

ORIGINAL ARTICLE



METHODOLOGY OF DEVELOPING SYMPTOMATIC BEHAVIOR SCREENING TOOL (SYMBEST) FOR CHILDREN AGED 3-4 YEARS OLD WITH BEHAVIOR PROBLEMS.

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Abstract

The purpose of this research is to develop the symptomatic behaviour screening tool (SymBest) for early childhood educators to identify children with symptomatic behaviours. This quantitative study is using the design & development (DDR) approach by Richey & Klien, 2007. Fundamentally this approach is going through three comprehensive phases. The phases are as follows: Phase I is Need Analysis, Phase II is Design & Development and Phase III is Usability. Participants of phase I is 434 early childhood educators (ECE) and survey design was used for data collection. In Phase II, Fuzzy Delphi analysis was conducted with 18 expert participants from diverse backgrounds of clinical and education to gain the expert consensus on the suitability of the constructs and items representing SymBest. Finally in phase III, Modified Nominal Group Technique was used to test the usability of SymBest among 21 ECE educators who are expert in the field.

Keywords: Symptomatic Behavior, Screening Tool, Behavior Problems, Fuzzy Delphi, Nominal Group Technique.

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1. Introduction

Early identification of developmental delays in children gives more significant focus on general assessment and the resultant awareness on the developmental norms (Robinson and Dunsmuir 2010)¹. In Malaysia, the screening of children with developmental delays or special needs is shouldered by the Ministry of Health (MOH). The ministry is also entrusted to provide early intervention programs where early identification is vital. Legislatively, only doctors and paramedical personnel are qualified to certify an individual as being special needs. Thus the concept being cultivated in Malaysia is that the screening of an individual for special needs could only be carried out from the perspective of medical rather education (Haniz Ibrahim, Siti Eshah Mokshein, Ardzulyana Anal, & Syamsinar Abd Jabar, 2014)². Screening tools need to be developed in order to identify whether the child is a “child with a disability” under Individuals with Disabilities Education Act (IDEA). Screening is also a method of gathering information that will help to determine the child’s educational needs as well as to guide decision making for an appropriate educational program. IDEA Act states that there are at least two ways in which a child may be identified to need formal evaluation with MOH. First is through the attentiveness of parents and secondly observations from the school system. School, by all means, should notify parents if there is any sign of developmental delays observed in a child. Most often the identification method adopted by the school system is by observation and results from a test given in the classroom (IDEA, 2005)³. Screening is essential to be practiced in the school system so that educators can be more confident in conveying the concern for parental awareness. Screening in the school system is essential for educators to recognize the developmental alerts found in children which could be addressed together with parents for referral recommendation. The concept of symptomatic behaviour is adopted from the concept of childhood externalizing behaviour. Symptomatic behaviour refer to the probability that children with certain characteristics or life experiences maybe vulnerable to psychological, physical, or adaptive difficulties during their developmental years and beyond (Jerome & Robert, 2006)⁴. Consequences like school dropout, drug and alcohol addiction, suicide, defiant, psychiatric, and behavioural problems are some of the symptomatic behaviour features found. It is also comprehend as to characteristics of the child or of her or his circumstances that are associated with the development of maladaptive behaviours (Jerome & Robert, 2006)⁴. Some symptomatic behaviours are strongly associated with developmental problems, whereas for others the association with problems is less predictable (Rita and Israel C. Allen, 2006)⁵. In this study, symptomatic behaviour is identified across five developmental domain of early childhood. High scoring for symptomatic behaviours from the developmental domains will indicate the developmental delays which may require further assessment from the clinicians.

2. Identifying Symptomatic Behaviour leading to Developmental Delays

Identifying the developmental delays in children earlier gives greater focus on general assessment and the resultant awareness on the developmental norms (Robinson & Dunsmuir,

2010)¹. Thus to draw the importance for early identification of developmental delays in children, it is necessary to study the increasing rate of children with special needs in Malaysia which will determine the needs for screening in the education system. The primary database which is maintained by the Department of Social Welfare (DSW) is compiled from the data obtained from the registration system for persons with disabilities established under the Person's With Disability (PWD) Act. The registration system in Malaysia is voluntary, low registration numbers has been attributed to a fear that registration as a 'person with disabilities' might cause a child to be stigmatized. Presently, the DSW, Ministry of Health (MOH), Ministry of Education (MOE) maintain separate database on children with disabilities. Their respective data however is not being collated into a single source (UNICEF, 2014)⁶.

