ORIGINAL ARTICLE

DEVELOPING SYMPTOMATIC BEHAVIOR SCREENING TOOL (SYMBEST) FOR CHILDREN WITH BEHAVIOR PROBLEMS : A FUZZY DELPHI METHOD

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Abstract

The purpose of this research is to develop a symptomatic behaviour screening tool (SymBest) for early childhood educators to identify children with symptomatic behaviours. The measuring constructs of the screening tool are the child developmental domains with developmental delays as items representing the constructs. Fuzzy Delphi analysis was conducted with 18 participants from diverse backgrounds of clinical and education to gain the expert consensus on the suitability of the constructs and items representing SymBest. The findings showed that the experts have a fair degree of agreement on the constructs and the items suggested to form SymBest. The constructs and items with accepted threshold value, percentage of group consensus and fuzzy score is then organized in sequence priority to form the screening tool.

 Keywords: Symptomatic Behavior, Screening Tool, Behavior Problems , Fuzzy Delphi.

Introduction

Behaviour Problems refers to any type of behaviour that interferes with a child's cognitive, social, or emotional development. It is found inappropriate because it is harmful to a child, his peers or adults around them (Kaiser & Rasminsky, 2009)[1]. Behaviour problems referred as challenging behaviour is one of the core features of children at risk of developing special needs. Behaviour which is inappropriate to situation, repetitive and not age appropriate are some early alarm for parents and teachers of young children. In 2014, The US Census Bureau estimated a population of approximately 1.8 billion of youth from 5 to 19 years around the world (Child Mind Institute, 2015)[2]. Similarly there was a community study conducted to estimate the prevalence of children and adolescence with mental and emotional disorders from 27 countries and every world region. The meta- analysis study indicated a pooled estimation of 13.4% (241million) children and adolescents affected by any type of mental disorders. The most common group of mental disorders are anxiety disorders, affecting 117 million; disruptive behaviour disorder, affecting 113 million; ADHD, affecting 63 million; and depressive disorders, affecting 47 million (Polanczyk, Salum, Sugaya, Caye & Rohde, 2015)[3].

IDEA defines emotional disturbance as a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance : (a) an inability to learn that cannot be explained by intellectual, sensory, or health factors, (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers, (c) inappropriate types of behaviour or feelings under normal circumstances, (d) a general pervasive mood of unhappiness or depression and (e) a tendency to develop physical symptoms or fears associated with personal or school problems (IDEA, 2004)[4].

The concepts 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)[5]. 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)[5]. Some symptomatic behaviours are strongly associated with developmental problems, whereas for others the association with problems is less predictable (Wicks-Nelson and Israel 2006)[6]. 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.

Children with Behaviour Problems in Early Childhood

Many children in the early childhood classrooms are found to be aggressive, some are bullies and many tell lies at least occasionally, but a child must have these problems to an exaggerated degree in order to be diagnosed with behavioural problem. If the child fail to meet every one of the recognized diagnostic criteria for a particular disorder, their behaviour then falls within the wide normal range (Donna & Clifford, 2003)[7]. However, what is considered disordered and what is atypical behaviour among young children is still being a concern of professionals of several disciplines. Mostly teachers and parents of young children always in dilemma to determine which is a behaviour problem and which is a typical behaviour. To make oneself clear on this, there must be a clear cut criteria to determine. Developmental norms frequently are used to decide whether a particular child's behaviour is at risk or not (Donna & Clifford 2003)[7].

All children continue to use behaviour once in a while, when they're frustrated, angry, or having a bad day as a coping mechanism. Some even use to express some confusing and difficult events like divorce, the arrival of new siblings, parents illness or job loss, or a family move. Children usually manage to cope with extra support and understanding. However some children have much difficult and persistent problems, and they may come to rely on challenging behaviour as the best way to respond to a situation (Kaiser & Rasminsky, 2009)[1]. Donna and Clifford (2003)[7] points out, there are three general criteria to identify a behaviour pattern as abnormal. First, the child's actions or emotions must be painful or objectionable to himself and other. The behaviour causes distress of some type to the child or others. Second, the behaviour interferes with the child's everyday functioning at school, at home, or in other context. Third consideration is a behaviour's cultural or social appropriateness. If a behaviour does not represent an understandable form of defiance, then it is considered to be socially and culturally inappropriate.

Behaviour problems are also characterized as externalizing or internalizing behaviours. Externalizing includes tantrum, physical or verbal aggression, and self-injury; internalizing behaviours are reflective or internal states such as withdrawal and non-compliance, obsession and (Green, Mays, & Jolivette, 2016)[8]. In this research externalizing behaviours among children in the ECE centres are the focus of the study. Externalizing behaviours are the constructs of the developed screening tool to screen children at risk of behavioural problems which is expressed as symptomatic behaviour. To form the symptomatic behaviour screening tool (SymBest), externalizing behaviour like aggression, non-compliant, in- attention and antisocial proposed to be the main constructs of the tool.

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)[9]. 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)[10].

According to the statistic report 2016 from the DSW, there are total number 409,269 registration 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)[11]. 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)[12]. 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)[13]. 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 (S.M Baqutayan, S.A.Shamsul Khalil, N.A. Baharum and N. AbuHassan, 2016)[14]. Thus the actual number of children with disability in Malaysia is not reflected (Amar Singh, 2008)[15].

