

## ASSESSMENT SCALE FOR EMOTIONAL AND BEHAVIOURAL SCHOOL DROPOUT RISK AMONG PRIMARY SCHOOL CHILDREN

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### ABSTRACT

This study aims to construct a scale to measure the emotional and behavioural school dropout risk among primary school children. A mix study design was implemented to carry out this study. First phase was qualitative, implemented with interview designed, 12 primary school teachers and 12 primary school children participated. An interview protocol was developed with expert panel and in light of comprehensive literature review. The data was analysed by thematic analysis, and the main themes were emerged related emotional and behavioural aspects of school dropout risk. Based on the data a scale was constructed to evaluate Self-awareness, self-management and motivation, social awareness and social management aspects related to school dropout risk. The items were related to the self-emotional and self-management motivation in school, social awareness and social managements related to study with teachers and other classmates. A total 22 items were constructed with the validation of 6 expert panel, including, psychologist, teachers, early childhood educators, and special educators, the contents validity score was reported 85% among all the expert panel on each item analysis. 294 primary school children participated in testing the scale reliability from all the districts of Malaysia through online survey. Overall reliability was score on Cronbach Alpha value of .97 for all the items of Primary School Dropout Emotional and Behavioural Risk Scale. The findings revealed that Primary School Dropout Emotional and Behavioural Scale is valid and reliable measure to assess the school dropout risk among primary school children. Based on the findings of high validity and reliability, this scale is suitable to be use and applied to primary schools to assess the risk of school dropout for interventions.

**Keywords:** school, dropout, emotional, behavioural, scale, students

### INTRODUCTION

School Dropout is one of the major problems in the educational sectors in Malaysia. Even though, the dropout rate in Malaysia is small but if the contributing factors are not well recognized the rate can be increasing as there is no effective solution to encounter the problems. According to the 2018 report from PADU, it reported that about 3.59% of students who dropout from school annually (Ministry of Education, 2018). The factors affecting the dropout rates had been focused by several researchers. For instance, Mokshein et. al (2016) stated several factors such as the low interest towards academic, the attitudes of the parents and social problems of the students. Dropout also related to the socioeconomic status of family. This was reported by EFA Global Monitoring Report Team (2015) which found that school dropout is commonly among low and middle-income countries (LMIC). As in Malaysia, the B40 group are one of the factors of school dropout. According to Hwang et al. (2021), pupils from B40 groups are more likely to drop out because the parents are less likely to show their interest towards the children's' education. In addition, Singar and Zainuddin (2017) which explore on the factors that influence the indigenous student to dropout from school in Melaka. Based on

the result, it showed that the issues of school dropout among Indigenous students are related to the level of income, education level of parents, infrastructures and basic amenities. The study also indicated that education level is the most influential while level of income was the least influential factors. The similar result also found from nor et. al, (2011) which indicated that parents education background also one of the reason of school dropout in which they explained most of the parents did not received any formal education. Furthermore, the social factors were also believed as one of the reasons behind the issues of school dropout. This is based on research conducted by Njagi & M. Mwanja (2017) on the parenting styles and student's dropout rate in Embu County, the results showed that majority of the students with high dropout rate came from parents who practiced authoritative and authoritarian parenting styles. The researchers also discussed that these parenting styles were likely to cause the premature termination of school programs. The relationship between parent and children also influences the school dropout. This was reported by Ketija (2018) which found that family factors such as parent-child relationship is also one of the factors that lead to the school dropout. Other than that, Prakash et. al (2017) who aimed to study the correlation between school dropout and absenteeism among adolescent girls in South India found out that there were several factors contributes to the problems. For instance, the economic factors in which household poverty, social norms practices by the Indian culture which was related to children education values and also school related factors such as harassment and poor learning environment that can be risk factors for school dropouts among primary school children.

