

**VALIDATION OF THE MALAY VERSION FOR THE
SUBTYPES OF ANTISOCIAL BEHAVIOUR
QUESTIONNAIRE (STAB) AMONG SECONDARY
SCHOOL STUDENTS IN KELANTAN, MALAYSIA.**

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ABSTRAK

Pengenalan: Kebanyakan tingkah laku antisosial bermula dari awal usia dan berkembang dengan kelakuan nakal dan sengaja melanggar peraturan di sekolah mahupun di rumah. Antara soal selidik yang boleh mengukur tingkah laku antisosial adalah *Subtypes of Antisocial Behaviour Questionnaire (STAB)*. Soal Selidik Jenis-jenis Tingkah laku Antisosial ini telah dicipta dengan lebih ringkas dan pendek dan menekankan faktor agresif sosial di samping dengan faktor agresif fizikal dan langgar peraturan berdasarkan analisis kajian tingkah laku antisosial. Walaubagaimanapun, terdapat kekurangan bukti mengenai ciri-ciri psikometrik skala ini dalam konteks tempatan, terutamanya dalam kalangan remaja. Justeru, adalah penting untuk mengesahkan skala ini dalam versi Bahasa Melayu supaya penyelidikan lanjut mengenai jenis-jenis tingkah laku antisosial di peringkat sekolah menengah di Kelantan dapat dilaksanakan dan faktor-faktor yang berkaitan dapat dikenalpasti.

Objektif: Kajian ini bertujuan untuk mengesahkan Soal Selidik Jenis-jenis Tingkah laku Antisosial versi Bahasa Melayu (M-STAB).

Metod: Satu kajian keratan rentas yang melibatkan 387 peserta yang berumur antara 13 hingga 17 tahun telah dijalankan antara bulan Ogos sehingga November 2020 di lapan buah sekolah menengah di daerah-daerah negeri Kelantan. Peserta-peserta dipilih melalui kaedah pensampelan berbilang tahap. M-STAB telah diterjemah ke Bahasa Melayu secara terjemahan hadapan dan ke belakang oleh dua panel pakar. Versi terakhir M-STAB telah diselaraskan dan pra-ujian dijalankan ke atas 10 orang peserta. Para pelajar yang dipilih dan bersetuju menyertai kajian serta mendapat persetujuan ibu bapa telah mengisi soal selidik kertas maklumat sosio-demografi pelajar dan M-STAB. Pengesahan M-STAB dinilai dengan menggunakan analisa faktor pengesahan bagi pengesahan konstruk secara langsung kerana soal selidik ini diambil daripada kandungan asal yang mempunyai bukti teori dan empirical yang kukuh.

Kebolehpercayaan M-STAB ini dinilai dengan menggunakan komposit bagi kebolehpercayaan konstruk.

Dapatan: Kajian ini menunjukkan model terakhir M-STAB yang paling bersesuaian dengan data terdiri daripada tiga faktor utama dengan 32 soalan. Tiga faktor ini terdiri daripada 10 soalan daripada faktor *agresif fizikal* dengan purata pemuatan faktor 0.45-0.70, 11 soalan daripada faktor *agresif sosial* dengan purata pemuatan faktor 0.38-0.66 dan 11 soalan daripada faktor *langgar peraturan* dengan purata pemuatan faktor 0.02-0.56. Dapatan menunjukkan kesesuaian indeks yang memuaskan iaitu (RMSEA=0.03, CFI=0.92, TLI=0.91, SRMR= 0.07) dan nilai kebolehpercayaan komposit yang memuaskan (*agresif fizikal* = 0.82, *agresif sosial* = 0.82, *langgar peraturan* = 0.55).

Kesimpulan: Kajian menunjukkan skala M-STAB dengan model 3 faktor utama dan 32 soalan memiliki ciri-ciri psikometrik yang memuaskan. Skala ini adalah sah dan mempunyai kebolehpercayaan untuk digunakan bagi menilai jenis-jenis tingkah laku antisosial dalam kalangan pelajar sekolah menengah di Kelantan. Walaubagaimanapun, skala ini perlu digunakan dengan berjaga-jaga bagi wilayah lain di Malaysia.