Challenges Faced by Early Childhood Educators for Screening

Developmental, behaviour and psychosocial screening to identify early developmental impairment have become more important in the recent years in Malaysia. Developmental delays are associated with medical and genetics conditions, contribute to social and emotional problems and result in poor educational and functional outcomes (Guevara, Gerdes, Localio, Huang, Pinto-Martin, Minkovitz, Hsu, Kyriakou, Baglivo, Kavanagh & Pati, 2013)[16]. Ministry of Health's data suggest that between 12 – 17 % children have developmental problems and that the rate detected increases with age and time (Amar Singh, 2013)[15]. In Malaysia, developmental screening or commonly known as developmental surveillance is available and done by primary care practitioners. The reason being is, the primary care settings are the place where most children younger than 5 years old are seen and ideal for developmental and behaviour screening (Pediatrician, 2002)[17]. The component of developmental screening in the primary care setting includes attending to parents concerns, obtaining a relevant developmental history, making accurate and informative observation of children, and sharing concerns and opinions with other professionals (Shonkoff & Meisels, 2006)[18]. In the process of gathering information about the

child screening procedure are also involving parents and school system with questionnaires to be completed (Amar Singh, 2013)[19]. If the primary care settings are known to be receiving the most children for diagnosis then obviously schools will be the second higher place where delays are visibly identified. Hence, screening for early identification is also crucial to be practiced in the school system. Since screening is being traditionally believed to be MOH's responsibility alone, school system in Malaysia in all education levels are not introduced to use screening tools for early identification. In reality, most educational needs, and behaviour symptoms are clearly visible to the educators who are working with children in daily basis. Therefore screening and early identification is a fundamental property which must be a shared effort of parents, school system and primary care unit, not just dominantly by the doctors as presently.

Currently in the education setting, assessment in the form of checklist is available for literacy, numeracy, and writing, none for behaviours and emotional development. Though there are a number assessment tools introduced by the Ministry of Education (MOE) for the purpose of assessment and evaluation, the reality is that none of it is focused on early identification especially in the nursery schools. The available assessment tools like Literacy and Numeracy (LINUS) Screening Tools and Dyslexic Screening are favouring to academic readiness for children in the primary schools alone. Those tools are not practical to be applied rather adapted or adopted for nursery and preschool children. When there is less , screening support as guide for behaviour problems, educators are unable to manage behaviour problems because they do not know the reason why the behaviours like tantrums, defiant, aggression which is identified as externalizing behaviour is occurring (Woolfolk, 2010)[20] in the classroom.

In Malaysian Public Early Childhood Programs, there is a lacking for a formal and feasible assessment tools designed for educators to use in the ECE classroom to assess children at risk of behaviour disorders. In the year of 2016 there is an instrument called Instrumen Menentu Penempatan Murid Berkeperluan Khas(IMPaK) 4- 6 Tahun, developed by Special Education Division, Ministry of Education for preschool teachers in the National Preschool(Prasekolah Kebangsaan) to identify children for special education placement. However the instrument is still waiting for approval to be administered nation wide. Even though the needs for early identification is being addressed in National Preschool Curriculum and Kurikulum Asuhan &Didikan Awal Kanak-Kanak Permata Negara, a comprehensive developmental screening instrument is not provided. The Modul Pentaksiran Perkembangan Murid which is provided for the national preschool teachers is merely a guidance for observation and assessment whereby educators are expected to develop one on their own. Similarly in Curriculum Permata a developmental checklist according to the age range is available for Permata Early Childhood Educators in the Modul Pendidik or Pengasuh but the measuring items considerable insufficient to recognize behavioural symptoms indicating developmental delays. The checklist contains several items for each child developmental domains with yes or no response. This recent evidence from the available child curriculum in Malaysia and considering the increasing rate of children at-risk of developmental delays, the needs of a reliable screening tool in the school system is considerable for critical attention. As most of the behavioural

symptoms arises and visible between the developmental age to 2 to 4 years old, there is a critical needs for early identification in the nursery schools (TASKA) in Malaysia and there is no standard screening guidance and screening tools provided for nursery educators for this purpose.

Many different procedures like observation, interview and assessment scales might help educators to identify symptomatic behaviours. To observe and assess children's behaviour in daily basis, educators have the best opportunity than any other professionals. To assess children at risk of behaviour problems in school, it has to initiate with the early screening. A screening is a brief assessment aimed at identifying those infants or children who may be at risk for health and developmental delays due to differences as compared with standard expectations for children of the same age range and cultural background according to Division of Early Childhood of the Council of Exceptional Children (2007) in James A. McLoughlin, (2008)[21].

Direct observation and anecdote record are the method educators use for parent confrontation and medical referral in the current practice. This conventional method is one of the most valuable techniques for collecting information about the classroom conduct as general but less reliable to gather data on child's specific behaviour or to know why the behaviour occurs. These measures allow educators to share their observations of children's typical behaviour patterns and their judgments about the appropriateness of the student's classroom conduct (McLoughlin, 2008)[21]. The primary function of screening tools is to help educators in managing behaviour problems in the early childhood classrooms. However the available screening checklist by Permata Curriculum with dichotomous (Yes/No) responses the range or intensity of the reflected behaviour cannot be recognized. To have in depth understanding on the function of behaviours, assessment method in the form of rating scale with Likert responses are more practical and reliable.

When children enter school, educators become the important person to seek and provide information about children's behaviour in the school context. The concern of most ECE educators is the behaviour problems exhibit by children in the classroom. ECE educators often find it challenging on how to address behaviour problems among children in the classroom. Externalizing behaviour problems such as non-compliance, academic disengagement, aggression, inattention and anti-social behaviours are some of it that interferes with the classroom instructional planning and learning sessions (Barton-arwood, Wehby, Gunter & Lane, 2016)[22]. Some behaviour problems among young children is also an indication of developing at risk features of special needs like infantile autism, attention deficit disorder, attention deficit hyperactive disorder, though there's no clear diagnosis from the medical practitioners. A study on behaviour management in ECE classroom reported that preventive strategies like appropriate classroom arrangement, regular review of the classroom rules, and positive reinforcement through praises or stickers. Whereas strategies like verbal reprimands and time-out is often used by teacher aides (Ritz, Noltemeyer, Davis & Green, 2014)[23]. These strategies are being implemented in the classroom based on educators knowledge from prior experience. Under this circumstances, it is a challenging task for educators to provide behaviour support within their

capacity to manage the children and at the same time strive to deliver a functional lesson to the whole class. Generally there are several conventional strategies, implemented in the classroom for behaviour problems. In early childhood education settings, preschool educators do not always have the training needed to implement behaviour analytical interventions (Brock & Beeman-Diglia, 2018)[24].