As conclusion, the problems of dropout affect the student worldwide in which the factors can be divided into several parts which are environment, socio-economic and also the behaviour of the students itself. Emotional management or emotion control is the ability of individual to control their emotions based on situation. For example, a person who able to manage their emotions was less likely to express his or her anger irrationally. In terms of emotions management in academic, there was also correlation. For instance, Iran Nejad (2021) which aimed to investigate the effectiveness of emotion regulation on the academic performance in female high schools. The researcher found out that the emotion regulation had effect on academic performance of the students. Next, a researched conducted by Voltmer & Salisch (2017) who examined the associations between children's emotion knowledge and academic performance found that the relationship between children's emotion knowledge and academic performance was stronger. Which means that children who were able to recognized and perceive the effects of their reaction or able to manage their emotions was more successful in their academic compared those who has low level of emotions knowledge. A recent study on the emotion regulation in academic performance among children showed that emotion regulation was associated with the successful and productive academic performances (Lim et. al, 2021). The result of this study was paralled with a study conducted by Xu (2016) which found that the good emotion regulation predicted the high scores of standardized math tests in adolescents. Dewi and his colleagues (2020) explained that when the students had good emotion regulation, they are able to control the negatives emotions due to the school assignment which considered as difficult, into positive emotions in which they consider that they were capable to answer those questions of school assignments. A study conducted by

Estrada and his colleagues (2021) which aimed to explore the importance of emotional intelligence training in the teaching-learning process. The result found that emotional intelligence was positively correlated with compassion and commitment in which this led towards better academic performance. The previous research that involved students also showed the positive correlation between self-compassion and emotional intelligence (Senyuva et. al., 2014) Furthermore, a correlational study was conducted to establish the relationship between emotional intelligence and academic achievement among student in Kenya (Karimi et. al., 2020). Based on the result, it showed that there was a strong positive correlation between emotional intelligence and academic achievement of the participants. The emotional intelligence was measured using the expressions of emotions and ability to perceive the emotions. The current study focused to assess the risk factors associated primary school children's risk of school dropout and provide a scale for valid and reliable assessment to recommend the interventions for their better educational plans.

### **RESEARCH DESIGN:**

This current study used mixed design, for the first phase the design that was applied is qualitative study as this study of dropout required details information on the indicator of dropout and emotional intelligence (EQ) of students from the teacher's perspectives and students' experiences. For items assessment related to measure the reliability and validity the quantitative designed was applied. The data was collected through online survey link of the scale among primary school children. The current phase of this study is based on survey. Research sampling for survey phase were primary school children. Overall, 294 students from primary school of all districts of Malaysia participated as purposive sampling through online link of survey scale the Primary School Dropout Emotional and Behavioural Scale.

In the quantitative study the scale was assessed for content validity and reliability. Total 22 items were developed through the themes analysis of data from interview and theory background. Initially proposed items were 30, the 5 items were deleted during the procedure of validity. Further the items were validated by 6 expert panel, included psychologist, special educators, teachers and early childhood educators. The overall results of content validity were report 83% among all the expert panels on the scale items, after reviewing the results from the panel 5 items were removed as report not necessary from the panel content validation analysis. Over all 25 items were presented for survey to check the reliability of each items on the scale. After reviewing the reliability 3 items were removed as showing low level of reliability. Final scale was based on 22 items for Primary School Dropout Emotional and Behavioural Scale. The research followed the ethical aspect to collect, and interpret the data.

### **RESULTS:**

In order to proceed with data analysis, the data set needs to pass some requirement of the research. Preliminary data analyses were performed to edit the data obtained in preparation for further analysis, to describe the key features of the data and summarize the results (Blischke, Rezaul & Prabhakar, 2011). To execute this analysis, a set of variables that used in the analysis

were created. This requires the researcher to recode or other operations on the variables of the data set. Issues such as response bias, missing data, duplications and outliers were checked before further analysis is been carried out.

Among 316 data, there is four (4) missing data or value. These responses were deleted and eighteen (18) other responses were removed due to duplications and response bias. After deletion of twenty-two (22) cases, data from 294 respondents were eligible and suitable for further analysis.

**Descriptive analyses:** A descriptive statistics for gender, age, race, parents' marital status, parents' level of education; fathers and mothers and parents' employment status; fathers and mothers, were generated, with a focus on the frequency, percentage and mean. Thus Table 1 presented the detailed descriptive information of demographic information.

