

Development and Initial Validation of the Adult Aggressive Behaviour Scale (AABS)

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ABSTRACT

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Despite of the growing research on violent crime locally and globally, there is still a lack of a local aggression instrument in Malaysia (Abdullah et al., 2015; Ghazali & Munusamy, 2020). The objective of this study was to develop a psychometrically sound and theoretically based measure with the 3 components of aggression based on the Frustration Aggression Model. The initial 60 items of the Adult Aggressive Behaviour Scale (AABS) consists of the physical, verbal and relational components. The items were constructed based on the aggression behavior of the multiracial culture in Malaysia. The AABS was administered to a sample of 117 adults in Malaysia. Quantitative item analyses were used to eliminate and revise items. Items with corrected item-total correlations lower than .3 were eliminated. The remaining items were analyzed using exploratory factor analysis constraining the process to three factors. Preliminary evidences showed that the AABS has good internal reliability and construct validity.

Contribution/Originality: This study developed new tools to measure adult aggressive behavior in Malaysia. Initial validation was done through Malaysian adult population and show good psychometric properties. This study provided new tools for other researchers or mental health practitioners to screen individuals with aggressive behaviours.

1. Introduction

In the past decade, researchers are concerned about aggression (Lange et al., 2016; Estévez et al., 2018; Kühn et al., 2018). Aggression brings many negative impacts and is destructive to society (Hassan et al., 2009). According to the Annual Crime and Safety Report (Department of Statistic Malaysia, 2018), high-risk locations found to be in Kuala Lumpur. In the report stated in 2018, Malaysia government need to pay more precaution in eastern area of Sabah State due to crime and terrorism. Hence, this has urged the Malaysian government to pay more attention to aggression issues. To reduce aggression among adults, governments have been implementing a variety of prevention programs and activities (Ibrahim et al., 2013). Problems arise when there is a lack of appropriate instruments in evaluating the effectiveness of those programs (Taherdoost, 2016). Thus,

a valid and reliable instrument for adults is important in deciding whether the treatment or training is suitable and to screen individuals who have a high risk of aggression.

Aggression has been studied a lot and is related to a variety of problems. Aggression brings many negative impacts to psychological, social, health and financial costs (Zwi et al., 2002; Corso et al., 2007). Aggression can happen in different forms, contexts, settings which include schools (Kaur et al., 2017), roadways (Sagar et al., 2013; Kaiser et al., 2016), family and peers (Smith & Moore, 2012; Palacios et al., 2019), romantic relationships (Feiring et al., 2002) and criminal settings (Savage & Yancey, 2008).

Aggression has been described in many ways. Psychologists generally define aggression as any behavior that aims to harm another person (Anderson & Bushman, 2002; Ostrov & Houston, 2008). Aggressive behaviour also refers to impulsive behaviour that violates social boundaries (Connor et al., 2019). It can lead to breakdowns in relationships with other people. Most researchers that study aggression agree that aggression is multidimensional (Flory, 2015; Sadoughi & Hesampour, 2017; Liu, 2004). Aggression includes different types of forms. Some researchers divide aggression into overt and relational forms (Prinstein et al., 2001; Crick & Grotpeter, 1995).

Aggression that is visible refers to overt aggression (Park & Kim, 2019). Such behaviours are aimed to cause harm such as threatening, kicking, pushing, hitting, insulting others (Crick & Grotpeter, 1995; Allen & Anderson, 2017). Physical aggression and verbal aggression are considered overt aggression (Grotpeter & Crick, 1996; Buss & Perry, 1992; Prinstein et al., 2001; Comstock et al., 2013). On the other hand, relational aggression is known as indirect aggression which refers to social manipulation, damage or threat to damage relationships, gossiping or rumour spreading (Crick, 1995; Crick et al., 2002; Grus, 2003; Werner & Crick, 1999).