Including children with behaviour problems in the classroom is always a mixed feeling for the mainstream classroom educators. Most mainstream educators are lacking of knowledge and skills in behaviour management especially the more severe ones. A survey study conducted on 300 Malaysian primary school educators indicates that Malaysian educators do not have sufficient training and skills to support children with additional learning needs (Miller & Lee, 2013)[25]. Educators feel that they are unable to include children with behaviour problems in the mainstream classroom because they are lacking in terms of exposure and training for diverse learners compared to special education teachers (Nornadia Mohamad Razali et al., 2013)[26]. This is why more commonly behaviour problems exhibit by children are misunderstood as disciplinary issues hence disciplinary actions are taken instead of intervention or referral. In Malaysia, inclusive classrooms are more focused in the primary and secondary education compared to early childhood education. There is a need to implement inclusive classroom in ECE itself before we could carry out to the primary and secondary streams. The present level of preparedness among ECE educators in Malaysia has to be enhanced (Aini & Laily, 2010)[27]. This is supported by a study conducted in Selangor Malaysia, where a group of ECE educators in the mainstream ECE stated that, they do not have adequate skills and training, which they felt that they urgently needed, as they did not know the techniques and teaching strategies for diverse learners (Nornadia Mohamad Razali et al., 2013)[26].

Development of Symptomatic Behavior Screening Tool (SymBest)

Screening tool is a set of validated document with reliable cut scores consist of question items asked to parents, teachers or caregivers to obtain information on development of the child at specific ages or when concern exists (Rice, Braun, Kogan, Smith, Kavanagh & Strickland, 2014)[28]. It is a procedure used to identify those children who have a developmental delay and require further assessment, Screening tool is quick and easy to administer so that it can be used to screen large number of children efficiently (McConnell, McEvoy, Carta, Greenwood, Kaminski, Good III & Shinn, 1998)[29]. In this study, the SymBest consist of five child developmental domains as a measuring constructs and the developmental milestones as items. The constructs are the six learning areas of child development in the conceptual curriculum model of Permata Negara and the items are the learning outcomes adapted from Permata child developmental checklist (2013). The decision to lift this model and the checklist is wise because they appear to be the blueprint of SymBest. Besides that, the model and the checklist serves as a guiding factor to design and develop the screening tool for children aged 3 and 4 years old. Figure 3.1 shows the conceptual curriculum model of Permata Negara. The strength of this

model is the unification of the four aspects in the childcare components and the six learning areas of child development. All the six learning areas of child development is selected and modified to fit as the constructs of SymBest. The figure below shows the learning areas of child development woven with the four aspects of childcare components (Eng, Aminah Ayob, Md Nasir Ibrahim, Mazlini Adnan, Jameyah Shariff & Noriah Ishak, 2016)[30].
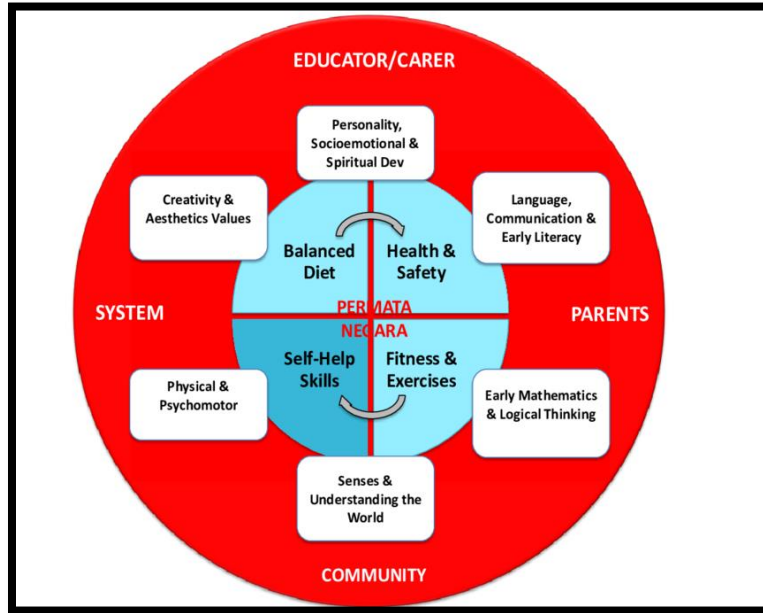
Figure. 1. Conceptual curriculum model of Permata Negara.

The six learning areas of child development in Permata Negara Model is modified and used as constructs in SymBest. Table 1 shows how the developmental domains of Permata Negara Model is modified for SymBest.

Table 1

Modified Constructs of SymBest from Permata Negara Curriculum Model

Permata Negara Curriculum Model	SymBest
1. Physical and Psychomotor 2. Senses & Understanding the World	1. Sensory and Motor Development.
3. Language, Communication and Early Literacy	2. Language & Communication Development
4. Early Mathematics & Logical Thinking	3. Cognitive Development
5. Personality,Social Emotional & Spritual Development	4. Socioemotional Development
6. Creativity & Aesthetic Values	5. Creativity Development.

There are 7 important concepts highlighted in conceptual curriculum model of Permata Negara. The 7 important concepts which framed the conceptual model are:

1. Whole brain learning,
2. Learning is fun,
3. Child empowerment,
4. Active involvement of parents and community,
5. A quality nurturing,
6. Optimum learning development and
7. Assessment and Evaluation through clinical observation.

The 7th concept of the model which is assessment and evaluation through clinical observation explains the importance of observation to identify the needs of every child, identify the development of children, recognize the strength and weaknesses of every child and encourage parents to carry out home based learning. The outcome of assessment and evaluation will encourage teachers and parents to recognize every child's potential and needs, identify children with special needs and intervention and finally to plan developmentally appropriate activities. There are there types of assessment record used in Permata Negara that is, narrative record, log book and developmental checklist. The assessment record adapted in this study is the developmental checklist of children age 3 to 4 years old.