Kata Kunci: Analisis faktor, Tingkah laku antisosial, Remaja, Pengesahan, Malaysia

ABSTRACT

Background: Most antisocial behaviours started since a young age and are perpetrated with simply rule-breaking and delinquent behaviour in school or at home. Among the most established tools available to measure this antisocial behaviour is the Subtypes of Antisocial Behaviour Questionnaire (STAB). This STAB Questionnaire was developed as a simpler and shorter inventory with highlight on social aggression in addition to overt/physically aggressive and covert/rule breaking factors in antisocial behaviour study analysis. To date, information regarding the psychometric properties of this scale when used in the local context is still lacking especially among the schooling age group. Therefore, there is a need to validate the Malay version of the STAB (M-STAB), so that further research can be conducted to explore on subtypes of antisocial behaviour among secondary school students in Kelantan and their associated factors.

Objective: The study aimed to validate the Malay version of the Subtypes of Antisocial Behaviour Questionnaire (M-STAB).

Method: A cross-sectional study involving 387 participants from 13 to 17 years old, was conducted from August 2020 until November 2020 in eight secondary schools in the district of Kelantan. Participants were selected via a multistage sampling method. M-STAB was initially translated from English into Malay language using forward and backward translation procedures by 2 experts. The finalised version of M-STAB was harmonised and pre-tested on 10 participants. Study participants who assented to the study and obtained parental consent then completed the final version of the M-STAB questionnaire and a socio-demographic questionnaire. The validity of the M-STAB questionnaire was evaluated using confirmatory factor analysis (CFA) for construct validity. This is because, the adopted scales with sufficient empirical and theoretical evidence can be taken directly to CFA. The reliability of

the M-STAB questionnaire was evaluated by composite reliability (Raykov's rho) for construct reliability.

Result: In this study, the final model of M-STAB most fitting the data comprised of 3 factors with 32 items, retaining all items from the original English version scale. These 3 factors consist of 10 items of physical aggression factor with a factor loading range of 0.45-0.70, 11 items of social aggression factor with a factor loading range of 0.38-0.66 and 11 items of rule breaking factor with a factor loading range of 0.02-0.56. The overall findings revealed good fit indices (RMSEA=0.03, CFI=0.92., TLI=0.91, SRMR=0.07). Composite reliability scales were also acceptable and satisfactory (physical aggression = 0.82, social aggression = 0.82, rule breaking = 0.55).

Conclusion: The study revealed that a 3-factor model with 32 items of the Malay Version of STAB has good psychometric properties. The scale is valid and reliable to measure the subtypes of antisocial behaviour among secondary school students in Kelantan. However, utilisation of these questionnaire among other regions in Malaysia need to be used with caution.

Keywords: *Factor Analysis, Antisocial behaviour, Validity, Malaysia*

CHAPTER 1

INTRODUCTION

1.1 Introduction

Antisocial behaviour is defined as any type of conduct that violates the basic rights of another person or any behaviour that is considered to be disruptive to others in society (1). This can be carried out in various ways, which include, but are not limited to, intentional aggression as well as covert and overt hostility (2). The rise of aggressive behaviour cases among adolescents is a great concern and global phenomenon but it is more prevalent in developing countries (3). For instance, statistics in Malaysia show that 28% of aggressive behaviour was perpetrated by adolescents (4) as compared to only 13.3% in a similar Dutch sample (5).

To highlight, in the year 2017, Kelantan was noted as one of the states in Malaysia with the highest rate of students with positive drug urine tests with 10% or 279 cases out of the total of 1,731 positive results (6) with 35 recorded violent and property crime by adolescents aged between 13 to 18 years with 52% increment from the year 2015. The majority of them were motorcycle theft cases (7). These were only the recorded list of crimes perpetrated by adolescents in Kelantan, which means the actual number that went unreported is not known.

It is worth noting that the existing law and acts in Malaysia have no provision that allows action to be taken against the perpetrators of this antisocial behaviour. The government is currently in the proposal stage of enacting a law that can properly address the anti-social behaviour of youths in our country (8). According to the Anti-Social Behaviour Act 2003 in the United Kingdom, the police were given powers in designated areas to disperse groups of two or more where their presence or behaviour has resulted or

is likely to result, in a member of the public being harassed, intimidated, alarmed or distressed (8,9,10).