There are different types of scale developed to measure aggression such as scales that rely on teacher ratings (Matthews & Angulo, 1980) or based on observations (Yudofsky et al., 1986). Those scales are more expensive and less practical when administered to a large group of people. For self-report scales, several tools have been developed for university students (Buss & Perry, 1992) or for elementary students (Raine et al., 2006). There are less scales that focus on self-reported aggressive behaviour in adulthood. It is important to develop a self-administer scale for researchers to use when doing research on violence prevention.

Although in Malaysia, there are several forms of aggression measurement that have been translated into Malaysian national language (Ex: Malay) (Mazlan & Ahmad, 2012), though there is yet no questionnaire combining 3 different forms of aggression in Malaysia context. Most of the past studies have focused on the Western perspective of aggressive behaviour (Fayso, 2019; Milani et al., 2015; Tremblay, 2000), but the results might not be applicable to Asian context. There could also be some differences in findings as cultural differences and collectivist nature in Asian (Darwish & Huber, 2003). Research has found that individualism and collectivism culture react to aggression differently (Forbes et al., 2009; Li et al., 2010; Bergmüller, 2013). Different forms of aggression were included in constructing the scale.

The purpose of the study is to develop new tools to measure adult aggressive behaviour. The scale was constructed based on the 3 different forms of aggression such as physical, verbal and relational aggression. Adult Aggressive Behaviour Scale (AABS) is a self-

report measure that was constructed to assess the aggressive behaviour among adults in Malaysia who are 18 years old and above. The initial phases of developing the AABS will be described in detail later after the literature review.

2. Literature Review

2.1. Existing Measurement of Aggression Scale

A large number of aggression instruments has been published (Weierstall & Elbert, 2011; Buss & Perry, 1992; Little et al., 2003; Yudofsky et al., 1986). Aggression is a multidimensional construct which consists of different forms of aggression (Alradaydeh & Alorani, 2017). Most of the aggression measures only one form or combined 2 forms of aggression. There is very little scale focus on combining physical, verbal and relational aggression components.

Buss-Perry Aggression Questionnaire (AQ) was developed to measure general aggression and several traits of aggression. It consists of 29 items and includes four subscales that assess physical aggression, verbal aggression, hostility and anger. This scale showed a good internal consistency and stability over time. This is the most frequently used instrument to assess aggression (Buss & Perry, 1992).

Reactive-proactive aggression (RPQ) was aimed to measure proactive and reactive aggression among adolescents. The scale consists of 23-items which 12 items refers to reactive aggression and 11 items to calculate proactive aggression. The scale using a 3-point Likert-type scale (0=Never, 1=Sometimes, 2=Often). Lower scores indicate low levels of aggression (Raine et al., 2006).

The Verbal Aggressiveness Scale (VAS) was created to measure traits of verbal aggressiveness. The scale consists of 20- items and it is a 5-point Likert scale range from almost never to almost always true. Higher scores show higher attitudes toward aggressiveness. VAS is easy to administer and can be apply to a variety of settings (Levine et al., 2004).

Aggressive Behaviour Scale was designed to measure 2 types of aggressive behaviour such as overt and relational aggression. This scale consists of 25 items and it is a four-point Likert-type scale ranging from 1 (Never) to 4 (Always). This scale shows good reliability which the Cronbach alpha of all six dimensions ranged between .72 and .87 (Little et al., 2003).

Matthews Youth Test for Health (MYTH-Form O) was created to measure type A behaviour style in children such as anger, aggression, overly competitiveness, impatience and easily aroused. It contains 17 items and is rated by teachers (Matthews & Angulo, 1980).

Overt Aggression Scale (OAS) was developed to measure aggressive behaviors in adults and children. This scale is rated based on observation. It focuses on measuring four categories of aggression which include physical aggression against self, physical aggression against objects, and physical aggression towards others and verbal aggression (Yudofsky et al., 1986).