This is a design and development study by (Richey and Klien 2007)[31] and the approach has three systematic phases : that is need analysis phase, design & development phase and evaluation and usability testing phase.

This article focusses on the second phase of the SymBest development which is the design and development. Thus only the analysis will be discussed further.

Research Questions

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 of children based on expert's consensus ?
b) What are the suitable items in the main constructs for screening symptomatic behaviours of children based on expert's consensus?
c) What are the sequence priorities of the items in the screening tool based on expert's consensus?

Methodology

In order to achieve the objectives of this phase, a screening tool will be developed along with the Fuzzy Delphi Method (FDM) to answer the research questions. The Fuzzy method is an analytical method based on the Delphi method that draws on the idea of the Fuzzy theory. This method uses the independent consensus of a group of experts in the subject field. The purpose of this method was to elicit perceptions or judgements held by "experts" knowledgeable in a specialized area (Blair & UHL, 1993)[32]. A survey questionnaire was developed to get experts view on the appropriateness of the constructs and items suggested to form the screening tool. The questionnaire consists of 7 sections with 7 point Likert scale. Section A is experts demography; Section B is experts view on the constructs of SymBest; Section C is experts view on the items of construct sensory and motor development; Section D is experts view on the items of construct language and communication development; Section E is experts view on the items of construct social and emotional development ; Section F is experts view on the items of construct cognitive development and Section G is experts view on the items of construct creativity. The constructs and the items are the developmental domains of children age 3 and 4 years old.

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 was 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)[33]. 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 responses 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 Agree or Disagree**	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)[34]:

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

Step 4: Identifying threshold value "*d*"

The threshold is important to identify consensus level among experts (Thomaidis, Nikitakos, and Dounias 2006)[34]. 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)[35].

Step 5 : Identifying percentage of experts 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)[36].

Step 6 : Defuzzification

Defuzzification information is very much needed to justify experts 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)[34]. In the defuzzification process there are 3 the formulas used to determine the score or ranking items. The formulas are:

    i.   Amax = 1/3 * (m1 + m2 + m3)
    ii.   Amax = 1/4 * (m1 + m2 + m3)
    iii.   Amax = 1/6 * (m1 + m2 + m3)

Upon achieving group consensus of the experts by adding the fuzzy numbers for every items, 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)[37], 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 defuzification value, the priority of the items of this instrument will be identified through the ranking process.

Findings and Discussion.

Results are presented below under 3 headings to answer three sub questions in this phase. 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 experts consensus?

It is interesting to note that, four constructs out of five constructs proposed is accepted. Refer to the first rule in FDM ,construct of sensory and motor development, language and communication, social and emotional and cognitive have consensus among the experts with threshold value score below than 0.2.   Based on experts view, the threshold value, "d" was calculated for all the constructs as shown in Table 3 below to determine the consensus level among experts for each constructs. The threshold value highlighted in red are the construct that exceeded the value 0.2. This indicates the individual experts views   for the particular construct are not in consensus with other expert participants (Cheng & Lin, 2002)[35]. For example

questionnaire section C experts view on the constructs of SymBest, expert 2, 6,8,12,15 and 17 were not in consensus with other experts in the agreement of construct creativity proposed for SymBest. Therefore the construct creativity was rejected based on experts consensus. However, the calculation of the threshold value is performed overall for the questionnaire items.

Table 3
Threshold Value d for Constructs of SymBest

Expert	Constructs				
	1	2	3	4	5
1	0.053	0.053	0.115	0.067	0.072
2	0.281	0.106	0.115	0.194	0.663
3	0.111	0.106	0.115	0.194	0.072
4	0.111	0.106	0.115	0.198	0.072
5	0.111	0.106	0.115	0.067	0.192
6	0.111	0.106	0.115	0.198	0.325
7	0.281	0.286	0.279	0.194	0.072
8	0.111	0.106	0.045	0.198	0.663
9	0.111	0.106	0.045	0.198	0.072
10	0.053	0.286	0.045	0.194	0.072
11	0.111	0.053	0.045	0.194	0.072
12	0.111	0.106	0.115	0.198	0.325
13	0.281	0.286	0.279	0.194	0.072
14	0.281	0.053	0.045	0.194	0.072
15	0.111	0.106	0.115	0.198	0.325
16	0.111	0.053	0.279	0.194	0.192
17	0.111	0.106	0.115	0.198	0.325
18	0.053	0.053	0.045	0.067	0.192
Value d of each construct	**0.139**	**0.121**	**0.119**	**0.174**	**0.214**

The second rule of FDM is percentage consensus of experts must be more than 75 %. Table 4 below shows that the construct sensory and motor development, language and communication, social and emotional and cognitive have gained 100% of group consensus from the experts. However the construct creativity alone was rejected based on the calculated percentage of 66.67% of group consensus. The third rule of FDM is the fuzzy score (A) Average of fuzzy number of each construct must be α – cut = 0.5 (Bodjanova, 2006)[37]. The average fuzzy number is calculated to determine the ranking and it is not applicable for this section. In response to this rule, the constructs creativity was still rejected even though the fuzzy score value is more than 0.5. The reason emerged is, in order for the construct to be accepted it has to meet the criteria set for all the three rules in FDM. Apparently from this table it is noted that only one rule is

accepted. Moreover, ranking is not needed in this section. Therefore the construct of creativity is rejected to form SymBest.

Table 4
Experts Group Consensus Percentage

No	Construct	Triangular Fuzzy Numbers		Defuzzification Process				Expert Consensus	Constructs ACCEPTED
		Threshold Value, d	Experts Group Consensus Percentage, %	m1	m2	m3	Score Fuzzy (A)		
1	Sensory and Motor Development	0.139	100.0%	0.778	0.917	0.978	0.891	**ACCEPTED**	0.891
2	Language & Communication	0.121	100.0%	0.778	0.922	0.983	0.894	**ACCEPTED**	0.894
3	Social & Emotional	0.119	100.0%	0.767	0.917	0.983	0.889	**ACCEPTED**	0.889
4	Cognitive	0.174	100.00%	0.689	0.850	0.956	0.831	**ACCEPTED**	0.831
5	Creativity	0.214	66.67%	0.578	0.756	0.894	0.743	**REJECTED**	

 b) What are the suitable items in the main constructs for screening symptomatic behaviours of children based on expert's consensus?