Hence, if these antisocial behaviour problems are not intervened sooner, the situation might become worse and in the long run, would adversely affect the younger generation and the future of our country (11). Therefore, there is an urgent need for the Malaysian government to investigate the potential factors leading to this antisocial behaviour and one of the important ways is by prevention and promotion, rather than having to manage juvenile crimes using laws and regulations once it has already happened (12,13,14).

Generally, most crimes commonly started with simply rule-breaking behaviour in school or at home (15,16). It would be important to assess this type of behaviour among school-going adolescents to ensure that intervention can be delivered timely. Practically, if young people offend in school and it could be identified early enough, intervention could be successfully delivered. This is also in line with the global shift in the approach to dealing with problematic and violent students in schools from a purely punitive approach to a more rehabilitative and supportive approach via interventional programmes and community service (17,18,19).

In order to facilitate the early screening and intervention of antisocial behaviour, especially among school-going adolescents, this study aimed to translate and validate a tool named the Subtypes of Antisocial Behaviour Questionnaire. To date, the scale has yet to be translated and validated in the Malay language to ease its use among the local population and the original scale was validated among college students but not school-going adolescents (20).

The non-diagnostic scale for antisocial behaviour is under-presented in the literatures regarding delinquency behaviour (21). Moreover, studying offenders in special units may be biased because convicted offenders are ‘unsuccessful’ offenders, who may not represent law-breaking behaviour in the community. The goal of reducing antisocial behaviour through prevention and treatment is essential but can only be achieved by early detection of this behaviour.

1.2 Justification of Study

Research on antisocial behaviour characteristics in adolescents as a risk factor for future psychopathy has increased worldwide especially in Western countries (22,23). However, this area of study is still very limited in the Malaysian context. The most likely reason for this is the lack of tools, especially those that have been validated in the Malay version, to assess this antisocial behaviour objectively. Therefore, it justifies the need to validate the Malay version of the Subtypes of Antisocial Behaviour Questionnaire. Reliable and validated Malay version of this assessment can help in preventing the future development of psychopathy by early screening of antisocial behaviour and symptoms of conduct disorders. This effort could go a long way towards helping to nurture a future generation with less prevalence of personality traits linked to criminality and law-breaking.

1.2.1 General Objectives

This study aimed to validate the Malay version of the Subtypes of Antisocial Behaviour Questionnaire (STAB) among secondary school students in Kelantan.

1.2.2 Specific objectives:

1. To translate the Subtypes of Antisocial Behaviour Questionnaire (STAB) to Malay Version Subtypes of Antisocial Behaviour Questionnaire (M-STAB)

2. To assess the construct reliability of the Malay Version Subtypes of Antisocial Behaviour Questionnaire (M-STAB) using Composite Reliability among the secondary school students in Kelantan
3. To determine the construct validity of the Malay Version Subtypes of Antisocial Behaviour Questionnaire (M-STAB) using Confirmatory Factor Analysis (CFA) among the secondary school students in Kelantan

1.3 Methodology

After obtaining permission from the author, the original English version of the STAB scale was translated into the Malay language by two language experts and reconciled into a single version. The translated Malay version was then back translated to the English version by another language expert who had not viewed the original English version. The translated Malay version was harmonised and pre-tested on 10 respondents who consisted of secondary school children of USM lecturers and staff to produce a finalised version for the study.

The study was conducted using a cross-sectional study design. The total duration of the data collection took approximately four months. The sampling frame for this study was school-going adolescents aged between 13 to 17 years old in schools registered under the Kelantan District Education office. Data entry and analysis were done with Statistical Package for Social Sciences (SPSS) version 26.0 and RStudio software for confirmatory factor analysis and construct reliability.