The Aggression Scale was developed by [Orpinas and Frankowski \(2001\)](#). It consists of 11 items which are used to measure self-reported aggressive behaviors among elementary school students. This scale focuses on overt behaviours and it is brief and easy to administer.

2.2. Forms of aggression

Physical aggression is defined as physical harming to another person such as biting, hitting, kicking, torturing, vandalism ([Crick & Grotpeter 1995](#); [Little et al., 2003](#); [Elmasry et al., 2016](#)). It is a hostile form of aggression and aimed to cause bodily injury ([Hsieh & Chen, 2017](#)). During childhood, most people show the highest levels of physical aggression such as biting, pushing and kicking ([Fares et al., 2011](#)). This is because young children lack of verbal skills. Thus, physical aggression is the way for them to resolve their social conflicts ([Björkqvist et al., 1992](#)). Physical aggression may grow into more serious issues during adulthood such as killing, domestic violence and abuse ([Liu et al., 2013](#)).

Verbal aggression refers to an act of using aggressive words on people which include scolding people with bad words, swearing, yelling, screaming and being sarcastic to cause psychological pain ([Infante et al., 1989](#); [Infante et al., 2011](#); [Levine et al., 2004](#)). Verbal aggression also includes behaviour such as threatening, name-calling and teasing. In addition, it can occur in different forms which include background attacks, character attacks, physical appearance attacks, capabilities attacks, cursing and nonverbal sign ([Deliligka et al., 2017](#); [Schrodt, 2003](#)). Most of the time, people tend to respond to verbal aggression with verbal aggression. Verbal aggression always comes with physical aggression. When verbal aggression exaggerates, it turns into physical aggression ([Hilton et al., 2000](#)).

Relational aggression is viewed as behaviours that aim to cause harm or damage to individual relationships through manipulation ([Crick et al., 2006](#)). The example of relational aggression include spreading rumours, telling lies, secrets, or gossip about a friend, excluding a friend from a group, ignoring someone ([Crick & Grotpeter, 1996](#); [Dailey et al., 2015](#); [Bowie, 2007](#)). Relational aggression not just occurs within friends, it also can be observed in dyadic relationships such as colleagues, and romantic partners ([Lento, 2006](#)). Study shows that children engage in relational aggression since 3 years old and this behaviour increases in middle childhood ([Murray-Close et al., 2010](#); [Cooley & Fite, 2015](#); [Kamper & Ostrov, 2013](#)). Then, relational aggression continues to show during adolescence and adulthood in peer and romantic relationships ([Lau et al., 2010](#); [Rose & Swenson, 2009](#); [Leadbeater et al., 2006](#)).

2.3. Correlation of Physical aggression

Physical aggressive behaviour brings a lot of negative impact to society ([Arya & Bhardwaj, 2011](#); [Gentile et al., 2010](#)). Compared to other types of aggression, physical aggression is the most dangerous and harmful type of aggression as it directly hurts or harms the person ([Pikuła, 2012](#)). Physical aggressive behaviour causes more instrumental damage and is related to legal consequences. Study has showed that physical aggression may increase to more serious act such as child abuse, homicide, sexual abuse or domestic violence ([Liu et al., 2013](#)). People who perform physical aggression have found relationships with personality disorders such as antisocial personality disorder or borderline personality disorder ([Kolla et al., 2016](#)). In addition,

they are also more likely to involve in abuses cases, accidents, other violence crime cases, drug addiction or suicidal (Boles & Miotto, 2003; Moss & Tarter, 1993; Pingault et al., 2013; Čabarkapa et al., 2018; Yavuzer et al., 2018; Rakovec-Felser, 2014).

On the other hand, several studies have found that there is an adverse correlation between physical aggressions among the victims. Victims of physical child abuse are more likely to experience the effect of depression, severe anxiety, post-traumatic stress disorder (PTSD) and later development of psychopathology (Schaaf & McCanne, 1998; Jung et al., 2015; Vranceanu et al., 2007; Faust et al., 2015). In a study conducted with 163 participants, the findings showed that symptoms of PTSD showed in majority (55%) of the participants who have experienced physical and or sexual abuse, whereas participants who undergoes abuse but do not develop PTSD display more depression and aggression (Laurel et al., 1991). Similar relationship has been reported by other researchers in their studies (Browne & Herbert, 1997; Kotch et al., 1999; Fujiwara et al., 2010).