Section C: Sensory & Motor Development

Precisely to meet the first rule in FDM , there are 13 items under the construct of sensory and motor development have consensus among the experts with threshold value score below than 0.2. The threshold value highlighted in red are the construct that exceeded the value 0.2. This indicates the individual experts views   for the particular items are not in consensus with other expert participants (Cheng & Lin, 2002)[35]. However, the calculation of the threshold value is performed overall for the questionnaire items. The second rule of FDM is percentage consensus of experts must be more than 75 %. Table 5 below shows that 13 items under the construct sensory and motor development have gained group consensus more than 75 %. However 17 items from the total proposed items was rejected based on the calculated percentage of below than 75%.

Table 5

Items Under the Construct of Sensory and Motor Development

No	Items	Triangular Fuzzy Numbers		Defuzzification Process				Expert Consensus	Item Accepted	Ranking
		Threshold Value, d	Percentage of Experts Group Consensus, %	m1	m2	m3	Score Fuzzy (A)			
1	Found restless with hands and feet.	0.177	100.0%	0.656	0.822	0.944	0.807	ACCEPT	0.837	1
2	Listen when spoken too	0.348	61.1%	0.528	0.700	0.828	0.685	REJECT		
3	Found over active or on the go more than other children (Jumps/ run/ climb)	0.174	94.4%	0.633	0.811	0.939	0.794	ACCEPT	0.794	7
4	Sustain attention in activities	0.172	94.44%	0.589	0.778	0.922	0.794	ACCEPT	0.794	7
5	Avoid, dislikes or show reluctance to engage in work that requires mental effort (writing, reading task)	0.280	55.56%	0.567	0.744	0.872	0.728	REJECT		
6	Remain seated in the classroom when expected.	0.168	72.22%	0.556	0.744	0.900	0.733	REJECT		
7	Cry more than others and takes a while to calm down.	0.278	50.00%	0.494	0.678	0.833	0.669	REJECT		
8	Easily distracted	0.194	88.89%	0.611	0.800	0.928	0.780	ACCEPT	0.780	10
9	Fixed in certain objects, activities or topics	0.166	83.33%	0.578	0.767	0.917	0.754	ACCEPT	0.754	12
10	Show repetitive movements (rocking, or	0.162	94.44%	0.678	0.850	0.956	0.828	ACCEPT	0.828	3

	repeated speech)									
11	Hold hands over ears to protect ears from sound	0.266	55.56%	0.589	0.767	0.889	0.748	REJECT		
12	Overly excited during movement activities (swimming, dancing,)	0.299	50.00%	0.494	0.672	0.822	0.663	REJECT		
13	Hums or makes other odd sounds in class.	0.203	66.67%	0.567	0.750	0.894	0.737	REJECT		
14	Walks on toes	0.197	88.89%	0.644	0.817	0.933	0.798	ACCEPT	0.798	6
15	Respond to and follow instructions presented verbally	0.180	77.78%	0.567	0.756	0.906	0.743	ACCEPT	0.743	13
16	Respond to name call	0.190	94.44%	0.633	0.811	0.933	0.793	ACCEPT	0.793	9
17	Fear of movement(stairs, playground, swing)	0.175	72.22%	0.589	0.772	0.917	0.759	REJECT		
18	Do task with force	0.287	50.00%	0.378	0.578	0.756	0.570	REJECT		
19	Colour/write with heavy pressure or not enough of pressure	0.278	44.44%	0.567	0.739	0.867	0.724	REJECT		
20	Imitate action	0.218	66.67%	0.589	0.772	0.906	0.756	REJECT		
21	Fall/ crash on the floor throughout the day.	0.190	94.44%	0.656	0.822	0.939	0.806	ACCEPT	0.806	4
22	Pay attention to the surrounding	0.176	77.78%	0.589	0.772	0.917	0.759	ACCEPT	0.759	11
23	Notice when things are pointed out.	0.229	66.67%	0.572	0.744	0.883	0.733	REJECT		
24	Focus visually on task	0.172	94.44%	0.644	0.822	0.944	0.804	ACCEPT	0.804	5
25	Stuff food in the mouth	0.401	33.33%	0.478	0.639	0.772	0.630	REJECT		
26	Avoid activities getting hand and feet	0.178	88.89%	0.689	0.856	0.950	0.831	ACCEPT	0.831	2

	messy(finger painting, play dough)									
27	Touch everything and everyone.	0.299	55.56%	0.561	0.733	0.861	0.719	REJECT		
28	Like to be touched.	0.277	61.11%	0.483	0.661	0.817	0.654	REJECT		
29	Bumps into other people or object in the environment.	0.245	61.11%	0.561	0.733	0.872	0.722	REJECT		
30	Uses toilet independently	0.274	61.11%	0.461	0.644	0.811	0.639	REJECT		

Section D : Language and Communication Development

In this section, 12 items under the construct of language and communication development have consensus among the experts with threshold value score below than 0.2.   The threshold value highlighted in red are the construct that exceeded the value 0.2. This indicates the individual experts views   for the particular items are not in consensus with other expert participants. However, the calculation of the threshold value is performed overall for the questionnaire items. The second rule of FDM is percentage consensus of experts must be more than 75 %. Table 6 below shows that 12 items under the construct language and communication development have gained group consensus more than 75 %. However 13 items   was rejected based on the calculated percentage of below than 75%.

