early signs of low self-control, aggression and self-serving cognitive distortions should be detected among people with high risk of criminal involvement. This is to enable proactive intervention and reduce their exposure to risky activities that may trigger behaviours that grievously harm others.

Thirdly, the knowledge herein may be used to reduce the risk of victimisation. Through the use of Criminology and Victimology perspectives, by understanding the underlying personality traits and its relationship to other psychological variables; people may be taught to be aware of the danger signs and be more responsible for their interactions that may trigger victimisation. Other than sharing knowledge with peers, such proactive education may be introduced in schools or public forums as a means of bridging the academic and community gap. Therefore, the knowledge goes beyond theory and into application for employee recruitment, counseling and in education settings.

CONCLUSION

In general, the findings herein evidenced certain personality traits as significant predictors of low self-control, high aggression, and high SSCD. The present study imparts statistical evidence on the role of personality traits as an important predictor of other psychological variables associated with criminal behaviour. Identifying several personality traits as significant predictors of low self-control, aggression and SSCD are considered pivotal for risk assessment, employee recruitment, counseling, and education settings. Also, identifying such criminal personality among the children and youngsters is vital for prevention, intervention, and rehabilitation efforts. The findings herein add substantial knowledge in the fields of criminology, victimology and psychology.

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Analisis Statistik Kesahan dan Kebolehpercayaan Soal Selidik Skala Konsep Kendiri Multi Dimensi (SKMM)

Mohammad Rahim Kamaluddin, Nadiah Syariani Md. Shariff, Siti Nur-Farliza, Azizah Othman, Khaidzir Hj. Ismail & Geshina Ayu Mat Saat
Personality Traits as Predictors of Low-Self Control, Aggression and Self-Serving Cognitive Disorder: A Study among Malaysian Male Murderers

Jin Kuan Kok & Wai Yoong Lai
Attending to Metaphor in Adolescence Depression

Nor Hernamawarni Abdul Majid, Nor Shafrin Ahmad & Rahimi Che Aman
Kesan Kelompok Gabungan *Brief* Fokus Penyelesaian dan Teori Kognitif Tingkah Laku terhadap Kebimbangan Komunikasi

Muhammad Salim Hossain & Mollika Roy
Fine Motor Skills and Accident Proneness of Garments Workers in Bangladesh

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