According to the statistic report 2016 from the DSW, there are total number 409,269 registrations as a 'person with disabilities'. Out of these, 11,621 are children below the age of 6 years old registered as children with special needs in Malaysia (Jabatan Kebajikan Masyarakat, 2016)⁷. On the other end, the number of preschool children registered in the government preschools throughout nation in the year of 2017 is 1031 which is 78 children more than the previous year (Bahagian Pendidikan Khas, 2017)⁸. In the government special education preschools registration of PWD is not a pre-requisite requirement for school enrolment. Therefore the headcount by MOE may not represent the total population of children with special needs enrolled in the special education preschools in Malaysia (Kementerian Pendidikan Malaysia, 2015)⁹. In 2015 the DWS estimated there is around 4.2 million people with disability were found yet to register based on the population statistics total of 30.1 million in the previous year (Baqtayan, Shamsul Khalil, Baharum and AbuHassan, 2016)¹⁰. Thus the actual number of children with disability in Malaysia is not reflected (Amar, 2008)¹¹.

3. Methodology of the study

This quantitative study is using the design & development (DDR) approach by (Richey and Klien 2007)¹². The study employed a DDR approach to develop the symptomatic behaviour screening tool (SymBest) for young children with behaviour problems. In general Richey and Klien (2007)¹² affirms that this approach has three systematic phases that is, the need analysis phase, design & development phase and evaluation and usability testing phase. This approach not only allows researchers to design a research study systematically but also create choices to apply various instruments and also research methods in every respective phases (Ramlan Mustapha 2017)¹³. Fundamentally this approach is going through three comprehensive phases (Richey and Klien 2007)¹². The phases are as follows: I) Need Analysis; II) Design & Development; III. Usability.

Table 1 below shows the research method used in each phase for this study which was adapted from Design and Developmental Research: Emergent Trends in Educational Research (2013)¹⁴.

Table 1

Research Method Based on DDR Approach

| Phase | Research Method |
|--|--|
| Phase 1: Need Analysis | Literature Review and Survey design (score mean and percentage) |
| Phase 2: Design & Development | Focus Group, Literature Review and Fuzzy Delphi |
| Phase 3: Usability Test | Nominal Group Technique (Score mean and percentage). |

3(a) Phase I: Need Analysis

Purpose: In DDR approach need analysis represents the first phase of the research. Need analysis is a phase which allows the researcher to identify the needs to develop the screening tool for educators to identify symptomatic behaviours among children. Need analysis is also a powerful method of deciding if services in the population currently are adequate or not. If such services are inadequate and a solution is available, it means there is a need. Given all that has been mentioned so far, in this phase besides identifying the needs to develop a screening tool, researcher too decided to get educators perception on classroom behaviour management, behaviour techniques used and the kind of support they receive from the school climate to understand the challenges educators are facing on the ground currently. Each research question in this phase lead to the development of SymBest (Ridhuan, Saedah, Zaharah, Nurulrabihah and Ahmad Arifin, 2017)¹⁵.

Research Questions: The need analysis phase attempt to answer the following research questions:

1. What are the needs to develop a screening tool to identify children's behaviour problems in the mainstream ECE in Malaysia?
 - a. What are educators' perceptions in managing children's behaviour problems in the classroom?
 - b. What strategies educators' use to manage children with behaviour problems in the classroom?
 - c. What are the supports available currently for educators to identify children with behaviour problems in the classroom?
 - d. What are ECE educators' perceptions of the needs of a screening tool?

The answer to these questions is critical to justify the needs to develop a screening tool for educators to identify children with symptomatic behaviours in early childhood classrooms.

The Sample of Phase 1: Since the study is to develop a screening tool for children ages 3 to 4 years old, participants selected in the need analysis phase are educators from the early childhood education programs by the government agencies and are also teaching children age 3 to 4 years old. In line with that, ECE educators from programs like KEMAS, GENIUS NEGARA, PERPADUAN and YAYASAN PEMBANGUNAN KELUARGA TERENGGANU (YPKT) participated in the need analysis phase. A number of 434 early childhood educators participated using the judgmental sampling method. The judgmental sampling method is a non-probability sampling technique in which the participants are selected based on a specific characteristics (Zainudin Awang, 2015)¹⁶. From the total number of ECE educators population, the required sample size for the need analysis phase is 351 (Krejcie and Morgan, 1970)¹⁷. However, the survey received a total number of 538 respondents. Since the study requires only ECE educators who are teaching children of age 3 to 4, 434 ECE educators were selected under the specified criteria.