**Table 1: Descriptive of Demographic Variables**

| Variables                  | Level        | Frequency(n) | Percentage (%) | Mean (M) |
|----------------------------|--------------|--------------|----------------|----------|
| Gender                     | Male         | 110          | 37.4           | 1.37     |
|                            | Female       | 184          | 62.6           |          |
| Age                        | 7 years old  | 26           | 8.8            | 9.70     |
|                            | 8 years old  | 40           | 13.6           |          |
|                            | 9 years old  | 38           | 12.9           |          |
|                            | 10 years old | 116          | 39.5           |          |
|                            | 11 years old | 40           | 13.6           |          |
|                            | 12 years old | 34           | 11.6           |          |
| Race                       | Malay        | 155          | 52.7           | 2.04     |
|                            | Chinese      | 25           | 8.5            |          |
|                            | Indian       | 61           | 20.7           |          |
|                            | Others       | 53           | 18.0           |          |
| Parents' Marital Status    | Married      | 281          | 95.6           | 1.04     |
|                            | Divorced     | 13           | 4.4            |          |
| Father's Education Level   | Primary      | 36           | 12.2           | 3.92     |
|                            | PMR          | 13           | 4.4            |          |
|                            | SPM          | 45           | 15.3           |          |
|                            | Diploma      | 95           | 32.3           |          |
|                            | Degree       | 67           | 22.8           |          |
|                            | Master       | 25           | 8.5            |          |
| Mother's Education Level   | Primary      | 13           | 4.4            | 4.32     |
|                            | PMR          | 25           | 8.5            |          |
|                            | SPM          | 58           | 19.7           |          |
|                            | Diploma      | 40           | 13.6           |          |
|                            | Degree       | 103          | 35.0           |          |
|                            | Master       | 27           | 9.2            |          |
| Father's Employment Status | Working      | 278          | 94.6           | 1.05     |
|                            | Not working  | 16           | 5.4            |          |
| Mother's Employment Status | Working      | 152          | 51.7           | 1.48     |
|                            | Not working  | 142          | 48.3           |          |

Table 1 describes in detailed the demographic variables in this research. The respondent's gender, both male and female who participated in this research is not balanced. However, since gender is not the main focus of this research, it can be disregarded. All the respondents involved in this research were in six (6) different age groups; 7 years old, 8 years old, 9 years old, 10 years old, 11 years old and 12 years old. The mean for gender, age, race, parents' marital status, parents' level of education; fathers and mothers and parents' employment status; fathers and mothers, indicated that there are no outliers. There are a total of 184 (62.6%) female respondents and 110 (37.4%) male respondents.

The majority of the respondents in this research are 10 years old of age, with 116 (39.5%), followed by the age group of 8 years old and 11 years old, both with 40 respondents representing 13.6% of the research, respectively. Malay students represent the majority of respondents participating in this research, with a total of 155 (52.7%) respondents. Based on the data set analysis, the majority of students have married parents, which represents 95.6% (281 respondents). Only 13 students have divorced parents which contributed to 4.4% of the data set. This percentage indicted those respondents with married parents are much higher than those with divorced parents. The data set revealed that most of the respondent's fathers are the one working for the family's income while half of the respondent's mothers contributed to the income.

### Reliability test

Reliability test is performed to investigate the degree of consistency of a measure. The term reliability refers to as the consistency of a research or measuring a test. Reliability can be statistically measured by two different methods; internal consistency and stability. Bracken and Howell (2014) defined reliability of .90 as necessary for using a measure's total score for decision making in a clinical setting. A reliability of .80 is seen as appropriate for making decisions based on subscales. These criteria are used to increase the measure of reliability of the instrument. Table 2 shows the summary of Cronbach's alpha coefficients of the variable.

**Table 2: Summary of Cronbach's Alpha Coefficients of Variable**

| Variable | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|----------|------------------|--|------------|
| **EBRS   | .970             | .968   | 22         |

\*\*EBRS = Primary School Dropout Emotional-Behavioral Risk Scale

Table 2 shows the Cronbach's alpha coefficients for the variable. From the table above, the researcher concluded that all the items in this research study are consistent and reliable.

### Validity test

Validity refers to how well a test measures what it supposed to measure. When a test measures the concept or theory that it was designed to investigate it is defined as construct validity. Content validity focuses on to which extent that a measure or a test accurately assessed the broad areas within the concept of the research. Using a panel of experts that has familiarity with the test or background in what the test is supposed to measure, is a way that sampling or

content validity can be achieved. According to Chakraborty (2015), there are four stages to establish content validity; Stage 1: Review past literatures to identify domains; Stage 2: Adaptation of items based on past literatures; Stage 3: Selected panel of experts reviewed the research model and measures; Stage 4: Conducting a pilot study.