2.4. Correlation of Verbal aggression

Verbal aggression is a common but harmful behaviour (Smits et al., 2004). People found it is rather easy to express their anger through words and sound (Kaplan, 1975). When an individual performs verbal aggression towards another person, it can hurt other people seriously. Furthermore, verbal aggression can arouse mutual aggressive reaction and further develop to more dangerous forms of aggression such as physical aggression (Liu, 2004).

Research shows that percentages of victimization and bullying dramatically increase when verbal aggression is included such as teasing, name-calling or swearing (Peterson & Ray, 2006). The effect of verbal aggression can be as severe as or cause more damage than physical aggression (Ayuwat, 2017; Karakurt & Silver, 2013). In fact, many negative impacts are associated with either being the person who performs verbal aggression to others or the victim of verbal aggression (Atkin et al., 2002).

Verbal aggression sometimes happens among spouses (Schumacher & Leonard, 2005). Verbal abuse in relationships causes depression, even with the absence of any physical abuse (Malik et al., 2020). In addition, verbal aggression that happens in a marriage will also cause harmful effects on children as they can easily get affected by parent's mood and this can be harmful to them (Moore & Pepler, 2006). A study indicates that children who grow up in a verbal aggressive situation might develop other kinds of disorder (Noh & Talaat, 2012). Perpetrators of verbal aggression also have higher risk of involvement in alcohol or drug abuse, other crimes (Moss & Tarter, 1993; Sacco et al., 2015). Study also shows that people who perform verbal aggression are associated with having poor quality of relationship with others (Bodenmann et al., 2010; Deffenbacher et al., 1996; Fitness & Fletcher, 1993).

Research shows that victims of verbal aggression are associated with many negative impacts (Akçay & Akçay, 2018; Hutchinson & Mueller, 2008; Loh et al., 2010). Victims sometimes suffer from depression, low self-esteem, personality disorder, negative self-perception, substance abuse and suicide (Yun et al., 2019; Wolford-Clevenger et al., 2017; Kolla et al., 2018; Torregrosa et al., 2011; Shahzad & Yasmin, 2015). Besides, victims who suffer from verbal aggression also experience eating disorders (Miotto et al., 2008). Results from a study show that those individuals who reported being verbal

abused are associated in adulthood with the higher risk of obesity (Bentley & Widom, 2009). Next, individuals who suffer from verbal aggression also reported experience in binge-eating disorders or bulimia nervosa (Afifi et al., 2017).

2.5. Correlation of Relational aggression

Most of the individuals may perform more relational aggression compared to other covert aggression such as physical aggression (Williams et al., 2009). This is due to the reason that relational aggression causes less damage, more accepted by society and most of the time will not be related to legal consequences (Martins & Weaver, 2019). In addition, most of the time relational aggression will not get noticed by other people (Bowie, 2007). Even though relational aggression did not cause overt forms of destruction but they still come with harmful consequences (Coyne et al., 2008). Nowadays, a growing number of research has been done to support the harmful effects of relational aggression (Coyne, 2016; Gangel et al., 2016; Aizpitarte et al., 2017; Williams et al., 2009).

Researchers have identified negative correlation of relational aggression among individuals (Park & Kim, 2019). Compared to non-victimized individuals, most of the victims of relational aggression suffer from high levels of depression, loneliness, social anxiety or low self-esteem (Heino & Fröjd, 2011; Zwolinski, 2007; Batanova & Loukas, 2011). In one of the studies, the researcher also found that among college students who are victims of relational aggression, they are associated with higher depression and alcohol-related problems. The study also found that relational victimisation was correlated with stress, academic burnout, and low emotional and social support from peers (Dahlen et al., 2013).