Instrument: In this research, three existing survey questionnaires was located, modified and used to obtain the findings for the need analysis phase (Creswell, 2018)¹⁸ guided by the Discrepancy Model of need analysis. The survey questionnaire; consist 5 sections with 47 items: Section A: Educators Details; Section B: Managing Classroom Behaviour; Section C: Specific Techniques Used for Behavioural Problems; Section D: Availability of Support for Behaviour Problems and Section E: is to know on the whole ECE educator's perception on the needs of a screening tool. The constructs and items of section B, C and D are a combination of three existing and validated survey questionnaire that is Teacher's Efficacy Scale by Tschannen-Moran & Woolfolk Hoy (2001)¹⁹, Teacher Classroom Management Strategies Questionnaire by The Incredible Years, Inc, USA and Working with Challenging Behaviour Preschool Survey (WCBPS) by Shauna Miller (2014)²⁰. The items are themed into 3 sections to answer the need analysis research questions. In Section B, the items are selected from Teacher's Efficacy Scale; Section C the items are selected from Teacher Classroom Management Strategies Questionnaire and Section D the items are selected from Working with Challenging Behaviour Preschool Survey. Finally, for section E, items are adapted from (Ramlan Mustapha, 2017)¹³ to understand ECE educators perceptions on the needs of having a screening tool to identify children's symptomatic behaviours. A pilot study was conducted on a group of 47 early childhood educators to determine the reliability of the instrument and the *Cronbach Alpha* value of 0.861 reported.

Method: The Survey Design was selected to seek for the opinion of ECE educators on the need of a screening tool. The need analysis in this study will be conducted via online survey technique to identify the need to develop the symptomatic behaviour screening tool to identify children with symptomatic behaviours based on educators view.

Analysis of Data: Data collected from the online survey questionnaire is analysed using the Statistical Package of Social Science (SPSS). The mean value score, percentage and standard

deviation of each section will be analysed. Figure 1 below shows a flow chart of the need analysis phase.