In this current research, six panel experts (see Table 3) were chosen to review the research model and measures. The experts' qualitative observations for each of the initial items that made up the initial instrument were taken into account. The initial items of the instrument were distributed under five domains; Self-awareness; Self-management; Social awareness; Social management; Motivation. Table 4 shows the indicators used by the panel of expert to validate the items. The qualitative observations and recommendations made by the panel of experts on the items resulted in 30 items. However, the wordings of some of the items were amended, resulting in the final validated instrument and 5 items were removed as declared by the expert unnecessary.

**Table 3: Panel of experts and field of expertise and validity score**

| Expert | Field of Expertise/Academic Training | Content validity score |
|--------|--------------------------------------|------------------------|
| 1      | Psychologist                         | 85                     |
| 2      | Psychologist                         | 83                     |
| 3      | Teacher                              | 85                     |
| 4      | Teacher                              | 86                     |
| 5      | Special educator                     | 83                     |
| 6      | Early childhood                      | 80                     |
|        | Total                                | 83%                    |

The factorability of the 22 Primary School Dropout Emotional-Behavioral Risk Scale (EBRS) was examined. A number of well-recognized criteria for the factorability of a correlation were used. Firstly, it was found that all of the items correlated with at least a value of .30 and with at least one other item, indicating reasonable factorability (see Correlation Matrix). Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .83, above the mediocre value of .70 (see Table 5), and Bartlett's test of sphericity was significant ( $\chi^2(231) = 11053.19, p < .05$ ). Lastly, the communalities were all above .30 (see Table 6), further confirming that each item shared some common variance with other items. Based on these overall indicators, factor analysis was deemed to be suitable with all 22 items.

**Table 4: Guideline of KMO value and level of acceptance (Kaiser, 1974)**

|            |                     |
|------------|---------------------|
| KMO Value  | Level of Acceptance |
| Above .90  | Superb              |
| .80 to .90 | Great               |
| .70 to .80 | Good                |
| .50 to .70 | Mediocre            |
| Below .50  | Unacceptable        |

**Table 5: Community value of component**

| Component   | Alpha level |
|---|-------------|
| 1. I feel bored in class                                | .923        |
| 2. Playing game to learn in class in fun                | .828        |
| 3. I don't like my teachers                             | .885        |
| 4. I don't feel confident to speak with other at school | .856        |
| 5. I don't understand why I feel angry at school        | .819        |
| 6. I cannot adjust well in class                        | .943        |
| 7. I cannot control myself to stay focused in study     | .928        |
| 8. I don't like to express my opinion in class          | .823        |
| 9. I feel sad at school                                 | .941        |
| 10. I do not enjoy to meet with friend at school        | .954        |
| 11. I cannot share my feeling with siblings about study | .889        |
| 12. My parents are always fighting that bother my study | .899        |
| 13. I feel teacher don't like me                        | .910        |
| 14. Teacher should use game in class to reduce boredom  | .920        |
| 15. I don't understand others feeling related to study  | .894        |
| 16. My friends bully me                                 | .775        |
| 17. I prefer to study alone                             | .942        |
| 18. I do not participate in play activities at school   | .877        |
| 19. I don't like to ask questions to my teacher         | .882        |
| 20. I don't feel motivated to learn                     | .805        |
| 21. I don't know what I want in life                    | .815        |
| 22. I don't believe in my abilities                     | .758        |

**Table 7: Descriptive statistics for the two Primary School Dropout Emotional-Behavioral Risk Scale factors (N = 294)**

|  | No. of items | M    | Cronbach's $\alpha$ | Cronbach's $\alpha$ based on Standardized Items |
|--|--------------|------|---------------------|---|
| Self-awareness, self-management and motivation | 11           | .734 | .967                | .968  |
| Social awareness and social management         | 9            | .706 | .954                | .956  |

As indicated in Table 4.8, the Cronbach's alpha coefficients for both factors exceed .90, which indicates excellent internal consistency: .97 for Self-awareness, self-management and motivation (11 items) and .95 for social awareness and social management (9 items).

To summarize, these analyses shows that two distinct factors underlying primary school students' response to the Primary School Dropout Emotional-Behavioural Risk Scale items, and that these factors have an excellent internal consistency. Two of the twenty-two items were disregarded as it does not represent Goleman's emotional intelligence theory (2001).