Furthermore, people who perform relational aggression are also found to develop more difficulties in social and emotional adjustment (Prinstein et al., 2001). However, evidence also shows that relational aggressive adults tend to be more popular among their peers (Puckett et al., 2008). In addition, adults who are relational aggressive are more likely to be rejected by friends and experience isolation and loneliness (Shin et al., 2019).

According to a study of Werner and Crick (1999) conducted on 225 college students, they found that relational aggressive adults are associated with antisocial personality, borderline personality characteristics, anger problems, poor interpersonal functioning, difficulties in impulse-control and low levels of prosocial behaviour. In the studies, researchers found that women with relational aggression have correlation with bulimic symptoms.

3. Methodology

3.1. Research method and design

Participants were recruited by using a convenient sampling method. Information were gathered through online methods. Online questionnaires were used as it allows the researchers to collect a large amount of data within a short period of time (Evans & Mathur, 2005).

3.2. Sample and location

A total number of 117 participants were recruited in this study. The samples consist of 59% female and 41% male, all of the participants are adults who are 18 years old and above. Most of the participants were Chinese (77.8 %), Malay (12.8%) and Indian (9.4%). Participants were recruited from Malaysia as researchers wanted to develop a scale which is suitable for Malaysian.

3.3. Item Construction

There are a total 60 items constructed based on the operational definition of aggression during initial item construction. Items were ensured to have face validity. There were 20 items for physical aggression, 20 items for verbal aggression and 20 items for relational aggression. Items were randomized before distributing to the participants. A 5 point Likert scale was used (0=never, 1=almost never, 2=sometimes, 3= almost most the time 4=most of the time). Language used in labelling the rating scale is straightforward and easy to understand.

3.4. Procedure

The study was approved by the school before researchers carried out the study. Researchers collected data on the adult aggressive behaviour through online questionnaires. The questionnaire was arranged as follows: informed consent, demographic information, Adult Aggressive Behaviour Scale (AABS), Buss-Perry Aggression Questionnaire (AQ) and Appetitive aggression scale (AAS).

Firstly, participants included adults from UCSI University. In order to recruit more participants, participants were also recruited from different settings via different social media through online distributed to them. Participants are presented with a brief description of the study before proceeding to the questions. Next, individuals who are interested in participating in the research were provided a link to reach Google survey form and an online consent form was presented to them. Participants who agree to the consent were directed to the questionnaires. All participants remained anonymous.

3.5. Instrumentation

Adult Aggressive Behaviour Scale (AABS). AABS was used to measure adult aggressive behaviour. It is a self-report questionnaire which consists of 31 items. All items cover 3 forms of aggression which include physical aggression, verbal aggression and relational aggression. Items were arranged in a 5-Likert scale which consists of items ranging from 0=never, to 4=most of the time. This scale shows good internal consistency with Cronbach alphas ranging from .82 to .96.

Buss-Perry Aggression Questionnaire (AQ). This scale was constructed to measure the trait of aggression. It consists of 29 items which will group into 4 subscales. The subscales measure physical aggression, verbal aggression, anger, and hostility. AQ is a 5-likert scale which range from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me). This scale shows good reliability with Cronbach alphas ranging from .72 to .85. Besides, good test-retest reliability also found in AQ ranging from .72 to .80 (Buss & Perry, 1992). AQ was used to measure convergent validity of AABS.

Appetitive aggression scale (AAS). AAS was used to assess human violence. The scale consists of 15 items, which are five-Likert scale ranging from 0 (I totally disagree) to 4 (I totally agree). Total score is calculated by summing the scores of the items. AAS showed good psychometric properties which consist of internal consistency (Cronbach's $\alpha = 0.91$) and good inter-rater reliability (Weierstall & Elbert, 2011). AAS was used to measure discriminant validity.