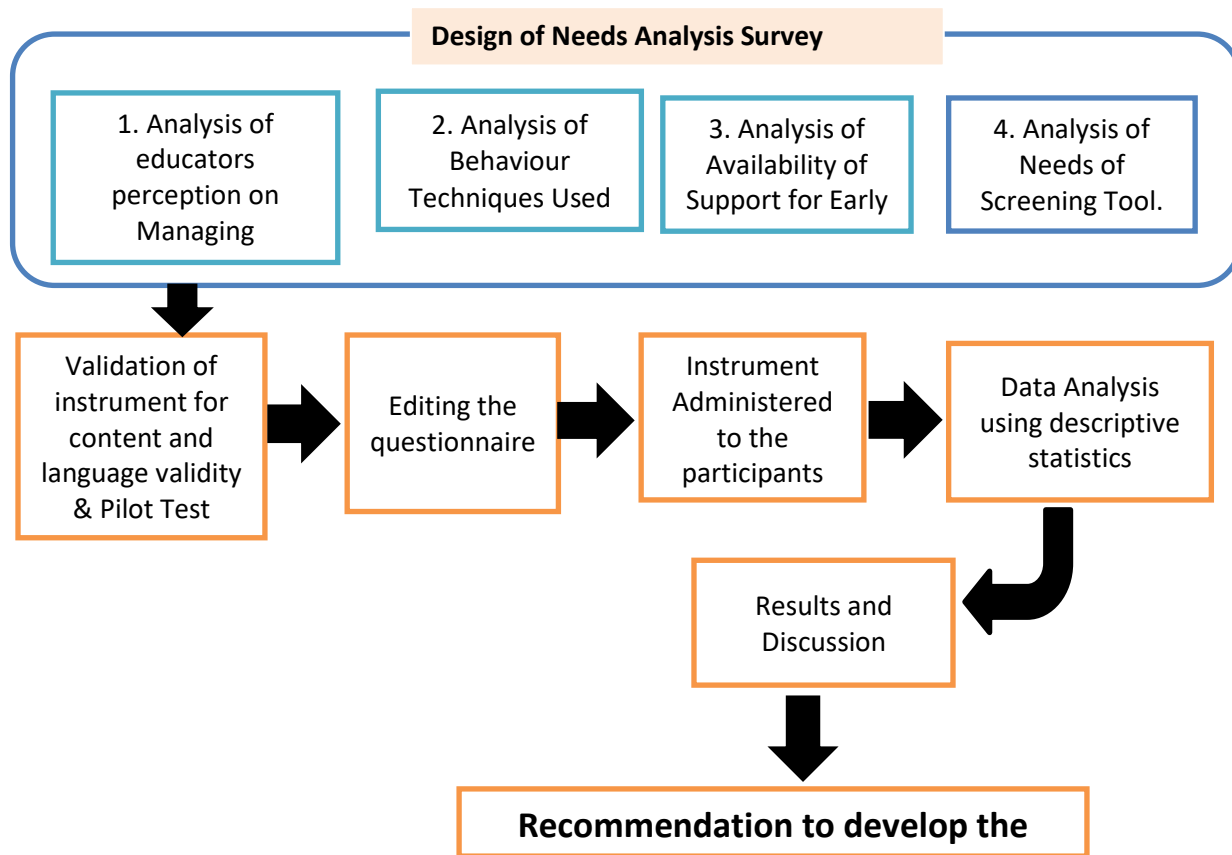


Figure 1. Flow chart of the need analysis phase

3(b) Phase II : Design & Development

Purpose : The second phase is the design and development of the screening tool to support and improve early childhood educator’s skills and knowledge for early identification and screening children with behaviour problems. The content of Symptomatic Behaviour Screening tool consists of constructs and items that aimed to screen children’s behaviour to be symptomatic to developmental delays. The constructs and items of the screening tool is from child developmental theories, developmental appropriate practices (DAP) , Red Flags: A Quick Reference Guide for Early Years Professionals by York Region Early Identification Planning Coalition, 2009 & Paediatric Group Discussion. Constructs are from the 12 principals of DAP (NAEYC) and the items are adapted from Red Flags: A Quick Reference Guide for Early Years Professionals by York Region Early Identification Planning Coalition, 2009 & Paediatric Group Discussion. Fuzzy Delphi method was used to validate the constructs and the items of SymBest.

Research Questions :

2. What is the design and development model of the screening tool to assess children’s symptomatic behaviour?
 - a) What are the suitable constructs of measurement for screening symptomatic behaviours by children based on expert’s consensus ?
 - b) What are the suitable items in the main constructs for screening symptomatic behaviours by children based on expert’s consensus?
 - c) What are the sequence priorities of the items in the screening tool based on expert’s consensus?

Sample of the study in Phase 2: The samples of this phase are the panel of experts from the field of medical, psychology and education. Right selection of the participants ensures the success of the study as the expert’s consensus is the validation for the developed screening tool. The experts are selected based on their experience and content knowledge in the field of medical, behaviourism and special educational needs. 18 experts are selected based on the above criteria for validating the screening tool using Fuzzy Delphi Method. Figure 2 summarizes the background of the experts selected in this phase 2 of this study.