Table 6

Items Under the Construct of Language and Communication

No	Items	Triangular Fuzzy Numbers		Defuzzification Process				Expert Consensus	Item Accepted	Ranking
		Threshold Value, d	Percentage of Experts Group Consensus, %	m1	m2	m3	Skor Fuzzy (A)			
1	To respond verbal or non verbal to "yes " or "no"	0.153	100.0%	0.711	0.872	0.967	0.850	ACCEPT	0.837	3
2	Follow simple one commands (come,sit,go,take)	0.147	100.0%	0.700	0.867	0.967	0.844	ACCEPT	0.844	2
3	Say what he/she wants.	0.138	100.0%	0.722	0.883	0.972	0.859	ACCEPT	0.859	1
4	Greet	0.158	77.78%	0.522	0.717	0.883	0.707	ACCEPT	0.707	11
5	Repeat conversation	0.271	55.56%	0.556	0.739	0.872	0.722	REJECT		
6	Answers simple questions like "Who?" "What?" "Where?" and "Why?"	0.218	66.67%	0.589	0.772	0.906	0.756	REJECT		
7	Talks about activities at school (about friends) or homes.	0.341	55.56%	0.533	0.717	0.844	0.698	REJECT		
8	Uses sentences with four or more words(I want to sleep, I want to eat rice)	0.292	50.00%	0.589	0.761	0.878	0.743	REJECT		
9	Pay attention to a short story and answers simple questions about it.	0.133	100.00%	0.600	0.794	0.944	0.780	ACCEPT	0.780	7

10	Seems to hear and understand most of what is said in school	0.331	50.00%	0.567	0.744	0.861	0.724	REJECT		
11	Communicate easily with other children and adults	0.190	88.89%	0.633	0.811	0.933	0.793	ACCEPT	0.793	5
12	Understand what is said to her/him	0.183	94.44%	0.622	0.806	0.933	0.787	ACCEPT	0.787	6
13	Have poor vocabulary	0.184	77.78%	0.544	0.739	0.894	0.726	ACCEPT	0.726	10
14	Provide sufficient details when expressing ideas	0.313	44.44%	0.411	0.606	0.772	0.596	REJECT		
15	Join group activity	0.179	94.44%	0.656	0.828	0.944	0.809	ACCEPT	0.809	4
16	Understand by strangers of what is said.	0.293	66.67%	0.544	0.733	0.867	0.715	REJECT		
17	Understand spatial concepts such as "behind," "next to"	0.270	50.00%	0.556	0.733	0.867	0.719	REJECT		
18	Use words, such as 'and', 'but' and 'because', when having conversation.	0.266	50.00%	0.478	0.672	0.833	0.661	REJECT		
19	Describe recent events, such as morning routines	0.174	94.44%	0.511	0.706	0.872	0.696	ACCEPT	0.696	12
20	Ask lots of questions	0.362	27.78%	0.478	0.661	0.800	0.646	REJECT		
21	Use personal pronouns (e.g., he/she, me/you) and negations (e.g.,don't/can't)	0.294	50.00%	0.494	0.672	0.822	0.663	REJECT		
22	Use colour, number and time related	0.156	77.78%	0.567	0.756	0.911	0.744	ACCEPT	0.744	9

	words, for example, 'red' car, 'three' fingers and 'yesterday / tomorrow'.									
23	Enjoy looking at books and others stories	0.133	83.33%	0.567	0.756	0.917	0.746	ACCEPT	0.746	8
24	Could hear and respond when call from another room.	0.262	55.56%	0.583	0.750	0.878	0.737	REJECT		
25	Answer simple problem solving questions, for example "What do you do when you're hungry?	0.265	50.00%	0.467	0.661	0.828	0.652	REJECT		

Section E: Social and Emotional Development.

In this section 17 items under the construct of social and emotional development have consensus among the experts with threshold value score below than 0.2. The threshold value highlighted in red are the construct that exceeded the value 0.2. This indicates the individual experts views for the particular items are not in consensus with other expert participants (Cheng and Lin 2002)[35]. However, the calculation of the threshold value is performed overall for the questionnaire items. The second rule of FDM is percentage consensus of experts must be more than 75 %. Table 7 below shows that 17 items under the construct of language and communication development have gained group consensus more than 75 %. However 11 items was also rejected based on the calculated percentage of below than 75%.

Table 7

Items Under the Construct Social and Emotional Development

No	Items	Triangular Fuzzy Numbers		Defuzzification Process				Expert Consensus	Item Accepted	Ranking
		Threshold Value, d	Percentage of Experts Group Consensus, %	m1	m2	m3	Score Fuzzy (A)			
1	Engage in pretend play.	0.123	100.0%	0.733	0.894	0.978	0.869	ACCEPT	0.837	5
2	Show interest in playing toys.	0.147	100.0%	0.700	0.867	0.967	0.844	ACCEPT	0.844	3
3	Play toys in typical way.	0.190	94.4%	0.656	0.822	0.939	0.806	ACCEPT	0.806	10
4	Liked by other children.	0.179	72.22%	0.567	0.756	0.906	0.743	REJECT		
5	Initiate to make friends.	0.174	94.44%	0.633	0.811	0.939	0.794	ACCEPT	0.942	1
6	Shares readily with other children(toys,food, stationary).	0.229	55.56%	0.600	0.772	0.900	0.757	REJECT		
7	Show appropriate facial expressions.	0.150	94.44%	0.689	0.861	0.961	0.837	ACCEPT	0.837	4
8	Acts too young for his/her age.	0.200	72.22%	0.533	0.728	0.883	0.715	REJECT		
9	Initiate physical fight with others	0.171	72.22%	0.533	0.728	0.889	0.717	REJECT		
10	Injure self while being angry (head banging, biting own self)	0.111	100.00%	0.711	0.883	0.978	0.857	ACCEPT	0.857	2
11	Injure others (kicking, hitting, biting, pushing)	0.178	94.44%	0.678	0.844	0.950	0.824	ACCEPT	0.824	6
12	Throw things on others in anger	0.157	94.44%	0.622	0.811	0.944	0.793	ACCEPT	0.793	13
13	Snatch things from others (toys , food)	0.173	83.33%	0.533	0.728	0.889	0.717	ACCEPT	0.717	17
14	Easily annoyed	0.245	61.11%	0.556	0.739	0.878	0.724	REJECT		
15	Destroy own properties	0.172	88.89%	0.589	0.778	0.922	0.763	ACCEPT	0.763	16
16	Destroy others	0.174	94.44%	0.633	0.811	0.939	0.794	ACCEPT	0.794	12