1.3.1 Methodology Flow Chart

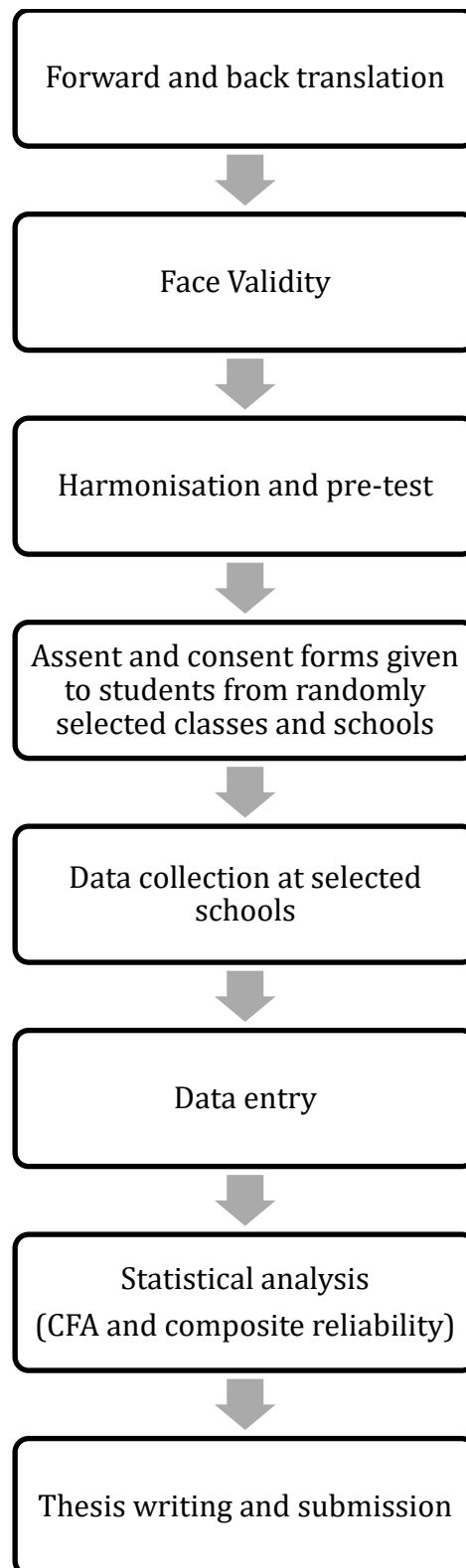


Figure 1: methodology flow chart

1.4 Dissertation organisation

This dissertation is arranged according to Format B Manuscript Ready based on the guidelines by the Postgraduate Office, School of Medical Sciences (2016). In Chapter 2, the study protocol that was submitted for ethical approval is presented. Chapter 3 is the manuscript of Validation of the Malay Version of the Antisocial Behaviour Questionnaire Among Secondary School Students in Kelantan, Malaysia that has been prepared for submission to Plos One journal. The appendices contained the validated questionnaire. The raw data is included in the attached CD.

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CHAPTER 2

RESEARCH PROPOSAL

2.1 Study Protocol Submitted for Ethical Approval

This proposal was derived from the first phase of study from the project titled “Psychophysiology of Aggression, Psychopathy, and Antisocial Behaviour Among Secondary School Students in Kelantan, Malaysia” which was funded by the Short Term Grant Scheme, USM (304/PPSP/6315346).

1. INTRODUCTION AND STUDY BACKGROUND

The crime rate in Malaysia has been decreasing between the year of 2010 to 2017 (1). However, the number of crimes is still worrying. Statistics have shown that out of the percentage of people who perpetrate violent and non-violent crimes, a significant amount are young people in their adolescence. Every year, the National Anti-Drug Agency in Malaysia will conduct a screening among school students to detect those who are positive on the drug urine test. In the year 2017, Kelantan has the highest rate of students with positive drug urine test results (279 cases, 10% out of the total of 1,731 positive results) (2). In addition, there were 35 recorded violent and property crimes by adolescents aged between 13 to 18 years old in Kelantan within the first six months of the year 2016, which shows an increase of 52% from the year 2015. The majority of them were motorcycle theft cases (3). Those are just some examples of crimes perpetrated by adolescents in Kelantan.

Malaysia Crime Prevention Foundation has worked together with the State Education Department to conduct programs and seminars to reduce the crime rate among school students. What if there is an alternative way to detect school students who

are at higher risk of being involved with antisocial behaviour, which allows for intervention to be delivered to the correct group of students?

Studies found that incarcerated adults with high psychopathic traits show more severe and violent patterns of antisocial behaviour after release and engage in more misconduct and aggressive behaviour within the institution (4,5,6). More studies attempted to extend the construct of psychopathy to youth to identify the early manifestation of what Frick et al. (2006) described as ‘serious personality disturbance’ at a time in development when they might be more amenable to treatment.