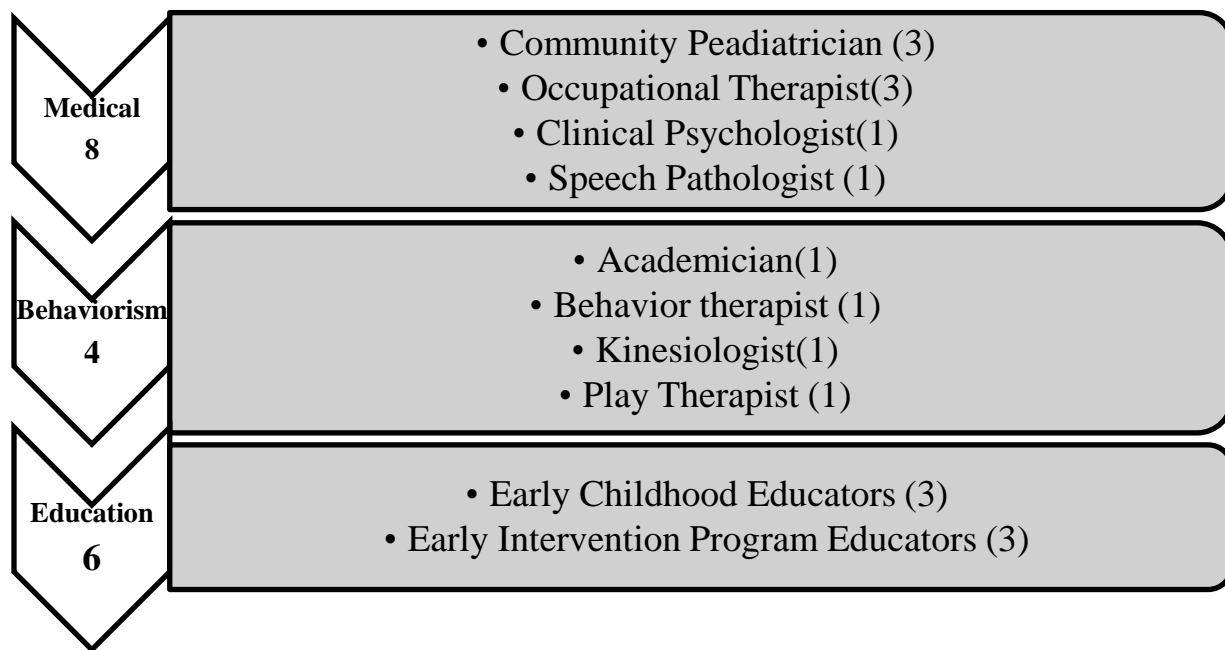


Figure 2 Background of the participants selected for the study

Instrument of the study: The instrument used in this phase was a Fuzzy Delphi survey questionnaire. The questionnaire consists of 7 sections. Section A is experts demography, Section B is experts view on the constructs of SymBest, Section C is experts view on the items under construct sensory and motor development, Section D is experts view under the construct

language and communication development, Section E is experts view under the construct social and emotional development, Section F is experts view under the construct cognitive development and Section G is experts view under the construct creativity. The questionnaire consists of 112 items with 5 measuring constructs. Experts were requested to mark their responses on the items and constructs according to the number that corresponds to. The Fuzzy Delphi Survey scale seeking for experts views has 7 points responses (Vagias 2006) with following anchors: 1= Totally Disagree, 2= Strongly Disagree, 3= Disagree, 4= Neither Agree or Disagree, 5= Agree, 6= Strongly Agree and 7= Totally Agree (Chang, Hsu, & Chang, 2011)²¹.

Method: The Fuzzy Delphi Method is used in the developing process of the screening tool, so the procedure for this phase is described in two major steps:

1. Developing the constructs and the items for SymBest.

Determining the measuring constructs and related items for each constructs are the prime step to be taken in the effort of developing this screening tool. The SymBest consist of five child developmental domains as a measuring constructs and the developmental milestones of children age 3 to 4 years old as items. The constructs are 12 Principals of Developmentally Appropriate Practice by National Association for the Education of Young Children (Carol Copple & Sue Bredekamp, 2009; National Association for the Education of Young Children (NAEYC), 2009) and embedded with the Theory of Maturation and the Theory of Cognitive Development. Whereas the items of SymBest are the Red Flags: A Quick Reference Guide for Early Years Professionals by York Region Early Identification Planning Coalition, 2009 (Easton et al., 2009)²². Figure 3 below shows how the constructs and items of SymBest were developed.