4. Result

4.1. Item reduction

Items were going through analysis. Corrected item-total correlation was used to check the item. This is to check the correlation between this item and the scale score that discarded that item. Among 60 items, 6 items with item-total correlation lower than 0.3 were excluded.

4.1.1. Factor analysis

After item reduction, the remaining items were then proceeded to factor analysis. An exploratory factor analysis was used to investigate the scale. Factor analysis was run by limiting the extraction to three factors as the current scale was conceptualized under 3 different factors. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was above .8 and the Bartlett's Test of Sphericity was significant ($p = 0.000$). Hence, it is suitable to conduct factor analysis. The remaining 54 items were used to run the construct validity of Adult Aggressive Behaviour Scale. Principal Component analysis with Varimax rotation and forcing three factors solution was selected to run the construct validity. 6 items were deducted as the item content did not fit to the content of the factor components. Next, total 15 items cross loaded on more than one factor had a highest loading < 0.4 or more than 75% were removed (Ibrahim et al., 2015). Total Principal Component analysis with Varimax rotation and forcing three factors solution was done again by using the remaining 31 items.

The three factors showed 49.50% of the variance. The first factor consists of 6 items and was labelled Physical Aggressive Behaviour (Scale PA). All items loading on this factor reflect causing physical harm towards others. The second factor consists of 10 items which was labelled as Verbal Aggressive Behaviour (Scale VA). All items loading on this factor indicate using aggressive language on others. The third factor consists of 15 items and was labelled as Relational Aggressive Behaviour (Scale RA). Items in the third items were loading on factors that aim to damage, harming relationships with other people.

The results showed the same categories as compared to the initial conceptualization of AABS scale which consist of Physical aggression, Verbal aggression and Relational aggression.

4.2. Internal consistency of AABS

The scale was named Adult Aggressive Behaviour Scale (AABS). This scale consists of 31 items. Cronbach Alpha was used to examine the internal consistency of the scales and the subscales were assessed. The Cronbach alpha was high for the whole aggressive behaviour scale ($\alpha = .963$), Physical aggressive subscale ($\alpha = .822$), Verbal aggressive

subscale ($\alpha=.908$), and Relational aggressive subscale ($\alpha= .950$). All the corrected item-total correlations for the 31 items were above .3.

4.3. Inter-correlations among subscales

The correlations between the subscales Physical Aggression (Scale PA), Verbal aggression (Scale VA) and Relational aggression (Scale RA) were examined by using Pearson r correlation. All subscales were all correlated ($r = .701$ -.793). Table 1 shows the correlation between the subscales.

Table 1: Correlations between the subscales

	Scale PA	Scale VA	Scale RA
Scale PA	1	.704**	.701**
Scale VA	.704**	1	.793**
Scale RA	.701**	.793**	1

Table 2: Descriptive Statistics for Aggressive behaviour scores

	Mean	Std. Deviation	Median	Skewness	Kurtosis	Cut off point
Aggressive behaviour	26.90	21.63	21	1.638	2.680	High: ≥ 21 Low: < 21
Physical aggression	5.29	4.51	4	1.175	1.011	High: ≥ 4 Low: < 4
Verbal aggression	11.97	8.07	11	.732	.079	High: ≥ 11 Low: < 11
Relational aggression	9.63	11.01	6	1.926	3.424	High: ≥ 6 Low: < 6

4.4. Establishing a scoring system

Researchers proposed that the scoring system of AABS is by summing up the ratings for 31 items. Besides, each of the 3 subscales can also be summed up to get the total score. A higher score shows higher degree of aggression. The cut-off point that used to identify low and high level aggression was determined by computing the median. Independent t -test was run to check whether each item would have significant differences. Hence, results showed that it is suitable to use this cut off point to categorize respondents into low and high levels of aggression in each subscales and whole scale ($p<.05$). Descriptive statistics of the three subscales was shown in Table 2.