## DISCUSSION:

Primary school student dropout has shown a significant value as compared to the population of almost 33 million (Statistics Department Malaysia, 2019). According to the Minister of Education, the major dropout of primary school student comes from B40 group. This is probably due to the lack of interest shown by the parents about their child's education and allowing their children to drop out of the education system. Child psychologist, educators and researchers need valid and reliable emotional-behavioural measures that are appropriate for use in a variety of community settings involving children when studying about emotional and behavioural risks. Emotional and behavioural risks, such as stress, anxiety, sadness disruptive and anger, are a form of problems in children that are categorised as either internalising or externalising problems (Ashford et. al 2008). Researchers believe that emotional and behavioural problems in children predict a wide range of negative outcomes in adulthood, including substantial difficulty in many crucial life domains such as family functioning, mental health, education and job (Trentacosta et .al, 2013). For example, it is well documented that oppositional defiant symptoms in childhood may predict not only behavioural issues in adolescence and adulthood, but also indicates poor academic results, drug use, unsafe sexual activities, and severe criminal activities (Magai, Malik & Koot, 2018). Children who exhibit problematic behaviour at school are more likely to struggle early, often, and throughout their school careers (Nelson et. al, 2007) and will have ramifications for day-to-day activities, including attendance in school, learning capacity, drug abuse, aggression and social relationships (Verhulst, Koot & Berden, 1990) and tend to remain throughout adulthood (Hofstra et al, 2001). Emotional issues in children including anxiety, depression, among others, often manifest themselves in later childhood (Vitaro et. Al 2007). Due to many children have not yet gained the required language and understanding to communicate their emotions in a way that is understandable, it may be difficult for the parents or other caregivers to see them in their children at an early age (El-Radhi, 2015). Thus, children with emotional and behavioural issues are more likely to develop future difficulties that interfere with many domains of their lives and negatively impact their mental health.

The validation of the instrument is an ongoing process that achieves a higher level of consistency the more the psychometric features of the instrument are defined by the type of instruments being used and the reason for using it. Validation also be determined for that particular instrument in a variety of settings and with a variety of population groups (Njagi et. al 2020). The degree to which an instrument provides a sufficient representation of the material that it is designed to cover is what is meant to be referred to as its "content validity" (Njagi et. al 2017). On the other hand, an instrument does not have to go into extensive detail regarding each of the components that go into making up a concept. This would make the instrument much too vast. Therefore, the instrument needs to have a sample that is representative of the several domains and probable problems that are associated with the idea of interest (Alarcon et al, 2008). The twenty-two items of the survey measured here include the most important issues with regard to primary school dropout and their emotional-behavioural risk. The twenty-two items are considered to be reliable and valid based on the data analysis of 294 respondents. The Primary School Dropout Emotional-Behaviour Risk Scale (EBRS) demonstrated high levels of

internal consistency and test reliability in primary school student population. The internal consistency reliability coefficient of .97 found in this research is excellent. The instrument resulted in two factors; Self-awareness, self-management and motivation (11 items); Social awareness and social management (9 items). Both of the factors yielded excellent internal consistency of .97 and .95 respectively.

The findings of this research contribute in ways to increase awareness among parents, community and society on their misunderstanding and misconception regarding children with emotional and behavioural issues that may lead to school dropout (Mitchell et.al 2019). This research also gives the idea for whole community to not take school dropout as a minor issue in today's society. The community should play a role in preventing this as nowadays social conformity from society is common. Information and training may be provided to all those that are responsible for the well-being of children in order to boost public awareness and improve early signalling, identification, and referral to appropriate source of assistance. These may include the children's caregivers, guardians, teachers, as well as professionals employed by general health institutions and judicial systems. In addition, policy makers should examine these results and develop policies that encourages access to mental health care services for children with emotional and behavioural problems.

## **CONCLUSION:**

As a summary, the data analysis presented here is a result from statistical analysis of Statistical Package for Social Sciences (SPSS) version 22. The data showed a high reliability and validity index of the proposed instrument. This research also investigates both emotional and behavioural issues. This is a significant step towards identifying children who may need professional assistance and enabling the execution of important policy choices to promote the well-being of children with emotional and behavioural problems in Malaysia. Children need to be taught to be self-aware of their emotions, as well as their behaviours. Children may learn to tackle obstacles with confidence and a positive attitude by being aware of their emotions, having those feelings validated, and learning to regulate those feelings. Adult may provide children with encouragement and validation as they go through the process of discovering and naming their emotions. A child who is experiencing emotions of sadness or frustration as a result of attempting something new might get reassurance from their parents, teachers, or therapists, for instance. They are also able to point the children in the proper way so that the child may feel the satisfaction that comes with achieving their goals

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