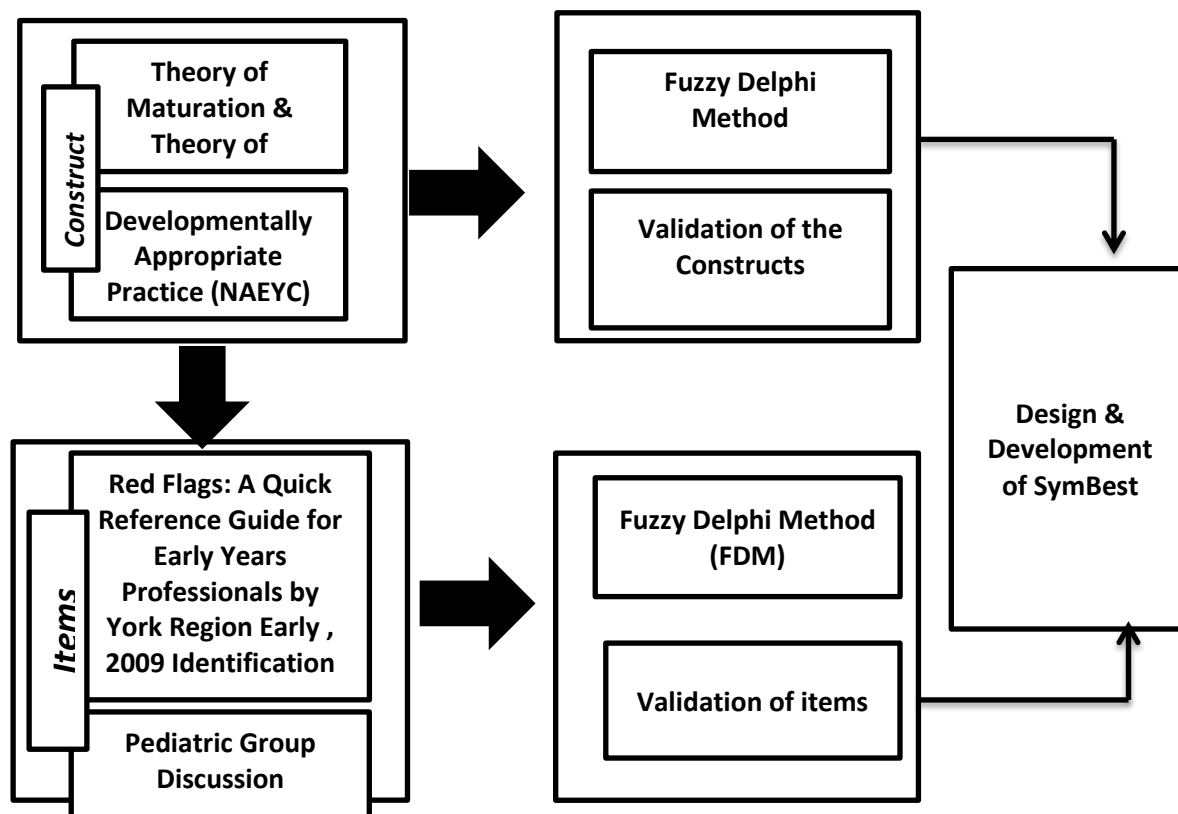


Figure 3.5 Design and development of SymBest based on Method.

2. Conducting Fuzzy Delphi (FDM)

The FDM will be conducted using the following steps:

Step 1: Selection of experts to validate the screening tool.

A total number of 18 experts were selected for the study for the process of FDM. The 18 experts are from clinical and education field.

Step 2 :Converting the linguistic variable into triangular fuzzy numbers.

The linguistic scale is a Likert scale with the addition of fuzzy numbers (Chang, Hsu and Chang, 2011)²¹. The Triangular Fuzzy Number represented as value m_1 , m_2 and m_3 often written as $(m_1,$

m_2, m_3). Whereby m_1 is the minimum value, m_2 is the most plausible value and m_3 is the maximum value. These Triangular Fuzzy Numbers are used in the fuzzy scale to interpret the linguistic variables to fuzzy numbers. Three fuzzy numbers are given to every response as shown in Table 2.

Table 2

Linguistic Variable Into Fuzzy Numbers

| Likert Scale | Scale Anchors | Fuzzy Scale | | |
|--------------|----------------------------------|-------------|-------|-------|
| | | m_1 | m_2 | m_3 |
| 1 | Totally Disagree | 0.9 | 1.0 | 1.0 |
| 2 | Strongly Disagree | 0.7 | 0.9 | 1.0 |
| 3 | Disagree | 0.5 | 0.7 | 0.9 |
| 4 | Neither Disagree or Agree | 0.3 | 0.5 | 0.7 |
| 5 | Agree | 0.0 | 0.3 | 0.5 |
| 6 | Strongly Agree | 0.0 | 0.1 | 0.3 |
| 7 | Totally Agree | 0.0 | 0.0 | 0.1 |

Step 3 : Average Fuzzy Number

To identify the average responses for every Fuzzy numbers and the distance between the average. The distance between two Fuzzy numbers $m = (m_1, m_2, m_3)$ and $n = (n_1, n_2, n_3)$ is computed by the following formula (Chang, Hsu, & Chang, 2011)²¹ :

$$d(\bar{m}, \bar{n}) = \sqrt{\frac{1}{3} [(m_1 - n_1)^2 + (m_2 - n_2)^2 + (m_3 - n_3)^2]}$$

Step 4: Identifying threshold value “d”

The threshold is important to identify consensus level among experts (Thomaidis, Nikitakos, and Dounias, 2006)²³. Threshold value is very important in determining consensus among experts. If

the threshold “d” less or equal to 0.2 (≤ 0.2), hereby consensus among expert is attained (Cheng & Lin, 2002)²⁴.

Step 5 : Identifying percentage of expert’s consensus for all the items .

While the overall group consensus should be more than 75% (>75%) for each elements; otherwise the survey has to be repeated (Chang et al., 2011)²⁵.

Step 6 : Defuzzification.