Synchronously, the three constructs of *physical aggression*, *rule-breaking*, and *social aggression* were explicit measures in the early detection and intervention of antisocial behaviour, especially in young people. Thus, the Subtypes of Antisocial Behaviour Questionnaire (STAB) was developed in a simplified version and completely based on these important factors compared to other tools like Achenbach Adult Self-Report or Relational Aggression questionnaire which were extremely long and does not amount to these three facets. Therefore, the STAB questionnaire was chosen in this study for validation in the Malay language version, directly to be used in the present study.

2. LITERATURE REVIEW

Antisocial behaviour is defined as the actions that harm others, violate societal norms, and/or infringe on the personal or property rights of others such as illegal actions including vandalism, theft, and assault as well as interpersonally harmful behaviours like the use of racial slurs and the spreading of damaging rumours. However, the manifestation of antisocial behaviour differs from individual to individual (7,8,9).

According to factor analytic studies, there are at least two moderately correlated antisocial factors which were an “overt” or physically aggressive/oppositional factor and a “covert” or nonaggressive/rule-breaking factor (10,11). Yet, social aggression constitutes another form of antisocial behaviour too, explained by one that uses social relationships as a means of harming others. Precisely described as indirect or relational aggression such as gossiping, ostracism, and “stealing” friends, behaviours that can be expressed either overtly or covertly. The victims of social aggression are commonly reported to have psychological outcomes, similar to those experienced by victims of physically aggressive behaviours (12,13). By means, although socially aggressive behaviours were not necessarily illegal acts, they were reflected as a form of antisocial behaviour.

Because of this, the Subtypes of Antisocial Behaviour Questionnaire (STAB) was invented based on these three constructs of physical aggression, rule-breaking, and social aggression which were simpler and shorter than the other available tools. The STAB is a useful research instrument in exploring the construct validity of different varieties of antisocial behaviour that are tested on late-adolescent and adult samples.

To date, the literature search did not reveal any validation and translation of the Subtypes of Antisocial Behaviour Questionnaire to any other language. For instance, STAB questionnaire has been used in past study to predict momentary reports of acting out behaviour and measuring equivalence across gender differences in antisocial behaviours. The findings of the study revealed that females scored lower on physical aggression, social aggression, and rule breaking compared to males, indicating true gender differences in antisocial behaviour (14). In addition, the analyses from the study also revealed that each STAB scale uniquely predicted only the momentary acting-out behaviours characteristic of that scale (15). Such findings also provide further support

and strengthen that the STAB questionnaire is again a promising self-report measure of physically aggressive, rule-breaking, and socially aggressive forms of antisocial behaviour. (16)

These three constructs in the STAB are also important clinically and diagnostically. It demonstrated expected mean differences across the various sample types and clinical treatment groups. It was also found to have consistent support for the criterion-related validity of the STAB scales when comparing them to related measures, as well as to frequently used conceptualisations of personality such as Multidimensional Personality Questionnaire Brief Form (MPQ-BF) and Externalizing Spectrum Model (ESM).

In conclusion, the STAB appears to have a stable factor structure, reliable scales, and convergent validity with other longer self-report measures of antisocial behaviour. All in all, these findings suggest that the STAB is a useful tool for researchers who are interested in studying the origins and correlates of these different forms of antisocial behaviour with a quick and efficient assessment tool especially for translating and validating the Malay language according to the unique geographical and social status.

3. JUSTIFICATION OF STUDY

Most crimes perpetrated started with simply rule-breaking behaviour in school or at home. It would be important to assess this type of behaviour among school-going adolescents to ensure intervention can be delivered timely. Practically, if young people offend in school and it could be identified early enough, intervention could be successfully delivered. Two longitudinal studies called “The High/Scope Perry Preschool study” (17) and “The Cambridge Study in Delinquent Development” (18) have followed up on their samples for over 40 years. The earlier study found that those in quality

preschool education programmes had significantly lower arrests for crimes and were sentenced to fewer months in prison compared to those who did not receive quality education (17). The latter found that a majority of young people who were convicted at a younger age (10 to 13 years old or 14 to 16 years old) did not stop offending after their first crime but tended to violate the law for an average of 13 years. They also committed many more offences and had longer criminal careers than the late-onset (18). This shows that the most prolific offenders start at an early age, so there is a need for preventing early-onset offending. Early intervention programmes in schools that could reduce crime among young people can be cost-effective for society in the long run.