	property									
17	Destroy things in the classroom (wall charts, furniture)	0.190	88.89%	0.633	0.811	0.933	0.793	ACCEPT	0.793	14
18	Argue with others	0.329	38.89%	0.372	0.561	0.728	0.554	REJECT		
19	Defies or refuse to comply with others request.	0.203	72.22%	0.567	0.756	0.900	0.741	REJECT		
20	Break rules	0.231	50.00%	0.544	0.722	0.867	0.711	REJECT		
21	Annoy others	0.290	44.44%	0.478	0.672	0.828	0.659	REJECT		
22	Scream a lot more than other children	0.174	94.44%	0.633	0.811	0.939	0.794	ACCEPT	0.794	11
23	Bully peers	0.258	72.22%	0.511	0.694	0.844	0.683	REJECT		
24	Wait for turns	0.153	100.00%	0.656	0.833	0.956	0.815	ACCEPT	0.815	9
25	Tolerate	0.284	61.11%	0.539	0.717	0.856	0.704	REJECT		
26	Cry or scream as a respond to "no" or "stop" command	0.199	88.89%	0.633	0.806	0.928	0.789	ACCEPT	0.789	15
27	Have eye contact	0.172	94.44%	0.667	0.839	0.950	0.819	ACCEPT	0.819	8
28	Prefer to be left alone	0.160	100.00%	0.667	0.839	0.956	0.820	ACCEPT	0.820	7

Section F : Cognitive Development

In the section the items under the construct cognitive development was analysed. 9 items under the construct of cognitive development have consensus among the experts with threshold value score below than 0.2. The threshold value highlighted in red are the construct that exceeded the value 0.2. This indicates the individual experts views for the particular items are not in consensus with other expert participants (Cheng & Lin 2002)[35]. However, the calculation of the threshold value is performed overall for the questionnaire items. The second rule of FDM is percentage consensus of experts must be more than 75 %. Table 8 below shows that 9 items under the construct language and communication development have gained group consensus more than 75 %. However 9 items proposed was rejected based on the calculated percentage of below than 75%.

Table 8

Items Under the Construct of Cognitive Development

N o	Items	Triangular Fuzzy Numbers		Defuzzification Process				Expert Consensus	Item Accepted	Ranking
		Threshold Value, d	Percentage of Experts Group Consensus, %	m1	m2	m3	Score Fuzzy (A)			
1	Actively seek answers to questions	0.210	72.2%	0.544	0.733	0.883	0.720	REJECT	0.837	
2	Organize objects by size	0.174	94.4%	0.622	0.800	0.933	0.785	ACCEPT	0.785	4
3	Organize objects by shape	0.162	94.4%	0.600	0.783	0.928	0.770	ACCEPT	0.770	5
4	Have a longer attention span of around 5 to 15 minutes	0.155	77.78%	0.589	0.772	0.922	0.761	ACCEPT	0.761	7
5	Draw the shape of a person	0.258	72.22%	0.511	0.694	0.844	0.683	REJECT		
6	Tell where they live	0.246	66.67%	0.433	0.628	0.806	0.622	REJECT		
7	Count ten or more objects	0.190	66.67%	0.578	0.756	0.900	0.744	REJECT		
8	Correctly name at least four colors and three shapes	0.181	88.89%	0.600	0.783	0.922	0.769	ACCEPT	0.769	6
9	Recognize some letters	0.144	77.78%	0.533	0.728	0.894	0.719	ACCEPT	0.719	9
10	Write his or her name	0.310	44.44%	0.333	0.528	0.711	0.524	REJECT		
11	Know own age	0.144	77.78%	0.556	0.744	0.906	0.735	ACCEPT	0.735	8
12	Know own name	0.191	94.44%	0.644	0.811	0.933	0.796	ACCEPT	0.796	1
13	Count chronologically from 1 to 10	0.195	61.11%	0.533	0.722	0.878	0.711	REJECT		
14	Understand opposites (e.g. big/little)	0.209	66.67%	0.544	0.733	0.883	0.720	REJECT		
15	Uses objects and materials to	0.151	100.00%	0.622	0.806	0.944	0.791	ACCEPT	0.791	3

	build or construct things, e.g. block tower, puzzle, clay, sand.								
16	Write some numbers and letters in sequence or random	0.325	44.44%	0.456	0.639	0.789	0.628	REJECT	
17	Recognizes most letters of the alphabet	0.277	61.11%	0.411	0.600	0.772	0.594	REJECT	
18	Know what common objects are used for	0.190	88.89%	0.633	0.811	0.933	0.793	ACCEPT	0.793	2

Section G : Creative Development

The constructs and items of creativity will be dropped from the formation of SymBest. As explained in the first sub research question, construct creativity was rejected based on the calculated percentage of 66.67% of group consensus. Table 9 is the items representing the creativity shows only 4 items selected out of 11 questions proposed. Since the construct itself was rejected and the number of items accepted was low based on expert's consensus, creativity development will be eliminated from SymBest.