Defuzzification information is very much needed to justify expert’s consensus on the constructs and items of the instrument. In Defuzzification techniques, fuzzy numbers are converted to crisp real number (Thomaidis, Nikitakos and Dounias, 2006)²³. In the defuzzification process there are 3 the formulas used to determine the score or ranking items. The formulas are:

- i. $A_{max} = 1/3 * (m_1 + m_2 + m_3)$
- ii. $A_{max} = 1/4 * (m_1 + m_2 + m_3)$
- iii. $A_{max} = 1/6 * (m_1 + m_2 + m_3)$

Upon achieving group consensus of the experts by adding the fuzzy numbers for every item, the alpha- cut level is identified. Alpha-cut level determines if the constructs or items of the instrument is accepted or rejected from the group consensus by experts of the study. Once the alpha-cut level is identified, the aggregate fuzzy evaluation will be determined by adding all fuzzy numbers for all experts (mean of, m_1 , m_2 and m_3). According to (Bodjanova, 2006)²⁶, the alpha cut value has to be not more than 0.5 (> 0.5).

Step 7: Ranking the constructs and items of the instrument

Based on the defuzzification value, the priority of the items of this instrument will be identified through the ranking process.

3(c) Phase III : Usability

Purpose : The purpose of this phase is to test the usability of Symptomatic Behaviour Screening Tool (SymBest), to validate if the screening tool is suitable to be implemented in the early childhood education (ECE) centres to screen children for symptomatic behaviour. In the context of this research, the aspect of satisfaction is focused on the ECE educators from the government agencies to evaluate the usability of SymBest. From the perspective of satisfaction, researcher

would like to seek the ECE educator's opinion on the usability of SymBest to screen children with symptomatic behaviour. The level of usability of a developed product can be determined based on the experts opinion and perceptions given upon using the product (Jeng and Tzeng 2012)²⁷.

Research Questions: The research questions formulated in this phase are as follow:

What is the usability of the screening tool to screen children with symptomatic behaviours from educator's opinions?

3. What are educator's opinions on the suitability of the items under the section of child's details in SymBest
 - a. What are educator's opinions on the suitability of the main constructs of SymBest?
 - b. What are educator's opinions on the suitability of the items in each constructs of SymBest?
 - c. What are educator's opinions on the usability of SymBest overall to identify children's symptomatic behaviours to a disorder?

Instrument: Precisely, to evaluate the usability of SymBest , a survey evaluation questionnaire was used. The survey questionnaire for the construct usability is adapted from (Mohd Ridhuan Mohd Jamil, 2017)²⁸. The adapted instrument was also tested for language rationality and content rationality involving 3 experts in the field of content and method. In this phase the developed SymBest was presented to a group of ECE educators who are teaching children age 3 to 4 years old and with working experience of more than 5 years in the field of early childhood education. Shortly after the presentation, the participants have rated the 7 points Likert scale questionnaire given to them. The questionnaire consists of consist of 5 sections:

Section A: Educator's Details

Section B: Educator's view on the Identifying Information of children

Section C: Educator's view on the suitability of the SymBest constructs

Section D: Educator's view on the suitability of the SymBest items and constructs.

Section E: Educators' view on the usability of SymBest overall.

Method: Nominal Group Techniques (NGT): The usability evaluation phase of SymBest is aimed to seek for the opinion and perception of ECE educator's with NGT survey questionnaire which was adapted from (Mohd Ridhuan Mohd Jamil, 2017)²⁸. The data collected from the survey questionnaire was analysed with Modified Nominal Group Techniques (NGT). In NGT , the decision is made after conducting a group discussion with a number of participants face to face (Aizzat Mohd. Nasurdin, Intan Osman, and Zainal Arrifin Ahmad 2006)²⁹. The systematic process of NGT allows a group consensus to achieve based on individuals responses (Delbecq & Van de Ven, 1971; Varga-atkins, Mcisaac, & Willis, 2015)^{30,31}. The active engagement of

participants during NGT, ensures the outcomes are not subject to facilitators interpretation nor dominated by the more vocal group members (Burrows, Findlay, Killen, Dempsey, Hunter & Snodgrass, 2011)³². The reason being, NGT allows each member of the group to participate in the process in a structured way without having to influence each other. Since the nature of the method is such that it enables the researcher to identify the shared views of a target group on a specific topic (Kennedy and Clinton, 2009)³³.