The focus of this study is on the community sample because community samples of delinquent adolescents are under-represented in the literature (19). Studying the community sample will also give a clearer idea of how many young people from the community have the tendency towards this behaviour and this will also make sure those with delinquent behaviour and without this behaviour will be drawn from the same geographic and social region. Moreover, studying offenders in special units may be biased because convicted offenders are ‘unsuccessful’ offenders, who may not represent law-breaking behaviour in the community.

The aim of reducing antisocial behaviour through prevention and treatment is essential but can only be achieved by the earlier screening of the behaviours. The present study will be the first, as far as the researchers are concerned, to incorporate three facets of antisocial behaviour among typically developing school-going adolescents in Malaysia by validating the Malay version of the original questionnaire, STAB.

4. RESEARCH QUESTIONS

1. Is the Malay version of the Subtypes of Antisocial Behaviour Questionnaire (M-STAB) a valid measurement tool for antisocial behaviour among secondary school students in Malaysia?
2. Is the M-STAB a reliable measurement tool for antisocial behaviour among secondary school students in Malaysia?

5. OBJECTIVES

5.1 General Objectives

This study aims to validate the Malay version of the Subtypes of Antisocial Behaviour questionnaire (STAB) among secondary school students in Kelantan.

5.2 Specific objectives:

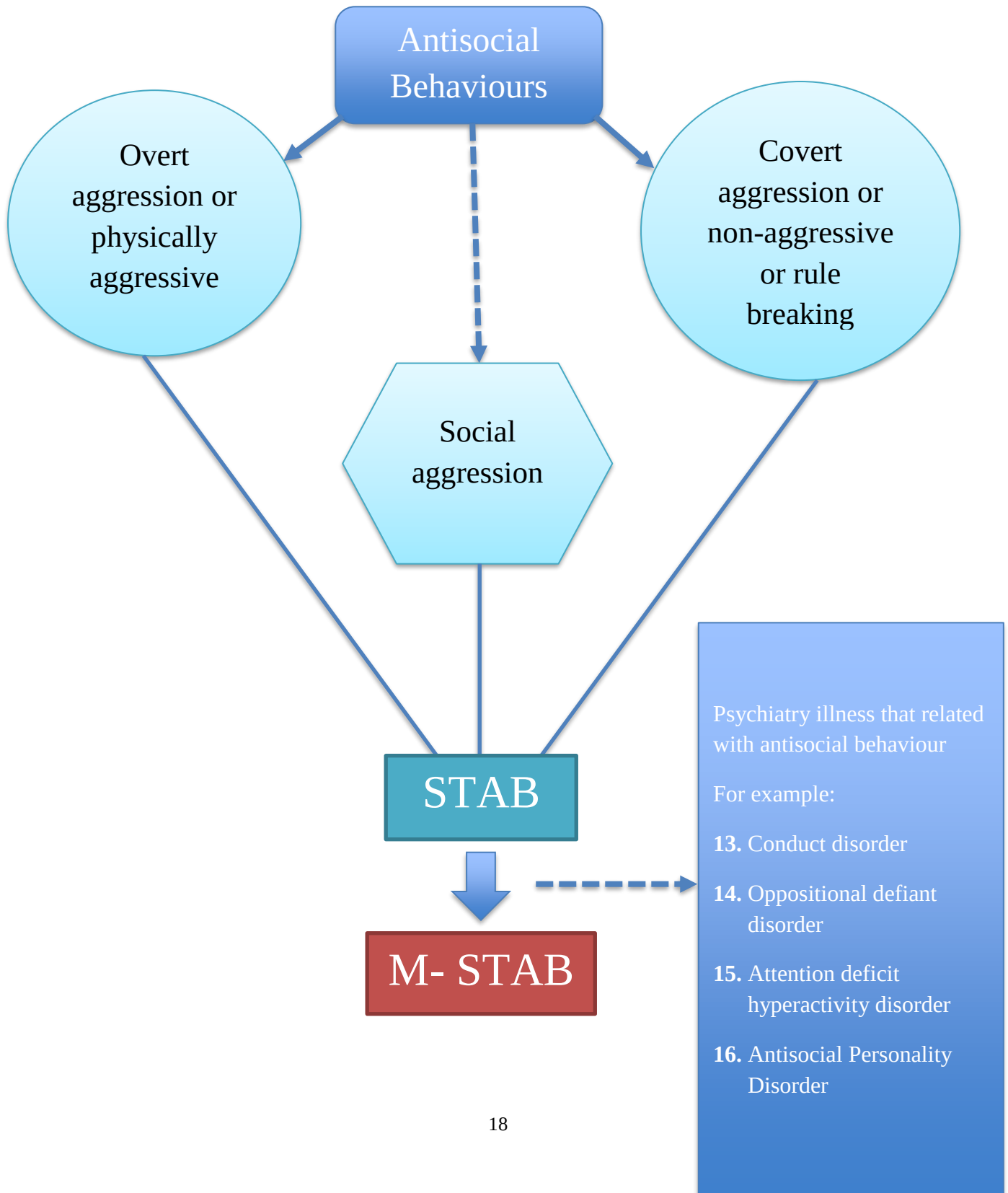
1. To translate the Subtypes of Antisocial Behaviour Questionnaire (STAB) to the Malay Version Subtypes of Antisocial Behaviour Questionnaire (M-STAB) and to be tested among secondary school students in Kelantan.
2. To assess the reliability of the Malay Version Subtypes of Antisocial Behaviour Questionnaire (M-STAB) using Composite Reliability among secondary school students in Kelantan.
3. To determine the construct validity of the Malay Version Subtypes of Antisocial Behaviour Questionnaire (M-STAB) using Confirmatory Factor Analysis (CFA) among secondary school students in Kelantan.