4.4.1. Scale Administration

AABS is a self-report instrument that measures the level of aggression in adults aged 18 years old and above and it consists of 31-items. It is a 5 Likert-scale and all items range from 0 (Never) to 4 (Most of the time). Participants are required to follow the instructions listed above the questionnaire. They were asked whether they are involved in the behaviours for the past 1 month. The purpose of this scale development is for the research purpose that aims to evaluate the effectiveness of anger management control or therapy.

4.4.2. Convergent and discriminant validity

To test the convergent and discriminant validity, Pearson correlation was run. The validity of the AABS was evaluated by examining relationships between the scales and another measure of aggression scale such as Buss-Perry Aggression Questionnaire (AQ) and Appetitive aggression scale (AAS). Results showed that these correlations provided good evidence for the convergent and discriminant validity of AABS.

Concurrent validity was tested by correlating the score between AABS and AS. Result shows that AABS scales were positively correlate with AQ which is probably the most widely used self-report measure of aggression $r=.704$. Study showed that AABS and AQ provide good evidence of concurrent validity. The relationship suggests that the measures likely assess the same component but are not repeated. The goals of AABS is to expand the contents and include relational aggression aspects in the scale.

Discriminant validity was tested by using the score of AABS and AAS. Results show a significant positive correlation $r=.357$. The relationship concludes that there is a moderate correlation between AABS and AAS which prove that both scales are measuring aggression but they are measuring different aspects of aggression. AAS showed only moderate correlation between AABS compared to AQ. Hence discriminant validity is established.

5. Discussion

The main goal of this study was to further develop and test a new self-report measure of anger in Malaysian adult. The results of this study provide preliminary support for the use of the AABS with adult ages 18 years old and above.

The AABS showed appropriate psychometrical properties, evidencing good internal consistencies and validity. The factor structure of the scale was examined through factor analysis. The exploratory factor analysis derived three-factor model. Total score was summing up the ratings for 31 items. Psychometric properties of the newly developed Adult Aggressive Behaviour Scale (AABS) reveal that the newly developed aggressive behavior scale is internally consistent, reliable and valid. Various method and procedure were conducted in the construction of the scale. The entire process of testing of reliability and validity were part of standardization process of the newly developed AABS.

6. Conclusion

Several limitations have been found in the study. Firstly, most of the participants were Chinese. Hence, it is hard to generalise the study in Malaysia. Future studies can try to find participants that equally cover Malays, Chinese and Indians. Besides, one of the limitations of this study is that this study used self-report instruments which might cause a response bias.

Participants might provide untruthful or provide answers which are socially acceptable when participants answer the questionnaire. Response bias can affect the validity of the study (Mazor et al., 2002). Future validation studies should consider to include reverse items to check on whether participants are truly answering the questions. Future study can be used with different samples such as violent criminals, students, athletes or other

samples. Administers to a more diverse population were encouraged in order to enhance reliability and validity. In addition, the study uses Exploratory Factor Analysis (EFA) to run the reliability. Future study can also involve Confirmatory Factor Analysis (CFA) to conduct factor analysis.

Overall, after considering the limitations of this study, the preliminary evidence shows that the 31-item Adult Aggressive Behaviour Scale (AABS) was an appropriate tool to be used in screening aggressive behaviour in Malaysia. AABS has run through a few analyses and showed good reliability and validity. Therefore, it is suitable to be used in future aggression research especially in Malaysia. This study might help other researchers to have a better overview of aggressive behaviour among Malaysian. Moreover, this scale might also be used as an appropriate tool for the government to screen and treat individuals with aggressive behaviours.

Ethics Approval and Consent to Participate

The researchers used the research ethics provided by the Research Ethics Committee of UCSI University Malaysia. All procedures performed in this study involving human participants were conducted in accordance with the ethical standards of the institutional research committee. Informed consent was obtained from all participants.

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Conflict of Interests

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest with respect to the research, authorship, or publication of this article.

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