Table 3

Procedure Of NGT Stepsi in the Context of This Research

| No | Steps | Explanation |
|----|--|---|
| 1 | Explanation and presenting the developed SymBest | Researcher as the moderator will start the Nominal Group Technique workshop by explaining the Symptomatic Behaviour Screening Tool (SymBest). The NGT usability survey questionnaire was also given to the participants during this time. |
| 2 | Explanation on the constructs and the items | Moderator has given time for the participants to discuss and clarify if they have any doubt about the content of the presentation |
| 3 | Discussion among the participants | In this stage, participants were allowed to discuss among them about the topic presented and the items in the usability questionnaire given during the first step. Participant's opinion was recorded. |
| 4 | Voting through survey questionnaire | Further in this step, participants were given duration of time to evaluate the suitability of the constructs and items of SymBest using the usability questionnaire given. Once complete, the usability questionnaire will be collected by the moderator. |
| 5 | Discuss the usability findings. | Moderator then will key in the data collected from the usability questionnaire form by the participants in <i>Microsoft Excel</i> to calculate the percentage and acceptance level of participants on SymBest. The findings obtained will be shared among the participants. |

The NGT Procedure : From the several past literature studies, it is stated that there are 5 basic steps for NGT technique (A Muqsith Ahmad et al. 2017; Dang 2015; Harvey and Holmes 2012;

Mohd Ridhuan Mohd Jamil 2017; Williams et al. 2006)^{34,35,36,28,37}. In this phase the 5 basic steps involved are, (1) Explanation and presentation of SymBest, (2) Explanation on the constructs and items representing SymBest, (3) Discussion on the constructs and items among the participants, (4) Voting the constructs and items of SymBest through a survey questionnaire and (5) Discuss the finding of the usability of SymBest. Table 3 below is presenting procedure of NGT steps in the context of this research.

Duration of Nominal Group Technique(NGT) Procedure: NGT is a face to face meeting with a group of selected participants organized by the researcher to collect opinions on the usability of the developed product. It is conducted as a workshop with presentation and discussions in order to achieve the consensus. Thus, the time frame of the workshop conducted must be determined prior so that the session can be planned properly and the desired outcome can be achieved. In the context of this research to seek for the usability of SymBest, the NGT workshop time span proposed was 2 hours and 30 minutes. This prolongation is ideal for participants to actively get involve in the workshop conducted. In view of this, (O’Neil & Jackson, 1983)³⁸ in his literature supports that the ideal time span for a NGT workshop is in between 2 hour to 2 hour and 30 minutes.

Sample of Experts as participants in NGT : Experts in the regards of this research is referred to participants who are responsible for providing information to answer the research questions of the usability phase. In particular this phase requires experts from the early childhood education centres. The sample of experts must be also from the target population who are going to use SymBest to identify children with symptomatic behaviours in the classroom. Thus in this perspective, early childhood educators who are teaching children age 3 to 4 years old who have teaching experience more than 5 years are selected to be the expert participants of this phase. Potentially, as for this research a number of 21 experts who are the early childhood educators was selected to be the participant of this because they represent the target population who are going to use the SymBest to identify children with symptomatic behaviours.

Range of acceptance for measurement in NGT: There are many ways identified to interpret the NGT data collected from the NGT face to face workshop. Between the range of acceptance for measurement in the NGT frequently used the percentage score must be at the range of 70.0% and above (Mat, Chuprat, and Firdaus 2018; Mohd Ridhuan Mohd Jamil 2017)^{39,28}. The range decided is similar to a group scholars whom states that percentage of acceptance of an element is based on the percentage score where an element measured usability shall at least have the percentage of 70.0% based on the opinion of the expert participants of the study (Deslandes et al. 2010; Dobbie et al. 2004)^{40,41}.

4. Conclusion

This chapter described the research activities conducted through the main phases of the developmental research that is, the need analysis, design and development phase and usability of the screening tool. To achieve the purpose of need analysis phase, a survey questionnaire was developed to investigate educators perception on manage children's behaviour in the classroom, specific techniques for behaviour management, the kind of support received to manage behavioural problems and the needs for a screening tool. The analysis mean scores, percentage and standard deviation was employed for this phase to determine the needs of developing a screening tool to identify symptomatic behaviours among children in the early childhood education classrooms by educators. The second phase is the design and development of Symptomatic Behaviour Screening Tool (SymBest). SymBest was developed from need analysis findings, literature review and paediatric group discussion session. The suitability of the constructs and items of the screening tool will be validated by a group of experts with the Fuzzy Delphi Method. In the third phase, the screening tool will be evaluated for usability by a survey method on 21 early childhood educators who are teaching children age 3 to 4 years old. Modified Nominal Group Technique was conducted. The evaluation is aimed to analyse educator's opinion on the usability of the screening tool.

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