6. RESEARCH HYPOTHESIS

The Malay version of the Subtypes of Antisocial Behaviour (M-STAB) is a valid measurement tool for antisocial behaviour among secondary school students in Kelantan, Malaysia.

7. THEORETICAL FRAMEWORK

The figure showed the general overview of the antisocial behaviours associated with psychopathy and their outcome in the Malaysian population.



8. METHODOLOGY

Given the study setting where most participants are literate in Bahasa Malaysia, there is a need for the questionnaire to be translated into their native language to apply to local social and cultural contexts.

8.1 Translation Process

For the method of translation, the Subtypes of Antisocial Behaviour Questionnaire (STAB) was translated to the Malay language, based on The Translation and Cultural Adaptation-Principles of Good Practice guideline (20).

1. **Preparation:** the original developer of the scale was contacted to seek for permission to use the instrument (this was done by the project's principal investigator (PI)) and also to develop an explanation of concepts in the instrument to avoid any ambiguities
2. **Forward translation:** The questionnaire was translated by one psychologist and one linguist who are bilingual in both languages and blinded to the study. Translations was compared to enable the detection of errors and any divergent interpretation of ambiguous items in the original, thus reducing the potential bias of each forward translator.
3. **Reconciliation:** Reconciliation of the forward translations into one single forward translated version, helped to resolve discrepancies between the original independent translations and resulted in a final consensus translation.
4. **Back translation:** One psychologist and a bilingual linguist in both English and Malay independently translated the Malay version back to English without viewing the original English questionnaire.

5. **Back Translation Review:** The back translation from Malay against the source language (English) was reviewed to ensure the conceptual equivalence of the translation.
6. **Harmonisation:** Both questionnaires, the original and the Malay version were compared to determine the accuracy of the translation, and appropriately suit local culture and language norms.
7. **Cognitive Debriefing:** Newly translated STAB scale was tested for cognitive equivalence on 10 respondents to ensure that the translation is comprehensible to the general or the intended population. These respondents consisted mostly of secondary school children of USM lecturers and staff who assented to participate and who had parental consent for the pre-test.
8. **Review of Cognitive Debriefing Results and Finalisation:** results from cognitive debriefing were reviewed and translation modifications necessary for improvement were identified. Items and response options were reworded based on respondents' feedback that justifies making changes. There were no major words that were replaced or modified at this stage. The pre-test results showed all questions to be easily comprehensible to the intended population.
9. **Proofreading:** Finalised translation was proofread and carefully checked for minor errors which may have been missed during the entire translation process.
10. **Final Report:** A final report was written which include a full description of the methodology used, plus an item-by-item representation of all translation decisions undertaken throughout the process.

9. STUDY DESIGN

9.1 Study design

This study was an observational cross-sectional study involving the general Malaysian public, who met all the inclusion and exclusion criteria.

9.2 Study duration

This study took approximately 18 months, the duration that covered the overall timeline for this research, starting from the project initiation until the final thesis submission. The tentative research timeline is presented using the Gantt chart as shown below.