Table 9
Items under the construct of Creative Development

Bil	Item	*Triangular Fuzzy Numbers*		*Defuzzification Process*				Expert Consensus	Item Accepted	Ranking
		Threshold Value, d	*Percentage of Experts Group Consensus, %*	m1	m2	m3	Score Fuzzy (A)			
1	Play with a variety of musical instruments, often in a unique way (e.g., may	0.199	88.9%	0.511	0.700	0.861	0.691	ACCEPT	0.837	1

	shake an instrument that is typically pounded).									
2	Learn words to favourite songs	0.226	72.2%	0.444	0.639	0.817	0.633	REJECT		
3	Compare and contrast sounds made by different instruments (e.g. Sound of triangle, sound of drum)	0.263	61.1%	0.456	0.644	0.811	0.637	REJECT		#N/A
4	Attracted to rhythms.	0.237	66.67%	0.489	0.672	0.833	0.665	REJECT		#N/A
5	Creates unplanned art and explain the image (e.g., when finished with a drawing, announces, "This is my kitty, Fluffy.").	0.213	72.22%	0.522	0.706	0.861	0.696	REJECT		
6	Participates in group games and circle dances (e.g., enthusiastically joins in with a group).	0.170	88.89%	0.511	0.700	0.867	0.693	ACCEPT	0.693	4
7	Recreates the world of the home and classroom through dramatic play(e.g., pretends to make and serve dinner to "family").	0.175	88.89%	0.600	0.789	0.928	0.772	ACCEPT	0.772	2
8	Uses objects as symbolic props (e.g.,	0.188	77.78%	0.578	0.767	0.911	0.752	ACCEPT	0.752	3

	places a shell on top of a dollhouse and declares it to be a satellite disc).									
9	Engage with elements of environments like play in unusual ways with stones, water, pebbles, fish, plants, sand, vegetables and etc.	0.203	66.67%	0.567	0.750	0.894	0.737	REJECT		
10	Curious, intuitive and resourceful	0.261	55.56%	0.578	0.756	0.883	0.739	REJECT		
11	Enjoy thinking and work independently	0.302	50.00%	0.478	0.661	0.811	0.650	REJECT		

C) What are the sequence priority of the items in each sections in the screening tool based on experts consensus?

The third rule of FDM is the fuzzy score (A). Average of fuzzy number of each construct must be α – cut = 0.5 (Bodjanova, 2006)[37].

The average fuzzy number is calculated to determine the ranking of the items. The ranks of the items are arranged based on the fuzzy scores. In response to this rule, Table 9, 10, 11 and 12 shows the accepted items under the construct sensory and motor development, language and communication development, social and emotional development and cognitive in ranking with fuzzy scores above 0.5.

Table 10
Items Ranking Under the Construct of Sensory and Motor Development

Fuzzy Score	Ranking	Items
0.837	1.	Found restless with hands and feet.
0.831	2.	Avoid activities getting hand and feet messy(finger painting, play dough)
0.828	3.	Show repetitive movements (rocking, or repeated speech)
0.806	4.	Fall/ crash on the floor throughout the day.

0.804	5.	Focus visually on task
0.798	6.	Walks on toes
0.794	7.	Found over active or on the go more than other children (Jumps/ run/ climb)
0.794	8.	Sustain attention in activities
0.793	9.	Respond to name call
0.780	10.	Easily distracted
0.759	11.	Pay attention to the surrounding
0.754	12.	Fixed in certain objects, activities or topics
0.743	13.	Respond to and follow instructions presented verbally

Table 11

Items Ranking Under the Construct of Language and Communication Development

Fuzzy Score(A)	Ranking	Language & Communication Development
0.859	1.	Say what he/she wants.
0.844	2.	Follow simple one commands (come,sit,go,take)
0.837	3.	To respond verbal or non verbal to "yes " or "no"
0.809	4.	Join group activity
0.793	5.	Communicate easily with other children and adults
0.787	6.	Understand what is said to her/him
0.780	7.	Pay attention to a short story and answers simple questions about it.
0.746	8.	Enjoy looking at books and others stories
0.744	9.	Use colour, number and time related words, for example, 'red' car, 'three' fingers and 'yesterday / tomorrow'.
0.726	10.	Have poor vocabulary
0.707	11.	Greet
0.696	12.	Describe recent events, such as morning routines

Table 12

Items Ranking Under the Construct of Social and Emotional Development

Fuzzy Score (A)	Ranking	Social & Emotional Development
0.942	1.	Initiate to make friends.
0.857	2.	Injure self while being angry (head banging, biting own self)
0.844	3.	Show interest in playing toys.

0.837	4.	Show appropriate facial expressions.
0.837	5.	Engage in pretend play.
0.824	6.	Injure others (kicking, hitting, biting, pushing)
0.820	7.	Prefer to be left alone
0.819	8.	Have eye contact
0.815	9.	Wait for turns
0.806	10.	Play toys in typical way.
0.794	11.	Scream a lot more than other children
0.794	12.	Destroy others property
0.793	13	Throw things on others in anger
0.793	14	Destroy things in the classroom (wall charts, furniture)
0.798	15	Cry or scream as a respond to "no" or "stop" command
0.763	16	Destroy own properties
0.717	17	Snatch things from others (toys , food)

Table 13

Items Ranking Under the Construct of Cognitive Development

Fuzzy Score (A)	Ranking	Cognitive Development
0.796	1.	Know own name
0.793	2.	Know what common objects are used for
0.791	3.	Uses objects and materials to build or construct things, e.g. block tower, puzzle, clay, sand.
0.785	4.	Organize objects by size
0.770	5.	Organize objects by shape
0.769	6.	Correctly name at least four colors and three shapes
0.761	7.	Have a longer attention span of around 5 to 15 minutes
0.735	8.	Know own age
0.719	9.	Recognize some letters

Discussion and Conclusion

The article has discussed the early identification practices in Malaysia currently and the role of early childhood educators on screening as well as the challenges educators face for early identification in the educational setting. It is very important to identify which children may need intensive and targeted supports for referral completion (Jennings, 2012)[38]. Based on the Fuzzy Delphi results, findings shows that the constructs of sensory and motor development, language

and communication development, social and emotional development and cognitive development is suitable as a measurement construct for SymBest. The items accepted under each constructs based on experts group consensus is fairly representing children's symptomatic behaviors. There is a need to identify children at-risk of developmental delays as early as 3 to 4 years old or earlier and a screening tool is vital in the early education system.

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