9.3 Study setting

This study was conducted at secondary schools in the chosen districts of Kelantan.

9.4 Study population and area

9.4.1 Reference population

The reference population for this research was secondary school students aged from 13 to 17 years old in Malaysia.

9.4.2 Source population

The source population for this study was secondary school students aged from 13 to 17 years old in Kelantan. This location was chosen due to its proximity to the principal investigator's workplace and home.

9.4.3 Sampling frame

The sampling frame for this study was secondary school students aged from 13 to 17 years old in schools registered under the Kelantan District Education office.

9.5 Sampling method – Multistage sampling

The list of all Government operated secondary schools in the Kelantan district was attained from the District education office (PPD). A series of random numbers was computed and used to select the schools to approach. Eight schools were selected.

At each particular school selected, any class from a list comprising all Form 1 to Form 5 classes were randomly selected, and all students in the selected classes were invited to participate in the study. A total of two to three classes were selected from each randomly selected school. The assent of the students who were still considered minors were obtained whereby all the students in the selected classes were given information about the study, its objectives and possible benefits to society as well as the subsequent process if they were to participate. The students were given the opportunity to enquire if they have any further questions and would be given the opportunity to consider the option of joining the study or not. Once the students have understood the information provided and voluntarily agree to participate, assent and consent forms were given to all the participants who agreed in each class. The students signed the assent form which was a combined document with the consent form which needed to be signed by parents who consented for the participation of their children in the study. Only students with both parental consent and signed assent forms by the students were included in the study.

The researcher targeted a minimum amount of 30 students irrespective of age who met the inclusion criteria from each school. Once this targeted number was achieved, the researcher proceeded to the next school randomly selected for data collection. This was because of the limited number of students that would be available in each school due to the social distancing rules enforced after the re-opening of schools after the Movement Control Order (MCO) period.

9.6 Sample size determination

Validation of the Malay version of STAB

All objectives were considered for sample size determination.

- **For Internal Consistency Hypothesis testing (26)**

- Cronbach alpha (H_0): 0.6 (lowest acceptable Cronbach alpha value)
- Cronbach alpha (H_1): 0.8 (expected Cronbach alpha value from the study)
- Significance level (α)= 0.05, Power ($1-\beta$): 0.8
- Number of items (k)= 32
- Sample size= 37
- Sample size (with drop-out) = 47

- **For Confirmatory Factory Analysis (27)**

- Given no of items = 32 with 3 domains,
- Modest communality, 0.45-0.55: minimum $n=200$

9.7 Inclusion Criteria

The inclusion criteria for this study were young people:

1. Aged between 13 to 17years old who attended the selected schools at the time of study
2. Parental consent granted (parents who signed the consent form)
3. Able to read and understand Malay Language (Bahasa Malaysia)
4. Studying in secondary schools which are under the administration of Kelantan

District Education Office (PPD)

9.8 Exclusion Criteria

The exclusion criteria for the study were young people:

1. Been diagnosed or receiving treatment for major psychiatric illnesses
2. Has visual, hearing or other physical impairment such as limb dismemberment which would impede reading and writing since questionnaires are self-rated
3. Students and parents who did not consent to their participation in the study.
4. Chinese/Indian national type secondary schools because of the potential difficulty in fully understanding a Malay language instrument.

10. RESEARCH TOOLS

10.1 Subtypes of Antisocial Behaviour Questionnaire

The STAB was created by Burt and Donnellan, consisting of 32 items. It was initially developed to tackle concerns on three constructs of *physical aggression* subscale (10 items), *social aggression* subscale (11 items), and *rule breaking* subscale (11 items) comprehensively while comparing to other tools lacking in these three facets.

The current STAB scale is a self-report version that has been used to assess variants of antisocial behaviour in a wide range of samples, including both males and females. It has also proved useful in other distinct populations including community, college and adjudicated samples.

All the 32 items are measured on a Likert scale ranging from 1 to 5 whereby a rating of 1 signifies 'never', 2 is 'hardly ever', 3 is 'sometimes', 4 means 'frequently' and 5 means 'nearly all the time'. The STAB has reported good internal consistency with Cronbach's alpha for *physical aggression*, $\alpha = 0.86$, as well as the *social aggression*, $\alpha = 0.82$, and *rule breaking* subscales, $\alpha = 0.84$. There were also overall good fit indices; with